



***Critical Response In Security and
Safety emergencies***

PROJECT FINAL REPORT

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Name of the scientific representative of the project's co-ordinator¹, Title and Organisation:

Nicola Iarossi, Program Manager, European Organization for Security

Tel: +32 2 7770255

Fax: +32 2 7758112

E-mail: nicola.iarossi@eos-eu.com

Project website address: <http://www.crisys-project.eu/>

¹ Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

4.1 Final publishable summary report

Executive summary

The EU regularly suffers from natural and man-made disaster, the social and economic consequences of which may adversely affect its growth and competitiveness. There is evidence of a growing vulnerability to disasters and subsequently an urgent need to improve the operational capabilities of the Member States. Furthermore, the Lisbon Treaty has enlarged the role of the EU and allows stronger coordinated activities for support to crisis management outside the EU.

Though the EU Civil Protection policy is increasingly targeting the prevention of crisis, these cannot always be avoided and they are affecting citizens with greater frequency.

The CRISYS project aim was to assist the population, environment, economy and, in general, the whole society by helping to achieve better protection and a more rapid return to a reasonable quality of life in the aftermath of a crisis.

The project constituted the first phase of a two-phased R&D activity aimed at demonstrating in a real environment the possibility to adopt a scalable and interoperable systems for the European Civil Protection; the phase 1 part of the activity has developed a roadmap for a demonstration project to be undertaken in phase 2, while also creating a wider network of interested stakeholders.

Although most of the main technologies for crisis management are reasonably available, Civil Protection and crisis management are not typical research issues. Key emphasis has therefore given in this project to developing close contact with local and national administrations and first responders to validate what and how to deploy innovative solutions. Accepting that research and development must continuously innovate as threats evolve we have concentrated upon providing insight into existing and developing solutions in a common demonstration environment. One major challenge has been to link approaches, technical solutions, procedures, standards etc. for civil protection to allow for a faster and more appropriate response to natural and man-made threats in EU countries and if needed abroad.

The CRISYS project therefore covers the role that Europe intends to adopt subsequent to the implementation of the new Lisbon Treaty and also considers a stronger civil-military mutual support (technologies, operations).

Summary description of project context and objectives

The CRISYS project's objective was to develop a demonstration action of an integrated and scalable crisis management system capable of providing comprehensive situational awareness to decision makers to ensure a timely, coordinated and effective response to large-scale disasters.

The project aims were to assist the population, environment, economy and, in general, the whole of society by helping achieve better protection and a more rapid return to a reasonable quality of life in the aftermath of a crisis. Key emphasis was given to developing close contact with local and national administrations and first responders to validate what and how to deploy innovative solutions.

Description of the main S&T results/foregrounds

Part of the FP7 Research Programme, the CRISYS project has over 16 months studied EU emergency aftermath arrangements, with the aim of developing a strategic roadmap capable of full implementation as an integrated and scalable crisis management system. Uniquely this study has considered response inside and outside Europe from the perspective of the End User to capitalise on existing relevant experience and available assets while forging solid networks and wide awareness with crisis management actors, be they first responders, governments, suppliers or other participants within this field.

It is well recognised that the crisis management business process involves multilayered interaction between many actors, each having distinctive responsibilities and all operating within challenging circumstances and time frames. One consequence is that those exercising judgment and making decisions in this complex environment require a resilient yet agile framework that can meet their multiple needs at many different emergency events; events that are sometimes not wholly predictable and may extend from hours to years.

Focused upon these demands the CRISYS team determined to concentrate upon the twin issues of capabilities and domains. This was because a solution framework that could meet these twin demands could be universally applied in practice. Initially eight capabilities: communications-situational awareness-command and decision support-logistics and resource planning-deployment in harsh environments-search and rescue-medical care-restoration of basic services; and four domains: operations-assets-education and information technology communications; were identified.

The research has confirmed the relevance of these two foundation principles, adding detail and priority to the domain components. Unsurprisingly the study has also qualified the absolute integral importance of information, often simply referred to as data, and data communication, which we call the information highway.

In addition to this connective use of information we have consolidated into three distinct sectorial tiers; users - those having jurisdictional responsibility - the command and control leaders-and the technology support used. Using all of these elements – information – capabilities – domain – and sector, the business architecture of crisis management has then been visualised in one innovative and homogeneous CRISYS Concept Model.

