TWINNING PROJECT FICHE

Strengthening of the State Space Agency's of Ukraine (SSAU) Institutional Capacity to Implement European Space Programmes in Satellite Navigation (EGNOS / Galileo) and Remote Sensing (GMES)

UA/12/ENP/TR/35

TABLE OF CONTENT

LIST OF ABBREVIATIONS **3**
2. OBJECTIVES **4**
2.1. Overall objective **4**
2.2. Project purpose **4**
2.3. Contribution to National Development Plan / Partnership and Cooperation Agreement (PCA) / European Neighbourhood Policy / European Neighbourhood and Partnership Instrument / Association Agenda **4**
3. DESCRIPTION OF THE TWINNING PROJECT **6**
3.1. Background **6**
3.2. Interrelated activities **8**
3.3. Results **9**
3.4. Activities **12**
3.5 Means/Input from the Partner Administration **18**
3.5.1. Profile and tasks of the Project Leader 18
3.5.2. Profile and task of the RTA 19
3.5.3. Profile and tasks of the short-term experts 20
4. INSTITUTIONAL FRAMEWORK **22**
5. BUDGET **23**
6. IMPLEMENTATION ARRANGEMENTS **23**
6.1 Implementing Agency responsible for tendering, contracting and accounting: **23**
6.2 Main counterpart in the Beneficiary Country **24**
6.3 Contracts **24**
7. SCHEDULE OF IMPLEMENTATION **24**
8. SUSTAINABILITY **25**
9. CROSSCUTTING ISSUES **25**
10. CONDITIONALITY AND SEQUENCING **25**
Annexes **26**
Annex 1: Tentative Logical Framework Matrix – to be further elaborated by the Contractor **27**
Annex 2. Tentative Schedule of Implementation **34**
Annex 3 – SSAU Organization Chart **36**
Annex 4 – Membership in international organizations and committees **37**
Annex 5 – List of relevant laws and regulations **38**

LIST OF ABBREVIATIONS

BA	Beneficiary Administration
BC	Beneficiary Country
EC	European Commission
EBRD	European Bank for Reconstruction and Development
ENP	European Neighborhood Policy
ESA	European Space Agency
EU	European Union
MS	Member State
NIS	Newly Independent States
SSAU (ДКАУ)	State Space Agency of Ukraine
PAO	Twinning Programme Administration Office in Ukraine
PCA (УПС)	Partnership and Cooperation Agreement
PSC	Project Steering Committee
RTA	Resident Twinning Adviser
STE	Short term expert, MS
Galileo	Satellite navigation system currently being built by the European Union
GMES	Global Monitoring for Environment and Security
GEOSS	Global Earth Observation System of Systems
EGNOS	European Geostationary Navigation Overlay Service
SCNSU (СКНЗУ)	System of coordinate and navigational support of Ukraine
CCS	Control-Correction Stations
ENPI	European Neighborhood and Partnership Instrument
PPP	Public Private Partnership

1. BASIC INFORMATION

1.1 Programme: ENPI Action Programmes 2010 for Ukraine
1.2 Twinning Number: UA/12/ENP/TR/35

1.3 Title: "Strengthening of the State Space Agency's of Ukraine (SSAU) Institutional Capacity to Implement European Space Programmes in Satellite Navigation (EGNOS / Galileo) and Remote Sensing (GMES) Areas"

1.4 Sector: Trade and Industry

1.5 Beneficiary country: Ukraine

2. OBJECTIVES

2.1. Overall objective

The overall objective of the project is to further accelerate the approximation between Ukraine and the European Union in the area of space and to enhance legal, scientific and industrial cooperation to effectively deal with social, economic, scientific and environmental challenges.

2.2. Project purpose

The project purpose is to improve the capacity of the State Space Agency and space industry of Ukraine to actively participate and contribute to the European space initiatives, in particular in the field of satellite navigation (Galileo) and ERS (GMES).

2.3. Contribution to National Development Plan / Partnership and Cooperation Agreement (PCA) / European Neighbourhood Policy / European Neighbourhood and Partnership Instrument / Association Agenda

This Twinning project shall contribute to achieving the goals of the Agreement on Partnership and Cooperation between Ukraine and the European Communities, and specifically intentions and measures foreseen in the following articles:

- Article 65: "Bearing in mind the respective competences of the Community, its Member States and the European Space Agency the Parties shall promote, where appropriate, long-term cooperation in the areas of civil space research, development and commercial applications. The Parties will pay particular attention to initiatives making full use of the complementarity of their respective space activities".

- Article 52, point 3: "….the cooperation will concentrate on industrial cooperation, investment promotion and protection, public procurement, standards and conformity assessments, mining and raw materials, science and technology, education and training, agriculture and agro-industrial sector, energy, civil nuclear sector, environment, transport, space, telecommunications, financial services, money laundering, monetary policy, regional development, social cooperation, tourism, small and medium-sized enterprises, information and communication, consumer protection, customs, statistical cooperation, economics and drugs".

- Article 53: “the development of business links between economic operators of both sides, e.g. in view of the transfer of technologies and know-how”, “Community participation in Ukraine's efforts to restructure and technically upgrade its industry”, “the improvement of management”.

- Article 58: "The Parties shall promote cooperation in civil scientific research and technological development (R+TD) on the basis of mutual benefit and, taking into account the availability of resources, adequate access to their respective programmes and subject to appropriate levels of effective protection of intellectual, industrial and commercial property rights (IPR). Science and technology cooperation shall cover: the exchange of scientific and technical information, joint R+TD activities, training activities and mobility programmes for scientists, researchers and technicians engaged in R+TD in both sides".

Negotiations on a new and enhanced agreement between the EU and Ukraine were launched in 2007. This agreement will succeed the PCA. The Association Agreement (AA), including the Deep and Comprehensive Free Trade Area (DCFTA) part will significantly deepen Ukraine’s political association and economic integration with the EU. This project shall also facilitate the implementation of the Association Agenda, which stipulates that the Parties will establish a regular dialogue on the issues covered by the chapter on space in the Agreement. The AA foresees the following:"...The parties shall promote mutually beneficial cooperation in civil scientific research and space technology utilization, particularly in the following areas: the global navigation satellite systems; earth observation and global monitoring; space science and research; applied space technology".

Cooperation shall include information exchange on policies and programs of the Parties and relevant opportunities for cooperation and joint projects, including the participation of Ukrainian enterprises and organizations in the appropriate space and transportation call of the EU Framework Program for Research and Technological Development.

Strengthening Ukraine's participation in GMES will facilitate the implementation of the ENPI National Indicative Program for 2011-2013 in the area concerning cooperation in the field of environmental and climate changes.

On the other hand, the purpose of the recently adopted by the Ukrainian Government "Concept for public policy implementation in the field of space activities for the period to 2032" is to address critical problems of socio-economic, environmental, cultural, informational, scientific and educational development of the country. One of the tasks defined by the Concept is to transfer space technologies into the real economy, including meeting social needs in the field of remote sensing and satellite navigation and telecommunications services. Implementation of the Concept shall allow development of an economically sustainable, competitive, diversified space industry, including:

- a national system of geoinformational support and monitoring of emergencies as part of the European (GMES) and global (GEOSS) systems and providing information services operation for all interested users;

- a system of coordinate-time and navigation support of Ukraine by using information obtained from different global navigation satellite systems (from the USA, Russia, the EU, China), and distributing such information by terrestrial and satellite channels.

3. DESCRIPTION OF THE TWINNING PROJECT

3.1. Background

Currently, Ukraine is one of the leading countries in the global space industry with regard to its manufacturing facilities and research capacities. Following its independence, Ukraine has inherited a third part of the former Soviet Union's space capacities. In particular, the space industry of Ukraine includes 32 scientific, research and development institutions. Most of them are located in Kyiv, Kharkiv and Dnipropetrovsk. The main actors are:

- In Kyiv: Public Enterprise of Special Engineering "Arsenal", which is engaged in navigation systems, optics and optics-electronics, Production Association "Kyivprylad", which develops devices for space vehicles, Space Research Institute of NASU-SSAU conducting research in the field of remote sensing (RS) application and geographic information systems (GIS);

- In Kharkiv: Joint Stock Company "Khartron" developing control systems, and Joint-Stock Company "Research Institute of Radio Engineering Measurement" developing telemetry systems;

- In Dnipropetrovsk: State Enterprise "Design Office "Yuzhnoye" – development of launch vehicles and satellites, and State Enterprise "Production Association "Yuzhmash" – manufacturing launch vehicles and satellites.

The SSAU is a member of several international organizations and committees (see the List in Appendix 5).

