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## **CIPRNet**

**Critical Infrastructure Preparedness and Resilience Research Network**

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**D8.6 Documentary movie for dissemination activities and for preparing a strategic campaign towards stakeholders and decision-makers in favour of EISAC**

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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# 1 Introduction

## 1.1 Scope

This document describes the key facts about the documentary movie to be produced for dissemination activities and for preparing a strategic campaign towards stakeholders and decision-makers in favour of EISAC, the European Infrastructures Simulation and Analysis Centre. In fact, EISAC will consolidate a large part of the past and current work performed in the CIP domain and thus can be seen as the ultimate, long term strategic objective of CIPRNet: the European framework for Critical Infrastructure Protection. The video is one of the actions taken by the CIPRNet consortium in the dissemination work package (WP8, [DoW]) aimed at spreading the CIPRNet outcomes to the relevant stakeholders.

## 1.2 Background

Since the first year of the project, the CIPRNet partners have devoted a great deal of effort to disseminate ideas and first (partial) results of the project in order to provide adequate visibility within the R&D community as well as with the stakeholders and to guarantee the perception of CIPRNet as an aggregating fulcrum addressing CIP R&D. All partners have worked on building a common vision, as well as a common vocabulary, and on promoting a common security culture among CI operators and Public Authorities.

The CIPRNet partners – while demonstrating the new capabilities acquired in improved knowledge, understanding, preparedness and mitigation of CI disruptions and their consequence – will go forward promoting the next step in their vision that is EISAC, its ambitions and the technological instruments which will boost its portfolio of assets and services. In order to achieve that, the Consortium identified in a documentary movie a crucial instrument for promoting EISAC, its technological capabilities and its functions as a basic European framework for Critical Infrastructure Protection. In fact the documentary movie, having images and audio text simultaneously available, is likely to be successful in capturing the attention and engaging the viewer.

## 1.3 Document structure

The document is organised as follows: Chapter 2 will summarize the CIPRNet vision to be conveyed in the documentary report, while Chapter 3 will provide more details about the movie, describing its main ideas, the chosen story, the target audience and the expected results. At the end, Chapter 4 will draw some conclusions on how the documentary movie will be used as an effective dissemination tool.

## 2 The CIPRNet vision

The CIPRNet project is mainly devoted to design and develop new technologies to support the protection and the enhancement of resilience of Critical Infrastructures (CIs). These goals can be achieved by specifically designing new tools enabling CI operators and emergency managers to carry out appropriate and efficient preparedness actions, to be trained on realistic training systems, to carry out a better analysis and control of CI during the daily operations and, particularly, when crisis situations are approaching.

The “system of systems” – which nowadays represents the best metaphor to describe the CIs – gives the idea of a fully entangled complex system, formed by elementary networks, each of them exchanging information, data and services with each other. In such a scenario, the idea that protection and control could be established at the level of the single network is going to fail: the systems provide services to each other which might inhibit the implementation of the restoration strategies. The dependency between telecommunication and electrical networks is paradigmatic, in this respect: following an ordinary fault, the electrical network operator needs the telco services to remotely control an electrical substation and quickly restore the service for most of the customers; however, if the outage affects the telecom base station serving the electrical substation, the (power) restoration strategy cannot be implemented due to its own fault.

For these reasons (which we need to get across in the movie), in the CIPRNet project the Risk Analysis of systems of CIs and their protection against anthropic or natural threats has been framed to consider the following issues:

1. intrinsic complexity of all CI networks
2. their mutual dependency which, in some cases, create inter-dependency loops among technological systems which, in addition, belong to different owners and, as such, are confidentially treated (no information sharing, different protection policies etc.)
3. the efficiency of the crisis management due to the potential involvement of different players
4. the relevance of predicting threats and preparing for critical situation

CIPRNet proposes technological solutions which address all points 1.-4. above and the video will focus the audience attention on the large benefits which could be achieved by using the new tools to enhance systemic resilience and thus improving services continuity. In this respect, the video will be an important tool for disseminating the project goals.

## 3 The CIPRNet Dissemination Movie

### 3.1 Rationale

Due to the complexity of the topic of protecting critical infrastructures, the involved dependencies between CI sectors, as well as the required awareness of stakeholders, the promotional video will attempt to convey only the key issues of CIP and the way in which CIPRNet project (among others) has attempted to produce technological advancement to cope with the challenges that this domain arises. Therefore the movie will aim at improving the communication between the CIPRNet consortium and the large set of stakeholders and potential end-users and to promote the achievements made in the project. More specifically, the movie is thus aimed to raise or increase the awareness of CI operators and to solicit their stronger engagements, as they are – among the potential end-users of the CIPRNet technologies – those who could benefit more from using its technologies. The goal is, at least, twofold:

- to make CI operators aware of the current complex situation about networks dependencies and the absolute need of improving the “single network protection” paradigm;
- to present new tools (and new potentialities) to improve analysis and control and to perform 24/7 risk analysis as well as to improve the existing training methods.