The CRISYS Concept Model has at its very centre the use of data and information and this has been translated into a CRISYS Operating Model. Using these two models a demonstration roadmap has been constructed to allow validation of the proposed concepts, methodologies and solutions within the real physical environment through practical exercises. Three operational scenarios are suggested each containing different specific requirements. They are: (a) the deployment of resources into a remote rural area, similar to but not replicating humanitarian aid delivery outside Europe; (b) response over an extended duration in a highly urbanized community that experiences partial loss of the critical infrastructure; and (c) a short duration event entailing an aerial toxic release in an urban geographically and politically divided location.

The validation process encompassed by these scenarios is deliberately constructed to permit a variety of solutions to be evaluated using a toolbox approach. Hence first responders to situational analysts may use different hand-tools, or alternative data communication systems might be deployed dependent upon the needs of mobile or static headquarters. Underlying this approach is the desire expressed by study respondents to build up the capacity of components through integration of existing capabilities and enhancing their interoperability rather than by seeking to drive a new singular uniformity.

This approach also reflects the dynamic nature of an event where needs change throughout the emergency time cycle, just as the immediacy of finding the nearest resources becomes supplanted by a requirement to find more sustainable longer term resources. Furthermore this holistic crisis management process is reinforced by the inclusion of significant learning opportunities for professionals and citizens.

The CRISYS Models incorporates the wide range of static and dynamic information and data transactions required and the essential need to incorporate legacy systems within a system of system type approach designed to enhance the value and usefulness of the collated information.

The CRISYS project recommendations, present an interesting and challenging view, being both confirmatory yet also demanding fundamental reinterpretation of the established practices. The objective throughout has been to improve European response in the aftermath of crisis, even where response to some events is so well practiced that some judge improvement unnecessary. The stimulation throughout has been to gain advantage from the better use of the people, processes, information and technology already on offer.

Potential impact (including the socio-economic impact and the wider societal implications of the project so far) and main dissemination activities and exploitation of results.

As part of the WP5 activities, dissemination of the results achieved have been specially targeted via the establishment and constant contents upgrade of the specific website, promotions of the project contents and findings at the moments during the national meetings and in separate meetings with DG-ECHO and DG- ENT in Brussels.

Promotions of the projects concepts and discussions on the topics have been promoted also in companies present in the Supplier Advisory Board list, during the two international workshop and the final conference held during the project as well as in other public conferences concerning the emergencies management topic, including the specific workshop “Toward a demonstration programme on crisis and disaster management” organized by the European Commission (DG-ENT) at the beginning of 2012.

The main result, the CRISYS roadmap, has been intended, in his preliminary form, to support the discussion at the above mentioned DG-ENT workshop and in its final deliverable as a guide to address and support researchers and evaluator during the preparation and the execution of the second phase.

Address of the project public website and relevant contact details

website: *www.crisys-project.eu*

contact: *Mrs. Sophie Batas (sophie.batas@eos-eu.com)*
 Mrs. Nadège Grard (nadege.grard@eos-eu.com)

4.2 Use and dissemination of foreground

Section A (public)

Spreading excellence, exploiting results, disseminating knowledge

The process for spreading excellence, exploiting results and disseminating knowledge about the CRISYS project has involved and will continue to involve all consortium partners.

The dissemination of the acquired knowledge has involved and will continue to involve different activities in order to raise awareness to as wider as possible European Community forum.

The Special clause 24 on limited dissemination is included in the Consortium Agreement: Any foreground, generated in the course of the Project shall not be disseminated to any legal entity outside the existing consortium, unless agreed otherwise by the beneficiaries and the Commission; this rule will also apply to any affiliate or parent companies. However an attempt to find an agreement between the consortium partners and the Commission has been launched at the final conference in order to make available for the public the major project’s deliverables, the CRISYS roadmap.

The process will take two different phases, internal within the stakeholders and related partners and the dissemination of project activities and results to the outside audience.