Due to the fact that the potential of the Ukrainian space industry is too large for the domestic market, Ukraine considers the possibility of international cooperation, focusing on cooperation with the European Union. For this reason the SSAU has signed a cooperation agreement with the European Space Agency (ESA) and seeks cooperation with the space agencies of the EU Member States.

Participation of Ukraine in FP7 Space

Ukraine has been part of 53 proposals in the FP7 space theme (18 GMES related, 35 non-GMES related) and participates/has participated to 10 projects (3 in GMES, 7 non-GMES). The success ratio is globaly 1:5, which places UA in the average. The overall EC contribution received by UA participants is 1.8 M€, which places Ukraine at the level of Romania, and above 9 other EU27 MS.

In GMES FP7 funded projects, Ukraine is active in the marine service (MyOcean/MyOcean2), and on a project on Land monitoring (Operr).

EGNOS and Galileo

Cooperation between Ukraine and the EU in satellite navigation systems was included in the Agreement on Cooperation in the field of civil GNSS between Ukraine and the EU, and its Member States signed in Kyiv on 01.12.05.

As a part of the National Target Scientific and Technical Space Program of Ukraine, the System for Coordinate Time and Navigation Support of Ukraine (SKNZU) is being elaborated.

SKNZU is applied for:

- providing ongoing monitoring of navigation fields generated by GNSS GPS, GLONASS and Galileo in a future;
- forming of differential adjusting of the information to correct the navigation field, including the formation of information about their integrity;
- adjusting the differential distribution of information to Ukraine and other countries.

A part of SKNZU, after appropriate modifications, will be used in the ground segment of the European regional system EGNOS. Within September 2004 and April 2005 the CCS-1 (Kharkiv) was integrated into the test bed of EGNOS system (ESTB). It was proved that the accuracy of coordinate determinations in Ukraine reached by Ukrainian CCS meets the accuracy of EGNOS in Western Europe.

The Agreement on cooperation between Ukraine and EU to create and develop the civil global navigation satellite system signed in 2005 provides the basis for joint activities in this area. As the first step of participation in the Galileo project, it's necessary to ensure expansion of the European regional satellite navigation system EGNOS throughout Ukraine. In February 2012, the identification mission was completed aimed at determining the possibility of expanding EGNOS into Ukraine. The mission identified the basic needs of potential clients and the main sectors that could benefit from the EGNOS extension.

GMES

Since 2000, European countries have implemented the global space-based observations system in order to preserve the environment and security GMES (Global Monitoring for Environment and Security), which contributes to the GEOSS (Global Earth Observation System of Systems). GMES system is composed of a set of distributed means for ground, air and space-based observation and operating systems for delivering information to users at various levels. Currently the GMES implementation is aimed at a development of space and ground components. The suppliers of space remote sensing satellite data are represented by ERS satellites of the European Space Agency, Germany, France, Italy and other European countries.

Ukraine has declared its intention to participate in development and operation of GMES. After launching "Sich-2" spacecraft Ukraine can contribute to development and informational filling of GMES and provide an organic integration of the national system of remote sensing into the European and global structures. During this period, the advanced samples of onboard equipment have been developed for filming the Earth's surface in the optical range of the electromagnetic spectrum and measuring the ionosphere parameters, while modernizing and adjusting the work of ground infrastructure of the spacecraft flight, hardware for satellite data receiving and processing. The main research activities of this system include the following areas:

- monitoring of crops;
- informational support for risk management (especially in relation to forest fires and floods);

• monitoring the surface and the seaside of Azov and Black seas;

• space weather and atmospheric monitoring;

• load on the environment, especially water contamination and landslides.

3.2. Interrelated activities

INTAS

October 19, 2005 the SSAU, CNES and INTAS signed a protocol on announcement of the joint call on the development of space technologies. The call was primarily focused on basic research, but the offers included practical activities too.

The total budget was equal to EUR 1.2 million, which included EUR 500,000 allocated by INTAS, EUR 500,000 by CNES, and EUR 200,000 by the SSAU. The selected research teams had to include at least two groups from INTAS participating countries and at least one group from the Commonwealth of Independent States (CIS). 25 highly ranked proposals were presented and 11 of them were selected recently for funding (including 7 with Ukrainian organisations).

Bistro

Tacis funded three consecutive "Bistro" projects, which were implemented during the period 2001-2006. The "Bistro-1" resulted in development of general recommendations concerning space technologies commercialization (2002). The "Bistro-2" project resulted in development of specific recommendations for the protection of intellectual property rights. An implementation plan for a Technology Transfer Center was also developed (2004-2005). Links between leading Ukrainian space companies and their European partners were established and the joint R&D projects started as a result of the third Bistro project.

Sea Launch/World Bank

The Consortium of American banks allocated a credit of 100 Mio. USD to the "Sea Launch" project subject to guarantees of the World Bank against political risk in Ukraine. To ensure this process the State Space Agency of Ukraine prepared the following international agreements:

• the agreement between Ukraine and the European Bank for Reconstruction and Development on a counter-guarantee against political risks (signed on December 30, 1997);
• the Agreement between the Government of Ukraine and the "Sea Launch" Company on support of the project (signed on December 16, 1997);

• the agreement between the Government of Ukraine and Government of the United States of America on protection of technologies related to launches by Ukraine of U.S. licensed commercial spacecrafts (signed on March 6, 1998).

• the agreement between the Government of Ukraine and Government of the United States of America on the protection of technologies related to the Ukrainian launch vehicles, missile equipment and technical data for the "Sea Launch" project (signed on September 29, 1999).

Twinning project "Boosting Ukrainian space cooperation with the European Union"

In March 2010, the Twinning project "Boosting Ukrainian space cooperation with the European Union" was completed. During the project period the team of 42 experts from

space agencies of France and Germany held a continuous dialogue with Ukrainian specialists. Over 60 events have been organized in Ukraine, France and Germany, and over 1,600 people participated.

The project was carried out in the following areas:

- International and national space legislation
- EU Framework Program for Research and Technological Development,
- Industrial Policy and the Norms and Standards for rocket and space technology
- Human resources and personnel management,
- Participation in the use and commercial application of the EU Galileo program,
- Participation in the Global Monitoring for Environmental and Security (GMES).

During the project realization, the contacts were established with key space players from the European Commission, European Space Agency and national space agencies of the Member States. In addition, a SWOT-analysis of space industry was carried out and recommendations provided for the development and restructuring of the space industry. The analysis of space laws of Ukraine has been executed. The draft Law amending the Law "On space activities" was elaborated, and afterwards adopted by the Parliament of Ukraine on 13.05.2010. A system of annual reporting by the State Space Agency of Ukraine was developed in accordance with the European practices. The SSAU introduced ongoing measures aimed at improvement of the personnel management system and implementation of procedures and practices of advanced management for civil servants. A National Contact Point "Space" of the 7th EU Framework Program for Research and Technological Development (FP-7) was established and support was provided for Ukrainian space industry scientists.

The EGNOS navigation system expansion study was carried out between 2008 and 2011on the whole territory of Ukraine. In March 2012 the identification mission of the European Commission was completed, which provided report on the possibility of expanding EGNOS throughout Ukraine.

The next Twinning project shall continue and develop the achievements of the previous projects.

3.3. Results

This Twinning project shall promote an active participation of Ukraine in two of the most dynamic developing space areas in Europe: Earth remote sensing and satellite navigation. Project’s results shall facilitate establishment of the Ukrainian-European cooperation in these areas and a development of the Ukrainian space sector to ensure greater impact of space technologies on the state's economy. The following results should be achieved:

<u>Component 1</u>. Analysis of present legislation in the field of space sector and drafting new laws in line with the EU norms and practices.

Ukraine has a well developed legal framework in the space area. At the same time, Ukraine is constantly developing it according to the best international practices. Therefore, one of the main objectives of this project is harmonization of the Ukrainian legal framework with

the EU standards and practices, which shall lead to more effective cooperation between the EU and Ukraine in the space sector.

***Result 1*. The draft law "On state regulation in the field of satellite navigation", based on the best European practices and standards, is elaborated.**

For the time-being the satellite navigation activities in Ukraine have not been sufficiently legally regulated. The need for further development of domestic production of equipment and satellite navigation hardware, applicable satellite navigation informational systems, development and regulation of the internal market for navigation informational services, providing navigation informational independence and national security requires development of state regulation mechanisms in this area.

***Result 2*. The draft law "On activities in the field of the Earth Remote Sensing", based on the best European practices and standards, is elaborated**.