In fact, if we draw an axis system where we set, on the abscissa, the time response of the CIPRNet technologies (i.e. the time scale during which the CIPRNet technologies could be of help, from the Real Time – RT – to the “off-line”, therefore the analysis and planning activities time) and, on the ordinates, their modes of usage (from the Systems control to the Training activities), we can distribute the CIPRTrainer and CIPCast technologies as in Fig. 1. CIPCast can be used as in RT environments (as a true risk forecast which operates 24/7) and in off-line mode, to simulate events or damages and predict all the events that could be associated to them. In turn, CIPRTrainer is particularly meant for training of emergency managers. All these issues (the objectives, the operating modes) will be described in the movie, providing also information on the operational characteristics of the developed products.

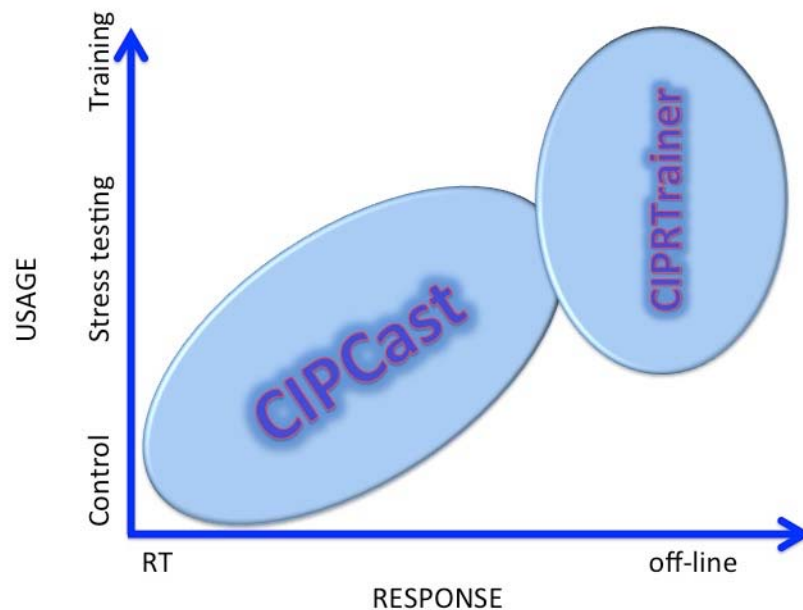


Figure 1: CIPRNet technical capabilities CIPCast and CIPRTrainer mapped onto types of usage (control, stress testing, training) and kind of response (Real Time to Offline)

The Dissemination Movie will start from these considerations and will present the “current” situation. The general Summary of the topics treated in the Movie will thus be:

- a) CIP: the reasons for protecting CI and protecting them against what;
- b) CI complexity: multi-operators and dependencies;
- c) CIPRNet contribution:
  - [1] enhancing systemic resilience via a “coordination” Decision Support System (CIPCast, [D7.4]), linking all the CI Operators, civil protection and the other Crisis Management players;
  - [2] enhancing preparedness actions via Emergency Management Training (CIPR-Trainer, [D6.5]) with state of the art Training Games framework;
- d) Conclusions, credits and acknowledgments.

### 3.2 The draft storyboard

The story will develop around the 4 main points of (a)-(d) listed in the previous section.

**Introduction.** The introduction will encompass points (a) and (b) above. The movie will show the main topics of the project: the development of technologies - of different types - aimed at improving the resilience of technological systems and enhancing the ability of operators and other stakeholders to set in place preparedness actions able to mitigate the impacts of the crisis and, ultimately, supporting resilience enhancement. The introduction will also underline the extreme complexity of the task of protecting and enhancing resilience of technological infrastructures due to the fact that they are complex, dependent and mostly managed by different operators (often competitors). For instance, the information sharing (which is vital to set up holistic protection strategies) is still a key issue that has made, to date, the solution particularly difficult to be achieved.

**Central section.** In this section the movie will present the major outcomes of CIPRNet toward the objective of CIP and resilience enhancement. More in details, two major tools will be presented:

- CIPCast, the Decision Support System conceived for both providing a real-time risk forecast for CI operators and emergency managers and for stress testing complex environments constituted by interacting CI networks;
- CIPRTrainer, the emergency training system which – through a “what-if” operation mode – allows to test emergency strategies (via a “track-and-steer” method allowing to rolling back emergency strategies up to obtaining the (sub)optimal solution).

Furthermore, few words will be dedicated to describe other activities that will have an impact on the CIP community. In particular, the realization of CIPedia© will be described; CIPedia© is a worldwide encyclopaedia attempting a standardization of the CIP-related lexicon, which the consortium found crucial for improving the capability in cross-communicating within the multi-disciplinary CIP community<sup>1</sup>.

**Conclusions.** In the final part, the movie will attempt to provide a comprehensive list of all the potential final users of the developed technologies: CI operators, Civil Protection Departments, Emergency managers and all Public Authorities committed to the societal protection and to ensure the community well-being, by allowing the maximum continuity and efficiency of the public services which are supplied by the CIs.

