



REGIONE BASILICATA

**Overview of the involvement of local Research
Organisations, Enterprises, Universities in
national and international projects on Earth
Observation applications and services.**

(Earth Observation, Satellite Navigation and Telecommunication)

GEOCART LTD

ORGANISATION PROFILE AND EXPERIENCE

Section 1 - Contact details

Organisation Name (full name)	GEOCART LTD
Organisation acronym (Abbreviation)	GEOCART
Address	VIALE DEL BASENTO, 120
Postal code	85100
City	POTENZA
Region	BASILICATA
Country	ITALY
www address	WWW.GEOCART.NET

Contact person:	
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Section 2 – Type of organisation

If you are an Enterprise

Enterprise type	<input checked="" type="checkbox"/> Private <input type="checkbox"/> Non profit	Is your Company a Small-Medium sized Enterprise (SME)?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/> Public <input type="checkbox"/> Other		if YES, Number of Employees <input type="checkbox"/> < 10 <input checked="" type="checkbox"/> > 10 and < 50 <input type="checkbox"/> < 250
<p>According to Article 2 of the annex of Commission Recommendation 2003/361/EC of 6 May 2003, which applies from 01 January 2005, an SME (Micro, Small or Medium-sized Enterprise) is an enterprise which:</p> <ul style="list-style-type: none"> • has fewer than 250 employees, • has an annual turnover not exceeding 50 million euro, and/or • an annual balance-sheet total not exceeding 43 million euro. 			
Owned by a non SME:		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Description of the organisation (max 1.000 characters):			
<p>Geocart was founded in 1995 to carry out engineering activities as well as services regarding environment, health and energy, to give technical assistance to bodies and business concerns in the sustainable management of environmental resources and in promoting the overall quality of processes and products, through consulting activities and assistance, planning activities, development and transfer of innovative technologies. The collecting and analysis of geographical data-base and the building-up of GIS-based systems represent the nucleus which the activities are developed around. At present employs approximately 17 people and is organised into 5 different Divisions which deal with IT, EO, R&D, Energy and international co-operation. Among the principal clients and partners we can distinguish private and public administration like Ministries, Local Authorities, Regional Administrations, National Council of Research, Italian National Institute of Health and with several Universities.</p>			
Staff information			
<p>Actual Staff profiles involved in EO activities is composed by civil engineers, environmental engineers, electronic engineers, geologists, forests, physicists, economists, surveyors, topographers and operational employees.</p>			

If you are a Research Organisation

Research Organisation type	Research Organisation (<input type="checkbox"/> Private <input type="checkbox"/> Public) High Education School / University / Institute (<input type="checkbox"/> Private <input type="checkbox"/> Public) <input type="checkbox"/> Other, please specify:
Description of the organisation (max 1.000 characters):	
Staff information	

Section 3 - Description of your main expertise and activities in the field of Earth Observation Technologies

Areas of expertise (max 2.000 characters)	<p>Geocart has developed activities aimed to:</p> <ul style="list-style-type: none"> - remote sensing campaign by using satellite and aerphotographic data for environmental monitoring; - airborne LiDAR surveys in order to produce large-scale topographic maps and very accurate and dense 3-D data over the ground (bare-earth and vegetation as well); - RTD Projects aimed to set up integrated system aimed to arrange database, analysis and delivering environmental data and GIS for environmental monitoring and related WEB-site; - Standardize and develop methodologies for the monitoring of the earth's crust deformations with the use of interferometric technical from SAR data (ERS1, ERS2, ENVISAT); - Definition of a multi-source approach for coastline mapping and identification of shoreline changes by using cartographic data, satellite imagery (SPOT-PX, Landsat-TM, Corona) and aerial photo. <p>Moreover, Geocart has realized MAPping an integrated multi-sensor platform that can be installed on fixed-wing aircraft and on helicopter. MAPping assures the territorial survey with wide coverage in short time. It can operate in two configurations: mounting on the same platform: Laser Scanning, Digital Camera and Thermo Camera; otherwise mounting: Laser Scanning, Digital Camera and Hyperspectral cameras. All sensors are synchronized via hw&sw with a Position system (GPS-INS). MAPping integrates positioning active and passive sensors for highly accurate 3D laser measurements of the earth's surface. The platform is open to the integration with other sensors.</p> <p>Geocart has acquired a strong experience in the management of complex international projects, funded by different EU Programmes, aimed to support the transition countries towards the implementation of European Directives into environmental, civil protection and health sectors.</p> <p>GEOCART is certified UNI EN ISO 9001:2008 and is affiliate to the National Researches Registry of the Italian Ministry of Research, Identification Code 51912 RTH.</p>
Keywords describing the activities performed by the organisation (if needed more than one)	<ol style="list-style-type: none"> 1. LiDAR 2. Remote Sensing 3. Hyperspectral data 4. GIS 5. Interferometric technique 6. Energy

Section 4 – List of Projects implemented in the last 5 years

Project	New Technology for the Made in Italy"- Trade 2015
Title	Development of a energetically independent system for the reading of water meters
Project Acronym	N/A
Source of funding / Programme	National funding
Status	In negotiation
Role of the organisation	Partner
Responsible	Shitek Technology srl
Duration	36 months
Content	Main project objective is to develop a energy-independent solution for remote reading of water meters and for the control of chemical and physical parameters. The system will be able to send the readings to the water service operator, obtaining the energy needed for the data transmission by ' kinetic' energy of water itself, with the help of a mini-high efficiency turbine placed inside the pipe upstream of the meter.
Website	N/A