The problem of a lack of legislative regulations of various business aspects of remote sensing has escalated and become extremely important after launching the national ERS satellite "Sich-2". The plans of future launches of similar spacecraft and for cooperation with the EU in joint use of the ERS space data require the approximation of space laws of Ukraine in remote sensing to the European standards. The legislation in the field of the ERS should regulate a remote sensing systems functioning, distribution and processing, as well as ways of reliability confirmation of the information products derived from data processing.

***Result 3*. Recommendations to encourage Public-Private Partnership in the space area are developed.**

With limited budget financing, raising funds from other sources is extremely important for further development of space activities. One of the ways to attract additional funds is an application of public-private partnership schemes. The existing legal framework in Ukraine does not allow application of this approach in space related activities. The project is expected to analyze the existing legal framework to elaborate a draft law that would encourage implementation of such approach in the space industry. Representatives of the space industry together with the International Centre for Space Law should be involved in this activity.

Component 2. Strengthening the institutional capacity of the State Space Agency of Ukraine to participate in the European research and space programs (including GMES and EGNOS/Galileo).

***Result 4*. The institutional capacity to implement EGNOS / Galileo systems in Ukraine and extension of cooperation in the GMES Programme is strengthened.**

Implementation of the EGNOS/Galileo systems in Ukraine and extension of cooperation between Ukraine and the EU within the framework of the GMES require structural reforms in the SSAU, necessary for successful realization of joint projects in the space high-tech areas. Recommendations shall be elaborated to implement technical regulations on service providing systems in satellite navigation and remote sensing areas in Ukraine; to adopt national standards in this area, harmonized with the European ones; to approve the regulations on the interaction organization between the SSAU subordinate organizations – operators of satellite services and central authorities and other state agencies.

Result 5. The institutional capacity of the Ukraine's space industry to participate in the HORIZON-2020 Programme is strengthened.

The new European Program for Research and Innovation HORIZON-2020 will start in 2014 and will include opportunities for mutually beneficial cooperation between Ukrainian and European organizations. An experience of the previous Twinning Project demonstrated high effectiveness of capacity building activities aimed at stimulating active participation of the SSAU in the EU research Framework Programs.

Result 6. Recommendations on improving project management in the SSAU are developed.

In a significant number of the space projects implemented in the SSAU the initially planned budget and the time allocated are underestimated. One of the reasons is weak efficiency of the present project management methodology used by the SSAU. In order to facilitate effective implementation of projects, primarily international projects in remote sensing and satellite navigation area, the recommendations ("roadmap") should be developed to establish a special office for project management at the SSAU. The "road map" should include such issues like project office' objectives, its structure and key business processes. In addition, the document should contain a description of organization changes in the SSAU facilitating establishment and operation of the new office.

Result 7. Recommendations to develop Public-Private Partnership schemes to implement space programs in remote sensing, satellite navigation and telecommunications according to the best European practices are developed.

The experience of the EU countries demonstrated high efficiency of the public-private partnership schemes in satellite navigation, telecommunications and remote sensing areas. Ukraine has a lack of mechanisms to promote such schemes. The recommendations should highlight among others ways of motivating private capital to participate in such schemes.

Result 8. Marketing plan to support development of internal market for space services in Ukraine is elaborated.

The inexistence of a developed internal market for ERS services, satellite navigation and telecommunications is one of the reasons for significant imbalance between available space capabilities of Ukraine and limited exploitation of the sector's potential. It is expected that the Contractor will analyze the current situation and elaborate an action plan to support development of the market for space services in Ukraine.

Component 3. Strengthening professional skills in remote sensing, satellite navigation, satellite communications and broadcasting.

Result 9. Professional skills in remote sensing, satellite navigation, satellite communications and broadcasting are strengthened.

It is expected that the Contractor will prepare a training needs assessment report. Based on these findings it will present a plan for staff development in the areas of remote sensing, satellite navigation, satellite communications and broadcasting

In addition, the Contractor will support the SSAU in developing a training road map to fulfill the tasks and meet requirements presented in a draft of the National Target-Oriented Scientific and Technical Space Program of Ukraine for 2013-2017.

3.4. Activities

The project envisages strengthening institutional capacity of the SSAU in order to further accelerate the approximation between Ukraine and the European Union in the area of space and to enhance legal, scientific and industrial cooperation and development. in the field of satellite navigation (Galileo) and Earth Remote Sensing (GMES) to effectively deal with social, economic, scientific and environmental challenges.

In order to achieve the results referred to in paragraph 3.3 the following measures should be conducted (below action plan is tentative).

Component 1. Analysis of a present legislation in the field of space sector and drafting new laws in line with the EU norms and practices

Result 1. The draft law "On state regulation in the field of satellite navigation", based on the best European practices and standards, is elaborated.		
Activities	**Input**	**Output**
Activity 0 Kick off meeting to launch the project activities Final meeting to conclude the project and analyse the results achieved	Indicative 2 STE * 2 days (2 missions)	
Activity 1.1 **Analysis** of existing legal and regulatory framework, definition of regulatory requirements. Review of the best legal practices in satellite navigation of the EU Member States	Indicative 2 STE * 5 days (3 missions)	Report with recommendations and conclusions
Activity 1.2 **Elaboration of the draft** Law "On state regulation in satellite navigation", according to the European practices.	Indicative 2 STE * 5 days (2 missions)	The draft Law "On state regulation in satellite navigation"
Activity 1.3 **Round table** discussion on the draft Law	Indicative 2 STE * 5 days	Report with recommendations and conclusions
Activity 1.4 **Revision of the draft** Law "On state regulation in the field of	Indicative 2 STE * 5 days	The revised draft Law "On state regulation in the field of satellite navigation"

satellite navigation," taking into account the round table conclusions		
<u>Result 2.</u> The draft law "On activities in the field of the Earth Remote Sensing", based on the best European practices and standards, is elaborated.		
Activity 2.1. **Analysis** of existing legal and regulatory framework, definition of regulatory requirements. Review of the best legislation practices on remote sensing of the Member States	Indicative 2 STE * 5 days (3 missions)	Report with recommendations and conclusions
Activity 2.2. **Elaboration of the draft Law** "On activities in the field of Earth Remote Sensing" relevant to the European practices.	Indicative 2 STE * 5 days (2 missions)	Draft Law “On state regulation of satellite navigation”
Activity 2.3 **Round table** discussion on the draft Law	Indicative 2 STE * 5 days	Report with recommendations and conclusions
Activity 2.4 **Revision of the draft Law** "On activities in the field of Earth Remote Sensing" including conclusions of the round table	Indicative 2 STE * 5 days	Revised Law of Ukraine "On activities in the field of Earth Remote Sensing"
<u>Result 3.</u> Recommendations to encourage Public-Private Partnership in the space area are developed.		
Activity 3.1 **Analysis** of existing legal and regulatory framework, definition of regulatory requirements. Review of the best legal practices in satellite navigation of EU Member States	Indicative 2 STE * 5 days (3 missions)	Report with recommendations and conclusions
Activity 3.2 **Elaboration of the draft** Law, which would regulate public-private partnership	Indicative 2 STE * 5 days (2 missions)	Draft Law

schemes in the space area in accordance with the best European practices.		
Activity 3.3 **Round table** discussion on the draft Law	Indicative 2 STE * 3 days	Report with recommendations and conclusions
Activity 3.4 **Revision of the draft Law** on public-private partnership schemes in the space sector, taking into account the results of the roundtable	Indicative 2 STE * 5 days	Revised draft Law

<u>Component 2.</u> Strengthening the institutional capacity of the State Space Agency of Ukraine to participate in the European research and space programs (including GMES and EGNOS/Galileo).