User Advisory Board

A primary “internal” audience has been found in the CRISYS User Advisory Board. The User Advisory Board has been composed by a large and heterogeneous group of end users on the crisis management and civil protection domain, including Fire and Rescue, Civil Protection, Police, Health Services, Military or Crisis Management, under management of CTIF; the manager, alongside the CRISYS Project Manager have invited members of the board to take part in the CRISYS national meetings in their own countries where wide information on the project findings has been disseminated. The same has been done for their engagement in the envisage Workshops

The User Advisory Board will be heavily involved in the following topics:

- Definition of requirements and definition of procedures
- Analysis and definition of standards, norms and interoperability issues (not just technical interoperability but also organisational, procedural aspects)
- Validation of the strategic roadmap for future demonstration programmes

Disseminating results and knowledge

The dissemination of the knowledge generated by the CRISYS project has involved different communications tools. Although mainly based in the use of the Internet, other communications means included information materials, in-site visit to different Member States and EU Institutions, dedicated Workshops and the final Conference.

Visiting Member States

The CRISYS project visited, 9 different Member States with the objective to involve the participation of their national Crisis Management and Civil Protection actors. These meetings have been the basis to identify and outline their user requirements and operational procedures and policies, providing different and multifunctional views steaming from different countries. At the same time the meeting have been an excellent vehicle for discussing and disseminating around Europe the project findings at the date, create awareness on the phase II project and build a stakeholder networks interested in the development of the new European Civil Protection mechanism.

In addition to the users to have the opportunity to provide input for their requirements in aftermath crisis management, the meetings have been, in fact, an excellent venue to validate CRISYS findings and disseminate knowledge among interested stakeholders in order to provide an ulterior refinement for the strategic roadmap

Workshop

The Workshops with the different User Advisory Group and related end users have been also a key dissemination activity to spread the knowledge of the CRISYS project.

More specifically, the Validation Workshop has outlined the findings of WP3 and the initial outcomes of the required Strategic Roadmap; it acted as the first validation with the users following the gathering results from previous work and an excellent framework to check on the proposed integrated and scalable system and to envisage further opportunities; obtaining the audience feedback has been an important steps to improve CRISYS final recommendations whilst helping networking and disseminate activities.

Final Conference

At the end of the project, a final CRISYS Conference has been organised in order to present the work conducted and engage all the related stakeholders to provide input, comments, suggestions, etc. Feedback from the final Conference has been considered and incorporated in the final strategic roadmap for the demonstration programme.

The event, initially foreseen in Brussels has been held finally in Barcelona in order to add a further European member state to the set already “visited” by the CRISYS meeting, giving the possibility even to Spanish stakeholders to interact with the project findings; the opportunity given by the Generalitat De Catalunya, to visit its “Crisis information centre” in the venue, has been for the participants the possibility to touch by hand, technological, human, organizational aspects of the topic treated by the CRISYS project.

CRISYS Web Page

The World Wide Web has become an essential information channel. Its success is explained by the variety and multitude of information it makes available to a wide number of people anytime, anywhere, always. It has become indispensable for producers of information, particularly in the scientific and technical domains and therefore, the CRISYS project has used these advantages and potential to spread results worldwide.

Spreading awareness and knowledge gained during the CRISYS project has been performed and will be performed through a dedicated website, allowing partial access to all public results to European organisations and citizens and media. The website allows access to key messages about the project and its results, from all different audiences. Key elements included references to the project description, background of the partners, and information on progress and findings. The website has been proposed in every CRISYS meeting as point of reference for the updated information and has been exploited and publicise by proposing the link in the partners web sites.

CRISYS Publications

Brochure

At the beginning of the project the consortium partners have been provided with an electronic brochure and after first milestone, CRISYS has published a flagship brochure reflecting the status of the project which will continue to serve as a prestigious calling card for presentation to influential readers – European policy makers, national and local authorities, investors, industrial end users, media representatives...

The brochure:

- Provide an overview of the consortium and highlight the reputation and strengths of individual partners
- Provide the background and technological rationale for undertaking the initiative
- Indicate the targeted results and emphasise the scale of innovation expected to be achieved with regards to the future demonstration programme

- Predicted the likely long term impact in term of European cost-effectiveness and competitiveness and quality of life enhancement

For the final conference another specific brochure was published to summarise and give insight to the concepts behind the CRISYS strategic roadmap delivered by the project.

