

Ref no:	Project title		SCIER: Sensor & Computing Infrastructure for Environmental Risks								
	Country	Overall contract value (€)	Proportion carried out by Epsilon	No. of staff provided	Name of Client	Origin of Funding	Dates [start/end]	Consortium members if any			
	GREECE	2.091.000€	21,68%	5	EU	EU	24.01.2014 24.01.2016	1			
Project Description						Type of Services Provided [Outlined]					
 Expected Results The SCIER system will assist the citizens to profit from a better security against natural or man made hazards, and to respond in time in order to reduce the potential damage to their property. Most important, SCIER introduces an integrated concept that can have a strategic impact in the way citizens view environmental risks, to their well-being. A SCIER prototype integrates state-of-the-art sensors (e.g., vision sensors, wireless sensor networks with low energy requirements) with networking and computing infrastructure. SCIER will be demonstrated and evaluated in four European regions (Greece, France, Czech Republic, and Portugal). Such regions have suffered in the past from forest fires and/or floods.			The Problem: The WUI (Wild land-Urban Interface) is the area or zone where structures and other human development meet or intermingle with wild land vegetation. This area can be considered to be a zone where the probability of fire occurrence and flooding is by definition higher than in other areas such as plain rural zones or remote areas of poor accessibility. WUI has not been the main focus of contemporary geo-sciences and has been overlooked by operational activities related to natural hazards. Most of the existing systems (ICT for hazardous events management) focus either on the urban area, or on the wild land area. Moreover, most of the hazard and industrial accidents are monitored, controlled and managed by the government sector (e.g., civil protection authorities, ministries, agencies). There is little effort known, where the private sector (e.g., house owner, security company) truly participates in the monitoring of the events. Project objectives: SCIER is implementing a multi-risk management platform, characterized by an open architecture based on EU standards, which incorporates different models that share common data inputs and deliver standardized outputs that can be visualized and analysed via a GIS user-friendly environment. SCIER system is a sophisticated support tool which promotes the public-private sector cooperation and involves the private sector (e.g., house/land owner, security-company) as an "active player" in the WUI zone protection and the monitoring of hazardous events. Methodology and Key Technologies For the Wildland-Urban Interface (including inaccessible locations, forests, and canyons of the country-side) SCIER: ✓ Integrates wide and local area sensor network infrastructures (and management techniques). They are targeted to assisting real time monitoring of disastrous events at the urban-rural-interface. ✓ Integrates via a GIS-infrastructure, existing mathematical environmental models and prediction mechanisms for diverse and interrelated hazards — they are linked to the sensor networks and are capable of depicting the dynamics of the evolving hazardous phenomena. The system is operational on GRID principles. ✓ Develops an integrated platform for processed real time information delivery—It has the mission to integrate processed real time data acquisition, real time simulated information via modelling, and any other type of real time information. ✓ Develops the localized early warning system and related communication infrastructure—They have the mission to deliver real-time information to citizens, authorities, emergency bodies, and other types of civil protection means.						Services-Deliverables • Environmental Component: Study and selection of the relevant environmental hazards and the corresponding models, proper parameterization of the models • Sensors, Communications and Alerting: Design of the Sensing Sub-system, the communication architecture, the Alerting Subsystem and the Local Area Controlling Unit • Models and Sensor Fusion: “GRIDification” of environmental models, sensor fusion and prediction mechanisms, design of the Computing Sub-system architecture • Platform Integration, Testing & Validation: Integration of Sensing, Computing and Alerting Subsystems, testing and validation of the platform • Field Trials: Deployment and configuration for trials in URI sites • Evaluation and Impact Assessment: Technical and socio-economic evaluation, review strategy. Key Words natural or man made hazards, strategic impact, risks, integrated platform, warning system, real time , mathematical models Reference D. Kallidromitou & M. Bonazountas		

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