<u>Result 4.</u> The institutional capacity to implement EGNOS / Galileo systems in Ukraine and extension of cooperation in the GMES Programme is strengthened.		
Activity 4.1. **Analysis** of the SSAU activities on using EGNOS / Galileo systems in Ukraine taking into account the results of Identification Mission «Assessment on a possible extension of EGNOS coverage to Ukraine» and preparation of recommendations	Indicative 2 STE x 5 days (3missions)	Report with recommendations and conclusions on the establishment and organization of the operator services for EGNOS / Galileo systems in Ukraine
Activity 4.2 **Round table** discussion on recommendations on the organization of government control of satellite navigation activities.	Indicative 2 STE * 7 days	Report with recommendations and conclusions
Activity 4.3 **Revision of the recommendations** including comments and conclusions from the roundtable	Indicative 2 STE * 7 days	Report with recommendations and conclusions
Activity 4.4. **Study tour** to the space agencies of the EU Member		Study tour report Dissemination report

States, operators of satellite navigation services, ground infrastructure facilities of Galileo: control centers, control stations over satellite constellation, control receiving stations for studying the best practices and experience.		
Activity 4. 5. **Analysis** of the SSAU and Ukrainian space activities in the field of remote sensing. Draft proposal on Ukraine's participation in GMES	Indicative 2 STE * 5 days (2 missions)	Report with recommendations
Activity 4.6. **Round table** on defining participation opportunities for Ukraine in the GMES system.	Indicative 2 STE * 5 days (1 mission)	Report with recommendations and conclusions
Activity 4.7 **Elaboration of a draft Regulation** for Ukraine's participation in the GMES system and its approval	Indicative 2 STE * 5 days (2 missions)	Draft Regulation of Ukraine's participation in the GMES system. Printing of full color brochure
Activity 4.8. **Study tour** to the space agencies of the EU Member States, European ERS data centers and operators in order to learn the best practices and experiences of interaction between governmental agencies with commercial service operators and customers.		Study tour report Dissemination report
Activity 4.9. **Internship** for relevant staff of the SSAU at the Space Agency of the EU Member State aimed at studying the experiences of state regulation of satellite navigation and remote sensing activities.		Acquiring knowledge and experience of state regulation in the field of Earth remote sensing and satellite navigation.
Result 5. The institutional capacity of the Ukraine's space industry to participate in the HORIZON-2020 Programme is strengthened.		
Activity 5.1. **Workshop** to review new calls of the HORIZON-2020.	Indicative 2 STE * 4 days (1 mission)	Workshop Report

Activity 5.2 **Training** for the SSAU's officials and representatives of the industry to increase quality of the HORIZON-2020 proposals.	Indicative 2 STE *5 days	Ratio of applied/ successful proposals submitted within the HORIZON-2020 Program
Activity 5. 3. **Support of STE** in partners search	Indicative 2 STE * 5 days (2 missions)	Number of international consortiums to submit the HORIZON-2020 programme Prepared proposals to participate in Calls
<u>Result 6.</u> Recommendations on improving project management in the SSAU are developed.		
Activity 6.1. **Review and analysis** of business processes and procedures related to the implementation of projects in the SSAU. Preparation of report on the current situation of project management.	Indicative 2 STE * 5 days (1 mission)	Report with recommendations and conclusions
Activity 6.2. **Workshop** on reviewing the best practices on project management.	Indicative 2 STE * 5 days (1 mission)	Workshop Report
Activity 6.3. **Elaboration of a Roadmap** on establishing project management office at the SSAU for the purpose of bringing project management processes to the European practices and standards.	Indicative 2 STE * 5 days (2 missions)	Roadmap for establishing project management office at the SSAU
Activity 6.4. Traineeship in Space Agency of EU Member State for a complete understanding and exchange of experience in project management and its application (STE 6).		Acquiring knowledge and experience on best practices of space project management

<u>Result</u> 7. Recommendations to develop Public-Private Partnership schemes to implement space programs in remote sensing, satellite navigation and telecommunications according to the best European practices are developed.		
Activity 7.1 **Workshop** for representatives of the SSAU and the industry to review the procedures and best practices on application of public-private partnership schemes in implementation of European space programs	Indicative 2 STE * 4 days (1 mission)	Workshop Report
Activity 7.2 **Elaboration of recommendations** on public-private partnership schemes in implementation of space programs in remote sensing and satellite navigation.	Indicative 2 STE * 5 days (1 mission)	Report with recommendations
Activity 7.3 **Training** on the use of public-private partnership schemes for the SSAU and representatives of the industry, under participation of interested organizations in order to improve training and skills.	Indicative 2 STE *4 days (1 mission)	Knowledge and skills of the SSAU employees in applying the PPP schemes
<u>Result</u> 8. Marketing plan to support development of internal market for space services in Ukraine is elaborated.		
Activity 8.1 **Review and analysis** of the internal market of space services in Ukraine and marketing activities of the SSAU. Report on the current situation	Indicative 2 STE * 7 days (1 mission)	Report on current status of internal market of space services in Ukraine and marketing activities of the SSAU
Activity 8.2 **Workshop** with representatives of the marketing department of the SSAU and the industry on best European practices to promote space services market	Indicative 2 STE * 4 days (1 mission)	Workshop Report

Activity 8.3 **Elaboration of a marketing plan** for the development of domestic market of remote sensing, satellite navigation and satellite communications and broadcasting.	Indicative 2 STE *5 days (2 missions)	Marketing plan for the internal market of space services Printing full color brochure

<u>Component 3.</u> Strengthening professional skills in remote sensing, satellite navigation, satellite communications and broadcasting.

<u>Result</u> 9. Professional skills in remote sensing, satellite navigation, satellite communications and broadcasting are strengthened.		
Activity 9.1. **Analysis** to identify training needs for employees of the SSAU and the industry	Indicative 4 STE *5 days (1 mission)	Training needs assessment report
Activity 9.2. **Elaboration of a Training road map** to fulfill the tasks and meet requirements presented in a draft of the National Target-Oriented Scientific and Technical Space Program of Ukraine for 2013-2017	Indicative 4 STE *5 days (1 mission)	Training Plan

3.5 Means/Input from the Partner Administration

3.5.1. Profile and tasks of the Project Leader

The MS Project Leader should be a high-ranking civil servant.

Role:

- The Project Leader will direct, co-ordinate, and control the overall thrust of the project. He/she will lead the activities of the project, ensure the achievement of the mandatory results, and be responsible for the implementation of the activities.
- The Project Leader is expected to devote a minimum of three days per month to the project. In addition, s/he should co-ordinate, from the Member State side, the Project Steering Committee (PSC), which will meet in Ukraine at least every three months.

Tasks:

- The overall coordination of the project;
- The achievement of mandatory results;

- The organisation of working groups, if needed;
- The organisation of the good communication and coordination with beneficiary and stakeholders.

Profile:

Qualification and skills

• University diploma in economics, engineering, business or any other specialization that corresponds to this position;

• Fluency in written and spoken English;

• Good interpersonal skills;

• Excellent analytical and managerial qualities;

General professional experience

• Long-term civil servant or equivalent from a MS administration;

• At least 10 years of professional experience;

• Experienced project manager, demonstrating good record in organisational leadership, staff motivation, and communication;

• Experience in international activities and multilateral arrangements.

Specific professional experience

• At least 7 years experience in a managerial position in the space sector.

3.5.2. Profile and task of the RTA

The RTA, under the guidance of the PL, will lead the work of the team and will work on a daily basis with BC staff to implement the project, to support and co-ordinate the activities in the BC and to ensure continuity of implementation. The RTA is expected to ensure, together with the SSAU counterparts, the achievement of the general and specific objectives, the expected results and the indicative performance indicators of Twinning. The RTA will provide 21 months' input on site (including leave) and will be based in the premises of the SSAU. His / her knowledge should include the issue of general legislation, sufficient experience on technical issues, preparation and implementation of space policy, management, opportunities and relationships with the industry sector.

RTA tasks (list is not exhaustive):

- Overall direction and supervision of the project implementation and coordination of all activities according to the agreed work plan;
- Management of the project administration;
- Permanent contact with the national Project Director;
- Coordinate and supervise Short-Term experts;
- Advising on management and organisation of the SSAU;
- Act as contact part and liaison with the PAO and the EU Delegation;

- Prepare reports;
- Ensure the quality of manuals and printed outputs;
- Ensure effective and optimal utilization of available resources.

RTA Profile:

Qualifications and skills

• University diploma in economics, engineering equipment, business or any profession, corresponding to that position;

• Excellent English, written and oral, both spoken and written. Command of Russian/Ukrainian language would be an asset;

• PC literacy;

• Excellent analytical and managerial qualities.

• Good interpersonal skills.

General professional experience:

- At least 5 years of professional experience in relation with the specific domains covered by the fiche;
- Experienced project manager, demonstrating good record in organisational leadership, staff motivation and communication;
- Experience in organizing and conducting trainings.

Specific professional experience

• Previous experience as project coordinator/project manager in projects of similar importance and size would be an asset.

The RTA may have one assistant and one interpreter hired for the twinning project. The assistant and interpreter will be recruited before the start of the Twinning project and will be remunerated under the budget of the project. The profile of the RTA assistant and interpreter will be specified by the RTA and agreed with the Sector Manager from the EU Delegation following the provisions of the Common Twinning Manual (revision 2012).

3.5.3. Profile and tasks of the short-term experts

A team of **Short-Term Experts (STE)** from the MS will be required in each component.