Published Articles

The CRISYS project is now attempting to engage the trade press in order to reach with its relevant public messages the wider civil protection community by producing some articles intended for publication. The press selected will be journal or magazine dealing with security issues. These articles will utilise the material developed for the brochure fostering on the main publishable messages.

Newsletter

The newsletter originally envisaged for when the final CRISYS messages will now be developed to update the information contained in the main project brochure. The newsletter will be published in the CRISYS dedicated website to inform individuals within the partner organisation and externally to its target audiences.

Poster

A poster has been produced prior to the final Conference; the aim has been to provide an eye catching and thought provoking presentation and to include contact and website details giving ready access to further information. The poster, if requested, could be supplied to relevant first responders and crisis management managers in their respective Member States, for events including reference to the project itself and its contents.

Participation at international and local Conferences

The CRISYS Consortium also presented and will continue to present the project status and results at a selected series of known major European conference and events on the topic. Participation to conferences on Security issues including energy networks has been considered as well.

The most relevant event where CRISYS has had the opportunity to present the updated findings and propose its preliminary suggestions as been the FP7 Security research workshop "Towards a demonstration programme on crisis and disaster management" organized on January 25th 2012 by DG-ENT, in preparation to the "Demo project Phase II".

Other international conferences and event selected for the CRISYS concept and public findings dissemination, worth mentioning are:

- SDA Conference, 10 February 2011, Brussels (Belgium)
- Fire Congress, 25 May 2011, London (UK)

- FEU Meeting, 27 May 2011, Cyprus
- IFE International Conference, 7 July 2011, Cardiff (UK)
- ACRIMAS project 2nd workshop: “Current Gaps and Needs in Crisis Management in Europe”, 7 September 2011, Prague (Czech Republic)
- CTIF Annual Symposium, 15 September 2011, Bergen (Norway)
- Volunteer Conference, 4 November 2011, Zurich (Switzerland)
- Pandora Conference 29 March 2012 London (UK)
- Critical infrastructure protection in energy and communication sectors. The International experience and national priorities, 4-6 April 2012, Bucharest (Rumania)
- PROTECTION OF CRITICAL INFRASTRUCTURE IN TRANSPORT FIELD COOPERATION BETWEEN THE PUBLIC SECTOR, BUSINESS AND CIVIL SOCIETY, May 24th 2012, Bucharest (Rumania)
- SET 2012, the 11th international conference on Sustainable Energy Technologies, 2-5 September 2012, Vancouver (Canada)
- CTIF European Symposium, 19 September 2012, Bratislava (Slovakia)
- INTERNATIONAL WORKSHOP ON EMERGENCY MANAGEMENT FOR CRITICAL INFRASTRUCTURES CRISES, 4 October 2012, Rome (Italy)
- European External Action ML12 Exercise, October 2012

Project findings and messages has also been addressed at national, local level; between the many events we could mention:

- Cyprus Safety Platform, Kick-off Meeting, 22 February 2012, Nicosia (Cyprus)
- Semana Aeroespacial 2012 no IST, 18 April 2012, Lisboa (Portugal)
- Projects and activities towards the future Crisys Demonstrator in Security Call, 28 May 2012, Madrid (Spain)
- ENERGY FORUM, May 30th 2012, Bucharest (Rumania)
- FORO CDTI sobre los PROYECTOS DEMOSTRADORES EN FASE 2 de la convocatoria de Seguridad 2012, 27/02/2012, Madrid (Spain)

Additional CRISYS Dissemination Strategies

In addition, printed publications will be distributed to audiences drawn from selected mailing list owned by project participants or from an specially prepared listed assembled with reference to industry directories, associations and other related crisis management sources; where appropriate, they can also be included as inserts into other mailings by the CRISYS Consortium, such as proposals and invitations to events.

Moreover, brochures and leaflets have been offered and will be offered in the future to site visitors and to participants in those related meetings, conferences and exhibitions where the Consortium partners might participate (including, when possible, those organised by third parties).

All the CRISYS dissemination strategies are targeted to emergency organisations (users), relevant EU bodies, media, industry and governments in different countries. In particular representative of the CRISYS consortium has met in different occasions representatives of the European Parliament and European Commission (DG ECHO, DG ENT) in order to disseminate information about the project, create awareness and receive the feedback from them.