Project	Trade Innovation "Energy Efficiency"
Title	Ecopyrogas -Technological Area - Bio-energy and energy production from waste
Project Acronym	N/A
Source of funding / Programme	National Funding
Status	In progress
Role of the organisation	Partner
Responsible	Energy Recuperator spa
Duration	From (10/2009) to 10/2012
Content	Project objective is the realization of a pilot project for the production of electric power by the technology of the biomass gasification.
Website	N/A

Project	Call 2007 - Italian Spatial Agency: "Announce of Opportunity for COSMO-SkyMed"
Title	A software tool in order to process SAR stripmap data and calculate the map deformation with subcentimetric precision
Project Acronym	N/A
Source of funding / Programme	National funding
Status	In progress
Role of the organisation	Coordinator
Responsible	Geocart srl
Duration	From 02/2010 to 02/2012
Content	Over the last few years GEOCART has developed its own methodology, called "SLIDE" (Sar Land Interferometry Data Exploitation), in order to produce displacement maps of the territory by processing ERS data. This methodology was developed following the initial approach of the Persistent Scatterer Interferometry (PSI) methodologies. As a consequence, the work made will be carried on with the present project which aims at adapting the SLIDE to process CosmoSkyMed-acquired SAR data by using (as innovative element) also a high-resolution DEM acquired by the Geocart

	airborne Lidar and artificial passive Corner Reflectors for a wider use. The main project activities are the adjustment-test of the whole processing chain, then the design and installation in Potenza of few Corner Reflectors and the application of a "new SLIDE methodology" on the two Test Sites in Basilicata.
Website	N/A

Project	
Title	Check of movement of art works and buildings in the historic center of Rome.
Project Acronym	N/A
Source of funding / Programme	Private funding
Status	Completed
Role of the organisation	Subcontractor
Responsible	Center of Integrated Geomorphology for the Mediterranean Area - CGIAM
Duration	From 01/2007 to 03/ 2008
Content	Application of innovative remote sensing methodologies for the determination of sub-centimetric movements in order to evaluate the building stability and the risk of collapse by interferometric technique.
Website	N/A

Project	FP7-ICT-SEC-2007-1
Title	Integrated System for Transport Infrastructures surveillance and Monitoring by Electromagnetic Sensing
Project Acronym	ISTIMES
Source of funding / Programme	FP7
Status	In progress
Role of the organisation	Associate partner
Responsible	Technologies for Earth Observations and Natural Hazards - TERN
Duration	From 07/2009 to 07/ 2012
Content	The main purpose of ISTIMES project is to design, assess and promote an ICT-based system, exploiting distributed and local sensors, for non-destructive electromagnetic monitoring in order to achieve the critical transport infrastructures more reliable and safe. This has the overall aim to developing a high situation awareness by providing detailed information and images of the infrastructure status in a fast time and so to improve decision support for emergency and disasters stakeholders. The integration of electromagnetic technologies with new ICT information and telecommunications systems enables remotely controlled monitoring and surveillance and real time data imaging of the critical transport infrastructures. The project exploits different non-invasive imaging technologies based on electromagnetic sensing (optic fiber sensors, Synthetic Aperture Radar satellite platform based, hyperspectral spectroscopy, Infrared thermography, Ground Penetrating Radar, low-frequency geophysical techniques, Ground based systems for displacement monitoring). Sensor cross validation, synergy and new data fusion and correlation schemes will permit a multi-method, multi-resolution and multi-scale electromagnetic detection and monitoring of surface and subsurface changes of the infrastructure.
Website	http://www.istimes.eu

Project	EuropeAid
Title	SYSTEM FOR THE ANALYSIS OF TRAIN TRACK CONDITIONS
Project Acronym	EuropeAid/128325/C/SER/RS
Source of funding / Programme	IPA 2008
Status	In progress
Role of the organisation	Subcontractor
Responsible	Italferr Spa
Duration	From 10/2010 to 10/2013
Content	<p>Improve planning of maintenance functions and harmonise the parameters of Serbian railways to European standards, facilitating interoperability and raising capacity to higher managerial and technical level.</p> <p>Survey and establish the exact location of selected infrastructure assets, measuring and monitoring the existing conditions.</p> <p>Design a modern Railway Management System (RMS), define optimal Maintenance & Renewal (M&R) works and run a pilot test.</p> <p>Capacity building for the Serbian Railways managers and engineers regarding the Track Maintenance Management and RMS.</p> <p>Assist in preparation of tender documentation for procurement of RMS and M&R.</p>
Website	N/A

Project	TWINNING
Title	Strengthening of state supervision and monitoring system of exposure to electromagnetic fields
Project Acronym	PL2005/IB/SO/01
Source of funding / Programme	PHARE
Status	Completed
Role of the organisation	Associate partner
Responsible	Italian Ministry of Health
Duration	From 02/2007 to 05/2008
Content	<ul style="list-style-type: none"> • Reinforcement of the state supervision of electromagnetic field (EMF) exposure monitoring system in Poland by increasing the capacity of regional structure of the Chief Sanitary Inspectorate (the existing network of 16 voivodship sanitary stations) and the Chief Labour Inspectorate (state labour inspectorates) – through providing high-quality training, consultations and promotion; • Implementing the EU methodology and practice in the state system of protection against EMF and strengthening its work; • Improving competencies of the state sanitary inspection (SSI) personnel, the state labour inspection (SLI) personnel, scientific and didactic units and bodies of opinion in the scope of workers and population and the third bodies' safety and health protection through courses implementing the EU methodology and practice in the state system of protection against EMF.
Website	N/A