The number of STEs required in any particular component will depend on the nature of the detailed methodology being followed. The indications given below are purely indicative.

It is emphasised that each member of the MS team will have an appropriate counterpart in the SSAU, and the responsibility for attainment of the project results will be shared between them. The overall approach to the project places a high value on action-learning, and a key task of each and every member of the MS team will be to make their contribution to this capacity-building process.

Detailed Terms of Reference for STEs will be elaborated by the selected MS in cooperation with the SSAU.

Qualifications and skills of STEs:

- University Degree or equivalent level in law/economics or equivalent relevant to the mission;
- Command of Russian/Ukrainian language would be a strong asset;
- PC Computer literacy;
- Good interpersonal skills;
- Excellent team-working skills;

General professional experience:

- Civil servant or equivalent seconded to work by EU MS Administration for at least 5 years;
- At least 7 of professional experience.

Specific professional experience defined for each STE below:

TYPE	**PROFILE**
Expert(s) on space legislation	Experience in drafting and analysing legislation relating to satellite navigation, remote sensing, use of public-private partnership schemes in space sector
Expert on the Research Framework Programmes	Excellent knowledge of the framework research programs of the European Commission At least 3 yeas experience in organizing and conducting trainings
Expert on GMES Program	Excellent knowledge of the GMES program
Expert on EGNOS, Galileo programs	Excellent knowledge of EGNOS/Galileo programs
Expert on Project Management	Excellent theoretical and practical knowledge of project management methodology
Expert on Public Private Partnership	Experience in applying the schemes of public-private partnership
Expert on marketing	At least 3 years of experience in Experience in marketing activities

4. INSTITUTIONAL FRAMEWORK

The State Space Agency of Ukraine shall be the main recipient of services under this project.

After proclaiming Ukraine's independence in August 1991, the National Space Agency of Ukraine (NSAU) was established in February 1992 aimed at:

• development of conceptual foundations of state policy in the exploration and use of outer space for peaceful purposes and for the benefit of national security;

• organization and development of space activities in Ukraine and abroad, under its jurisdiction;

• participation in ensuring national security and defense capabilities;

• state support in commercialization of space activities;

• organization and development of cooperation between Ukraine and other countries and international space organizations.

In the course of administrative reform in 2011, the National Space Agency of Ukraine was renamed into the State Space Agency of Ukraine (SSAU).

The SSAU competences include:

- elaboration of the National Space Program with the National Academy of Sciences of Ukraine and other relevant departments and agencies;
- submission to the Cabinet of Ministers of the National Space Program budget;
- contracting and implementing projects in the exploration and use of outer space, the development and design works for space technology for both domestic and for international projects;
- conduction and coordination of launches, spacecraft control, satellite data receiving and processing;
- licensing of space activities;
- responsibility for the operation and development of Space Technology Certification System of Ukraine, the registration of space objects;
- management of the state enterprises under its responsibility;
- development of scientific and technical policy of space communications systems, television and radio broadcasting;
- participation in drafting international space agreements and representation of Ukraine in the international organizations dealing with peaceful use of outer space;
- space activity security supervision;
- transfer of space technologies and their commercialization;
- development of risk insurance system for space activities.

The organizational structure of the SSAU is highlighted in the Annex 3.

The implementation of planned activities under the project may require changes in the organizational structure of the SSAU.

5. BUDGET

The total budget allocated to the Twinning Project is EUR 1,450,000.

6. IMPLEMENTATION ARRANGEMENTS

6.1 Implementing Agency responsible for tendering, contracting and accounting:

The Implementing Agency responsible for tendering, contracting and accounting is the European Commission represented by the Delegation of the European Union to Ukraine. The person in charge of this project at the Delegation of the European Union to Ukraine is:

Ms. Svitlana Didkivska, Project Manager
Delegation of the European Union to Ukraine
10 Kruhlouniversytetska Street
Kyiv, 01024, Ukraine
Tel.:+380 (44) 390 80 10
Fax: +380 (44) 253 45 47
E-Mail: Svitlana.Didkivska@eeas.europa.eu

The Programme Administration Office (PAO) under the Main Department of the Civil Service of Ukraine is an administration responsible for coordination of the preparation of Twinning projects and support for their implementation, provision of advisory and methodological support to public authorities in preparation and implementation of Twinning projects. The person in charge at PAO in Ukraine are:

Mr. Viacheslav Tolkovanov
Head of the National Agency of Ukraine on Civil Service
Director of Twinning Programme Administration Office
15, Prorizna str., Kyiv, 01601, Ukraine
Tel.: +380 (44) 279 29 26
Fax: +380 (44) 278 51 91
E-mail: Vyacheslav.Tolkovanov@nads.gov.ua
Website address: www.twinning.com.ua

PAO Project Coordinator:
Mr Serhiy Kopan
Project manager
15, Prorizna str., Kyiv, 01601, Ukraine
Tel.: +380 (44) 279 29 26
Fax: +380 (44) 278 51 91
E-mail: serhiy.kopan@center.gov.ua

6.2 Main counterpart in the Beneficiary Country

Ukrainian Project Leader, **Mr. Serhiy Zasukha**
Deputy Head of the State Space Agency of Ukraine

8, Moskovska str.
Kyiv, Ukraine, 01010
tel. +380442816200
fax: +380442816209
yd@nkau.gov.ua
http://www.nkau.gov.ua

The Ukrainian Project Leader (PL) will act as the counterpart of the Member State PL. In close cooperation with him/her, the Ukrainian Project Leader ensures the overall steering and coordination of the project, the operational dialogue and the backing at political level. The PL's seniority will ensure his ability to mobilise the necessary staff in support of the efficient implementation of the project. He will also coordinate the Project Steering Committee from the Ukrainian side.

RTA Counterpart – **Mr. Lev Semenov**
Head of Scientific Space Research and Telecommunication Systems Department

8, Moskovska str.
Kyiv, Ukraine, 01010
tel. +380442816290
fax: +380442816209
semenov@nkau.gov.ua

RTA Counterpart

The RTA Counterpart will work with the RTA on a daily basis to ensure proper coordination and implementation of all the activities of the project and achieve an efficient transfer of knowledge. He will be responsible, together with the RTA, for finalising the reports to be submitted to the Project Leader as for the Project Steering Committee.

6.3 Contracts

There will be one Twinning Contract with a selected EU MS. Several MS may form a consortium.

7. SCHEDULE OF IMPLEMENTATION

7.1 Launching of the call for proposals: 10/ 2012

7.2 Start of project activities: 06/2013

7.3 Project completion: 05/2015

7.4 Duration of the implementation period: 21 months

8. SUSTAINABILITY

The achievements of the Twinning Standard Project (Mandatory Results) will be sustainable. They will be maintained as a permanent asset to/of the Beneficiary Administration as a result of the following:

Readability and practicality of deliverable documents:
Deliverable documents that have nature of practical guidelines, should be prepared in a manner that avoids excessive amounts of universal declarative statements, but rather practical step-by-step instructions that are logically grouped, easy to follow and possible to implement or execute in practice, so that they can be used as quick reference handbook in further practical work.

Human resources
Measures should be applied to avoid turnover of skilled personnel in the SSAU and drainage into private sector, including those participating in training trips abroad. The exact measures should be discussed with leadership of the SSAU.

The sustainability issues will be further elaborated in the course of the project as a joint responsibility of the MS partner and BC institution. Besides, in the final report twinning partners will include specific recommendations for safeguarding the achievement of mandatory results in the beneficiary administration.

The dissemination of project results and institutionalising obtained knowledge will be integrated into all levels of the project. Effective mechanisms are put in place by the BI to disseminate and consolidate the results of the project.

9. CROSSCUTTING ISSUES

The proposed project will comply with EU equal opportunity policies. Equal treatment of men and women in project implementation at all levels will be one of the most important principles in project management and implementation. Great attention will be given to having equal participation within the personnel that will be trained as well. The beneficiaries are employers of equal opportunity. Appropriate professional qualifications and experience will be the main decisive factors in personnel recruitment and evaluation. Both women and men have identical prospects.

10. CONDITIONALITY AND SEQUENCING

The following contributions expected from the beneficiary institution are regarded as important preconditions of the successful implementation of the project:

- The Twinning project receives high level political and professional support by the leaders of the SSAU;
- Strong involvement/commitment of the SSAU staff at all levels;
- Assigning/employing the necessary personnel to activities connected with the project;
- Ensuring the BI is assigning an operational PSC to monitor that all components of the Twinning project are executed within the time schedule of implementation;
- Ensuring coordination between institutions connected with the project;

- Ensuring access to the all necessary information and documents in accordance with legislation in force;
- Supply of office accommodation, equipped with computer, telephone, internet access, printer to MS in-country staff and visiting experts;
- Providing suitable venues and equipment for training sessions and seminars that will held under the project.

Annexes

Annex 1. Logical Framework Matrix

Annex 2. Detailed Schedule of Implementation

Annex 3. SSAU's Organization Chart

Annex 4. Membership in international organizations and committees

Annex 5. List of relevant laws and regulations

Annex 1: Tentative Logical Framework Matrix – to be further elaborated by the Contractor

LOGFRAME PLANNING MATRIX FOR Twinning Project Fiche:	Programme name and number: ENPI Action Programmes 2010 for Ukraine		
	Contracting period expires:	Disbursement Period expires:	
	Duration of the implementation period: 21 months	Total budget: EUR 1,450.000	
Overall Objective	**Objectively verifiable indicators**	**Sources of verification**	
To further accelerate the approximation between Ukraine and the European Union in the area of space and to enhance legal, scientific and industrial cooperation to effectively deal with social, economic, scientific and environmental challenges.	Development of cooperation with Europe in space field Increasing the impact of the Ukrainian space sector on the economic and social development		
Project Purpose	**Objectively verifiable indicators**	**Sources of verification**	**Assumptions**
The project purpose is to improve the capacity of the State Space Agency and space industry of Ukraine to actively participate and contribute to the European space initiatives, in particular in the field of satellite navigation (Galileo) and ERS (GMES).	The new legislation developed The recommendations and action plans developed Increased skills of the SSAU staff		Continuous state support of space activity Continuous commitment by SSAU and all stakeholders Political sustainability and stability Responsiveness and adaptability of all the contractors to a changing context and circumstances Necessary legislative provisions, administrative arrangements and adequate resources are available

Mandatory Results	**Objectively verifiable indicators**	**Sources of verification**	**Assumptions**
Result 1. The draft law "On state	1 round table	SSAU's Annual Report	Active participation of the SSAU

Mandatory Results	Objectively verifiable indicators	Sources of verification	Assumptions
regulation in the field of satellite navigation" basing on the best European practices and standards is elaborated	Draft of the Law of Ukraine	Interim Project Reports Official mass media Draft of the law	staff Access of European experts to the necessary information and materials
Result 2. The draft law "On activities in the field of the Earth Remote Sensing" basing on the best European practices and standards is elaborated	1 round table Draft of the Law of Ukraine	SSAU's Annual Report Interim Project Reports Official mass media Draft of the law	Active participation of the SSAU staff Access of European experts to the necessary information and materials
Result 3. Recommendations to encourage Public-Private Partnership in the space area are developed.	1 round table Draft of the Law of Ukraine	SSAU's Annual Report Interim Project Reports Official mass media	Active participation of the SSAU staff Access of European experts to the necessary information and materials
Result 4. The institutional capacity to implement EGNOS / Galileo systems in Ukraine and extension of cooperation in the GMES Programme is strengthened.	2 round tables 2 study tours 1 internship Recommendation concerning: establishment and organization of the operator services for EGNOS / Galileo systems in Ukraine; draft Regulation for Ukraine's participation in the GMES system	SSAU's Annual Report SSAU's orders Interim Project Reports SSAU's web-site	Active participation of the SSAU staff Access of European experts to the necessary information and materials Active involvement of enterprises and organizations of space industry
Result 5. The institutional capacity of the Ukraine's space industry to participate in the HORIZON-2020 Programme is strengthened.	1 workshop 1 training Number of proposals to the Horizon-2020 calls	Interim Project Reports SSAU's orders SSAU's Annual Report Data from CORDIS database SSAU's web-site	High interest and active involvement of enterprises and organizations of space industry Appropriate open calls of the Horizon-2020
Result 6. Recommendations on improving project management in the SSAU are developed.	1 workshop 1 intership Roadmap of the Project Management Office establishing	Interim Project Reports SSAU's orders SSAU's Annual Report	Active participation of the SSAU staff Access of European experts to the necessary information and

Mandatory Results	Objectively verifiable indicators	Sources of verification	Assumptions
			materials
Result 7. Recommendations to develop Public-Private Partnership schemes to implement space programs in remote sensing, satellite navigation and telecommunications according to the best European practices are developed.	1 workshop 1 training Recommendations for use of PPP schemes	Interim Project Reports SSAU's orders SSAU's Annual Report	Active participation of the SSAU staff Access of European experts to the necessary information and materials Active involvement of enterprises and organizations of space industry and commercial organizations
Result 8. Marketing plan to support development of internal market for space services in Ukraine is elaboarted	1 workshop Marketing plan developed and approved	Interim Project Reports SSAU's orders SSAU's Annual Report	Active participation of the SSAU staff Access of European experts to the necessary information and materials
Result 9. Professional skills in remote sensing, satellite navigation, satellite communications and broadcasting are strengthened	Training Plans developed Number of trained employees of SSAU	Interim Project Reports SSAU's Annual Report Training/Intership Reports SSAU's web-site	Active participation of the SSAU staff

Activities	Means (will be developed during the contract preparation)	Assumptions
0. Kick off and close of the project		
Activities for Result 1: 1. **Analysis** of existing legal and regulatory framework, definition of regulatory requirements. 2. **Elaboration of the draft** Law "On state regulation in satellite		Active participation of the SSAU staff Access of European experts to the necessary information and materials

Activities	Means (will be developed during the contract preparation)	Assumptions
navigation" ve 3. **Round table** discussion on the draft Law 4. **Revision of the draft** Law		
Activities for Result 2: 1. **Analysis** of existing legal and regulatory framework, definition of regulatory requirements. 2. **Elaboration of the draft** Law "On activities in the field of Earth Remote Sensing" 3. **Round table** discussion on the draft Law 4. **Revision of the draft** Law		Active participation of the SSAU staff Access of European experts to the necessary information and materials
Activities for Result 3: 1. **Analysis** of existing legal and regulatory framework, definition of regulatory requirements. 2. **Elaboration of the draft** Law of Ukraine, which would regulate the public-private partnership schemes in the space area 3. **Round table** discussion on the draft Law 4. **Revision of the draft** Law		Active participation of the SSAU staff Access of European experts to the necessary information and materials
Activities for Result 4: 1. **Analysis** of SSAU activities on using EGNOS / Galileo systems in Ukraine and preparation of recommendations		Active participation of the SSAU staff Active involvement of enterprises and organizations of space industry

Activities	Means (will be developed during the contract preparation)	Assumptions
2. **Round table** discussion of the prepared recommendations 3. **Revision of the recommendations** 4. **Study tour** 5. **Analysis** of SSAU and Ukrainian space industry activities in the field of remote sensing. 6. **Round table** on defining the participation opportunities for Ukraine in the GMES system 7. **Elaboration of draft Regulation** for Ukraine's participation in the GMES system and its approval 8. **Study tour** **9. Intership**		
Activities for Result 5: 1. **Workshop** 2. **Training** on increasing participation and success of proposals to the HORIZON-2020 3. **Support of STE** in partners search and preparing proposals to the upcoming calls.		Active participation of the SSAU staff Active involvement of enterprises and organizations of space industry
Activities for Result 6: 1. **Review and analysis** of business processes and procedures related to the implementation of projects in		Active participation of the SSAU staff Active involvement of enterprises and organizations of space

Activities	Means (will be developed during the contract preparation)	Assumptions
SSAU. 2. Workshop on reviewing the best practices of EU Member States on project management 3. **Elaboration of a Roadmap** on establishing project management office at SSAU 4. Intership		industry Access of European experts to the necessary information and materials
Activities for Result 7: 1. **Workshop** to review best practices on application of public-private partnership schemes in implementation of European space programs 2. **Elaboration of recommendations** on the use of PPP schemes 3. **Training** on the use of PPP schemes for SSAU and representatives of the industry		Active participation of the SSAU staff Active involvement of enterprises and organizations of space industry Access of European experts to the necessary information and materials
Activities for Result 8: 1. **Review and analysis** of the internal market of space services in Ukraine and marketing activities of SSAU. 2. **Workshop** with representatives of the marketing services of SSAU and the industry 3. **Elaboration of a marketing plan** for the development of domestic market of remote sensing, satellite navigation and satellite communications		Active participation of the SSAU staff Active involvement of enterprises and organizations of space industry Access of European experts to the necessary information and materials

Activities	Means (will be developed during the contract preparation)	Assumptions
and broadcasting		
Activities for Result 9: 1. **Analysis** to identify training needs for employees of SSAU and the industry 2. **Elaboration of a Training Plan**		Active participation of the SSAU staff Active involvement of enterprises and organizations of space industry

Annex 2. Tentative Schedule of Implementation

Activities		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
RTA Arrival																						
Activity 0.																						
Activity 1.1.																						
Activity 1.2.																						
Activity 1.3.																						
Activity 1.4.																						
Activity 2.1.																						
Activity 2.2.																						
Activity 2.3.																						
Activity 2.4.																						
Activity 3.1.																						
Activity 3.2.																						
Activity 3.3.																						
Activity 3.4.																						
Activity 4.1.																						
Activity 4.2.																						
Activity 4.3.																						
Activity 4.4.																						
Activity 4.5.																						
Activity 4.6.																						
Activity 4.7.																						
Activity 4.8.																						
Activity 4.9.																						
Activity 5.1.																						
Activity 5.2.																						
Activity 5.3.																						
Activity 6.1.																						
Activity 6.2.																						
Activity 6.3.																						
Activity 6.4.																						
Activity 7.1.																						
Activity 7.2.																						
Activity 7.3.																						
Activity 8.1.																						
Activity 8.2.																						
Activity 8.3.																						

Activity 9.1.																						
Activity 9.2.																						
Project reporting																						

STE Support

Training

Intership

Study Tour

Workshop / Round Table

Annex 3 – SSAU Organization Chart

Annex 4 – Membership in international organizations and committees

- Eutelsat
- International Telecommunications Satellite Organisation (INTELSAT)
- Intersputnik
- Committee for Space Research (COSPAR)
- International Academy of Astronautics (IAA)
- International Astronautical Federation (IAF)
- International Society for Photogrammetry and Remote Sensing (ISPRS)
- International Astronautical Union (IAU)
- United Nations Committee for the Peaceful Uses of Outer Space (COPUOS)
- Intergovernmental Group on Earth Observation (GEO)
- Inter-Agency Debris Committee (IADC)
- International Space Sciences Working Group (ISSLSWG)
- Committee on Earth Observation Satellites (CEOS)
- International Telecommunications Union (ITU)
- Space Agency Forum (SAF)

Annex 5 – List of relevant laws and regulations

Part 1. NATIONAL REGULATORY LEGAL ACTS

Chapter 1. Laws of Ukraine

Constitution of Ukraine, adopted on the fifth session of the Supreme Council of Ukraine on 28 June 1996 (*extracts*);

Law of Ukraine: “About space activity” dated 15 November 1996, # 502/96-BP

Law of Ukraine: “About state support of space activity” dated 16 March 2000, # 1559-III

Law of Ukraine: “About entrepreneurship” dated 7 February 1991, # 698-XII (*extracts*)

Law of Ukraine: “About privatization of state property” dated 4 March 1992, # 2163-XII (*extracts*)

Law of Ukraine: “About insurance” dated 7 March 1996, # 85/96-BP (*extracts*)

Law of Ukraine: “About licensing of certain types of economical activity” dated 1 June 2000, # 1775-II (*extracts*)

Law of Ukraine: “About state control of international transfer of military and dual-use goods” dated 20 February 2003, # 549-IV

Law of Ukraine: “About priority directions of innovative activity in Ukraine” dated 19 May 2011 #3393-VI

Chapter 2. Regulatory legal acts of the President

Decree of the President of Ukraine “About establishment of the National Space Agency of Ukraine” dated 29 February 1992, # 117

Decree of the President of Ukraine “About actions for improvement of state regulation of space activity in Ukraine” dated 17 October 1995, # 969/95

Decree of the President of Ukraine “About the National Center for Airspace Education of Youth of Ukraine” dated 11 June 1996, # 410/96

Decree of the President of Ukraine “About the National Spacecraft Control and Testing Center” dated 12 August 1996, # 698/96

Decree of the President of Ukraine “About actions for further development of space technologies” dated 4 March 1997, # 202/97

Decree of the President of Ukraine “About Day of workers of the space industry of Ukraine” dated 13 March 1997, # 230/97

Decree of the President of Ukraine “About actions for increase of effectiveness of space activity” dated 27 October 1998, # 1190/98

Decree of the President of Ukraine “About actions for use of space technology for innovative development of the state economy” dated 6 February 2001, # 73/2001

Decree of the President of Ukraine “About distribution of authorities of central bodies of executive power in the field of military and technical cooperation with foreign countries” dated 20 March 2002, # 276/2002

Decree of the President of Ukraine “About actions for fulfillment of Ukrainian-Brazilian project in development of the Cyclone-4 Space Launch System” dated 15 July 2003, # 700/2003

Decree of the President of Ukraine “About representation of interests of Ukraine in the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization” dated 17 July 1998, # 402/98-рп

Decree of the President of Ukraine “ Issues of the State Space Agency of Ukraine” dated 8 April 2011 #442/2011

Chapter 3. Regulatory Legal Acts of the Cabinet of Ministers of Ukraine

Resolution of the Cabinet of Ministers of Ukraine “About establishment of united satellite system for information transfer” dated 2 December 1996, # 1434

Resolution of the Cabinet of Ministers of Ukraine “About implementation of actions for improvement of space technologies” dated 28 June 1997, # 649

Resolution of the Cabinet of Ministers of Ukraine “About actions for state regulation of space activity” dated 4 June 1998, # 798

Resolution of the Cabinet of Ministers of Ukraine “About actions for state support of space activity” dated 27 February 1999, # 276

Resolution of the Cabinet of Ministers of Ukraine “About implementation of the Law of Ukraine “About state support of space activity” dated 7 February 2001, # 131

Resolution of the Cabinet of Ministers of Ukraine “About approval of the list of documents added to statement on license issue for specific type of economical activity” dated 4 July 2001, # 756 (*extracts*)

Resolution of the Cabinet of Ministers of Ukraine “About approval of the list of central bodies of executive power responsible for technical regulation in specified areas of activity and development of technical orders” dated 13 March 2002, # 288 (*extract*)

Resolution of the Cabinet of Ministers of Ukraine “About approval of the order of state control on international transfer of dual-use goods” dated 28 January 2004, # 86

Decree of the Cabinet of Ministers of Ukraine “About actions for implementation by Ukraine of provisions of Hague Code of Conduct against Ballistic Missile Proliferation” dated 31 March 2004, # 185-р

Decree of the Cabinet of Ministers of Ukraine “About approving the list of paid administrative services provided by State Space Agency of Ukraine” dated 9 June 2011 #518-р

Decree of the Cabinet of Ministers of Ukraine “ On approval of the concept of public policy in the field of space activities for the period to 2032” dated 30 March 2011 #238-р

Resolution of the Cabinet of Ministers of Ukraine “Issues of import goods into the customs territory of Ukraine within parliament ratified international treaties (agreements) of Ukraine on the space activity of a space systems development without paying customs duties and VAT” dated 3 February 2010 #102

Resolution of the Cabinet of Ministers of Ukraine “ On adoption of the rules and compulsory insurance in space activity” dated 10 November 2010 #1033

Resolution of the Cabinet of Ministers of Ukraine “ Some issues of state regulation in satellite navigation” dated 9 September 2009 #959

Decree of the Cabinet of Ministers of Ukraine “About approval of the Concept of National Target Scientific and Technical Space Program of Ukraine for 2013-2017 years” dated 15 February 2012 # 79-p

Part II. INTERNATIONAL LEGAL DOCUMENTS

Chapter 1. Multilateral international agreements

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies; dated 27 January 1967

Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, dated 22 April 1968

Convention on International Liability for Damage Caused by Space Objects, dated 29 March 1972

Convention on Registration of Objects Launched into Outer Space, dated 14 January 1975

European Convention on Transfrontier Television, dated 5 May 1989

Protocol amending the European Convention on Transfrontier Television, dated 9 September 1998

Comprehensive Nuclear Test Ban Treaty, dated 24 September 1996 (*Extract*)

Note of the Ministry of Foreign Affairs of France to the Embassy of Ukraine to France on joining by Ukraine the Missile Technology Control Regime, dated 25 November 1998, # 1055/QA

Resolution “The Space Millennium: Vienna Declaration on Space and Human Development” adopted by the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held at Vienna from 19 to 30 July 1999

Partnership and Cooperation Agreement between the European Community and Ukraine, dated 14 June 1994

Cooperation Agreement on a Civil Global Navigation Satellite System (GNSS) between Ukraine and the European Community, its Member States, dated 01 December 2005

Chapter 2. International agreements within the framework of the Commonwealth of Independent States

Agreement on joint activity in research and use of outer space, dated 30 December 1991

Agreement on the order of maintenance and use of space infrastructure objects in the interest of implementation of space programs, dated 15 May 1992

Agreement on means of missile warning systems and control of outer space, dated 6 June 1992

Agreement on the order of financing of joint activity in research ad use of outer space, dated 13 November 1992

Protocol on approval of Provision about Interstate Council for Space, dated 13 November 1992

Chapter 3. Bilateral international agreements of Ukraine

Bilateral international agreements of Ukraine and the Russian Federation

Agreement between Ukraine and the Russian Federation on the order of warranty and author supervision of operation of strategic missile complexes of the strategic forces located on their territories, dated 3 September 1993

Agreement between the Government of Ukraine and the Government of the Russian Federation on industrial, scientific and technical cooperation of defense industry enterprises, dated 18 November 1993

Agreement between the Government of Ukraine and the Government of the Russian Federation on cooperation in standardization, metrology and certification, dated 14 March 1994

Agreement between the Government of Ukraine and the Government of the Russian Federation on cooperation in development and operation of space and rocket equipment, dated 8 February 1995

Agreement between the National Space Agency of Ukraine and the Russian Space Agency for commercial use of LV "Zenith" dated 6 February 1995

Agreement between the Government of Ukraine and the Government of the Russian Federation on cooperation in research and peaceful uses of outer space, dated 27 August 1996

Agreement between the Government of Ukraine and the Government of the Russian Federation on means of missile warning systems and control of outer space, dated 28 February 1997

Joint Statement of the President of Ukraine and the President of the Russian Federation, dated 31 May 1997

Agreement between the Cabinet of Ministers of Ukraine and the Government of the Russian Federation on transfer of goods in the framework of cooperation in exploration of outer space, development and operation of rocket and space equipment, dated 11 February 2001

Joint Statement of the President of Ukraine and the President of the Russian Federation on issues of expansion of cooperation in field of space and aviation equipment, dated 12 February 2001

Agreement between the National Space Agency of Ukraine, the Russian Space Agency, the National Academy of Sciences of Ukraine and the Russian Academy of Sciences on establishment of International Center of Space Law, dated 5 June 1998

Memorandum on cooperation between the Russian Airspace Agency and the National Space Agency of Ukraine in activities on standardization of space equipment, dated 12 February 2001

Agreement between the National Space Agency of Ukraine and the Ministry of Defense of the Russian Federation on cooperation in the field of special control, dated 21 December 2001

Memorandum on cooperation between the National Space Agency of Ukraine and the Russian Airspace Agency in the field of development of global navigation satellite systems, dated 14 February 2003

Protocol between the Ministry of Defense of Ukraine and Ministry of Defense of Russian Federation on intentions in the sphere of military and military-technical cooperation in space activities dated 25 November 1995;

Agreement on the application of exclusive rights of "Sea Launch Limited Partnership" to use the LV during commercial launches from the Baikonur cosmodrome, dated 29 December 1997;

Agreement between the Government of Ukraine and Government of the Russian Federation on cooperation in the use and development of the Russian global navigation satellite system GLONASS, dated 17 May 2010;

Bilateral international agreements of Ukraine with other countries

Treaty between Ukraine and the Federative Republic of Brazil on long-term cooperation in utilization of the Cyclone-4 Launch Vehicle at the Alcantara Launch Center, dated 21 October 2003

Joint Declaration on results of the official negotiations between the President of Ukraine Leonid Kuchma and the President of the Federative Republic of Brazil Luiz Inacio Lula da Silva, dated 21 October 2003

Memorandum of Understanding between the National Space Agency of Ukraine and the Brazilian Space Agency on perspective joint space projects, dated 21 October 2003

Agreement between the Government of Ukraine and the Government of the Federative Republic of Brazil on safeguards of technologies related to participation of Ukraine in launches from the Alcantara Launch Center, dated 16 January 2002

Agreement between the Government of Ukraine and the Government of the Turkish Republic on cooperation in research and use of outer space, dated 19 December 2001

Memorandum between the National Space Agency of Ukraine and Brazilian Space Agency on cooperation on the use of Ukrainian launch vehicles at Alcantara Launch Center, dated 16 January 2002

Framework Agreement between the Government of Ukraine and the Government of the Federative Republic of Brazil on cooperation in peaceful uses of outer space, dated 18 November 1999

Agreement between the Government of Ukraine and the Government of Israel on cooperation in research and peaceful uses of outer space, dated 22 January 2001

Agreement between Ukraine and the United States to assist Ukraine in the elimination of strategic nuclear weapons and prevent proliferation of weapons of mass destruction, dated 25 October 1993

Agreement between the Government of Ukraine and the Government of the United States of America on safeguards of technologies related to launch of US licensed commercial spacecraft by Ukraine, dated 6 March 1998

Framework Agreement between Ukraine and the United States of America on cooperation in the exploration and use of outer space for peaceful purposes, Dated 31 March 2008

Agreement between the Government of Ukraine and the Government of Republic of Kazakhstan on research and peaceful uses of outer space, dated 14 October 1997

Agreement between the Government of Ukraine and the Government of Chinese People’s Republic on cooperation in research and peaceful uses of outer space, dated 4 December 1995

Framework Agreement between the Government of Ukraine and the Republic of Belarus on cooperation in the exploration and use of outer space for peaceful purposes, dated 12 June 2009

Framework Agreement between the Government of Ukraine and the Republic of Azerbaijan on cooperation in the exploration and use of outer space for peaceful purposes, dated 9 April 2009

Declaration of intent of cooperation in space exploration between Ukraine and the Republic of Argentina, 27 October 1995

Framework Agreement between Ukraine and the Government of the Argentine Republic on cooperation in the field of outer space for peaceful purposes, dated 02 October 2006

Agreement between the Cabinet of Ministers of Ukraine and the Government of India on cooperation in the exploration and use of outer space for peaceful purposes, dated 02 June 2005

Agreement between the Government of Ukraine and Government of the Republic of Korea on cooperation in the use of outer space for peaceful purposes, dated 18 December 2006

Agreement between the State Space Agency and the Ministry of Education, Science and Technology of the Republic of Korea to establish a joint Ukrainian-Korean Committee for cooperation in the use of outer space for peaceful purposes, dated 7 December 2011

Framework Agreement between Ukraine and the Government of Algeria People's Democratic Republic on cooperation in the exploration and use of outer space for peaceful purposes, dated 5 December 2007

Framework Agreement between Ukraine and the Government of the Arab Republic of Egypt on cooperation in the exploration and use of outer space for peaceful purposes, dated 9 April 2008

Framework Agreement between the Government of Ukraine and the Government of Indonesia on cooperation in the exploration and use of outer space for peaceful purposes, dated 6 November 2008

Agreement between the Government of Ukraine and Government of the Kingdom of Saudi Arabia on cooperation in the exploration and use of outer space for peaceful purposes, dated 3 November 2010

Framework Agreement between the Government of Ukraine and the Government of Peru on cooperation in space activities, dated 30 May 2011

Coordination Agreement between the Administration of Communications of Ukraine and Administration of Communications of France, serving as recording administration of the intergovernmental satellite organizations EUTELSAT (confidential), dated 24 February 2012

Agreement between the Government of Ukraine and the Government of the Republic of Turkey on cooperation in the exploration and use of outer space, dated 19 December 2001

Chapter 4. International Treaties of Ukraine with international organizations

Agreement between the Cabinet of Ministers of Ukraine and the Preparatory Commission for the Comprehensive Nuclear-Test Ban Treaty Organization on the Conduct of Activities, Including Post-Certification Activities Relating to International Monitoring Facilities for the Comprehensive Nuclear-Test Ban Treaty, dated 17 September 1999

Agreement between the Cabinet of Ministers of Ukraine and international organization for space communication INTERSPUTNIK on cooperation in use of satellite communication networks, dated 24 September 1998

Agreement on establishing the International System and Organization of Space Communications "Intersputnik", dated 15 November 1971

Agreement on legal capacity, privileges, immunities of the International Organization of Space Communications "Intersputnik", dated 20 September 1976

Operating Agreement of the International Organization of Space Communications "Intersputnik", dated 21 November 2002

Charter on a Distinctive Partnership between Ukraine and the North Atlantic Treaty, dated 9 July 1997

Hague Code of Conduct against Ballistic Missile Proliferation, dated 29 June 2002

Agreement between the Cabinet of Ministers of Ukraine and the European Space Agency on cooperation in the use of outer space for peaceful purposes, dated 25 January 2008