At the end, the movie will introduce the EISAC perspective, i.e. the realization of a pan-European agency committed to support nations and the whole EU in protecting their CIs also in case of cross-border and multi-national crisis or emergencies.

The video clip will be about 4' 30" as its aim is to encourage the viewer to get in touch with the CI experts in order to have the whole picture and it will have a resolution of 1080p. In the first version the commentary will be only in English and subtitles will not be available. Should it be a strong limitation, subtitles (in English, in the first instance) will be added. The video will be available in the web site [www.ciprnet.eu](http://www.ciprnet.eu). The Fig. 2-4 below show a few snapshots of the movie.

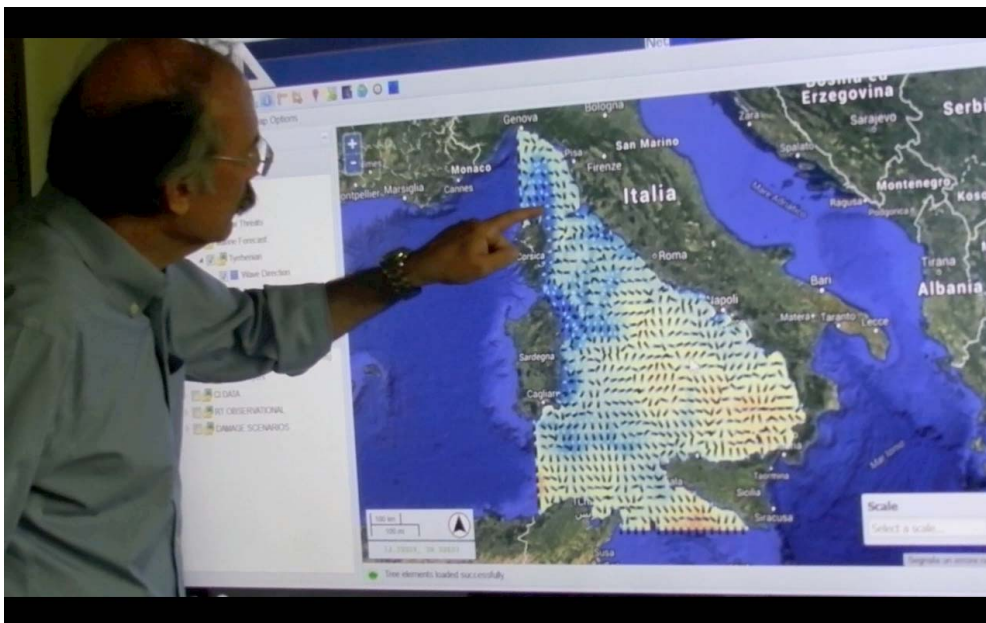


Figure 2: Snapshot from the CIPRNet Dissemination Movie, showing the CIPCast user interface

<sup>1</sup> [www.cipedia.eu](http://www.cipedia.eu)



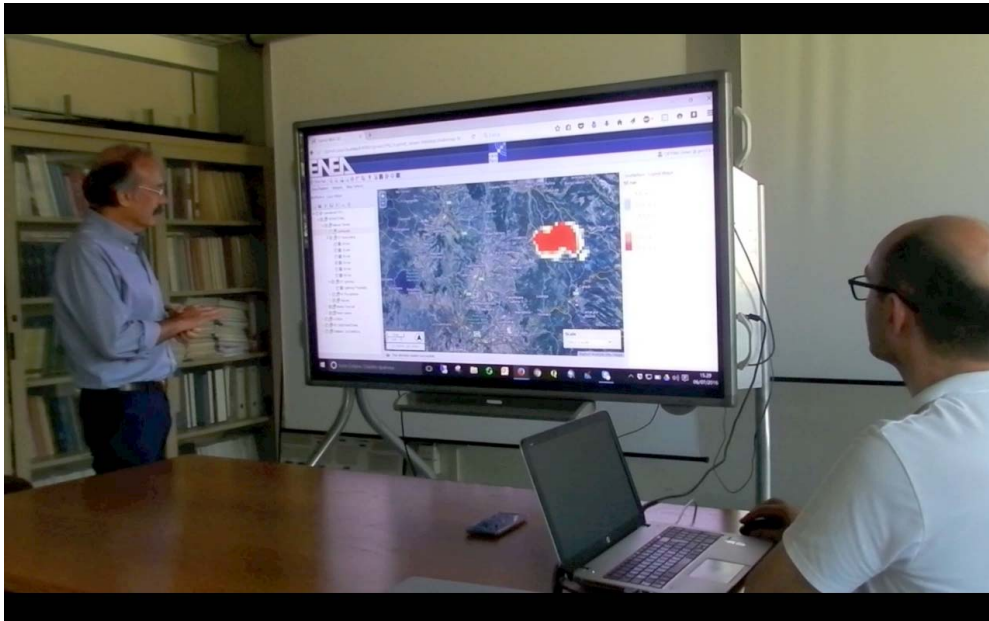


Figure 3: Snapshot from the CIPRNet Dissemination Movie, showing the CIPCast user interface

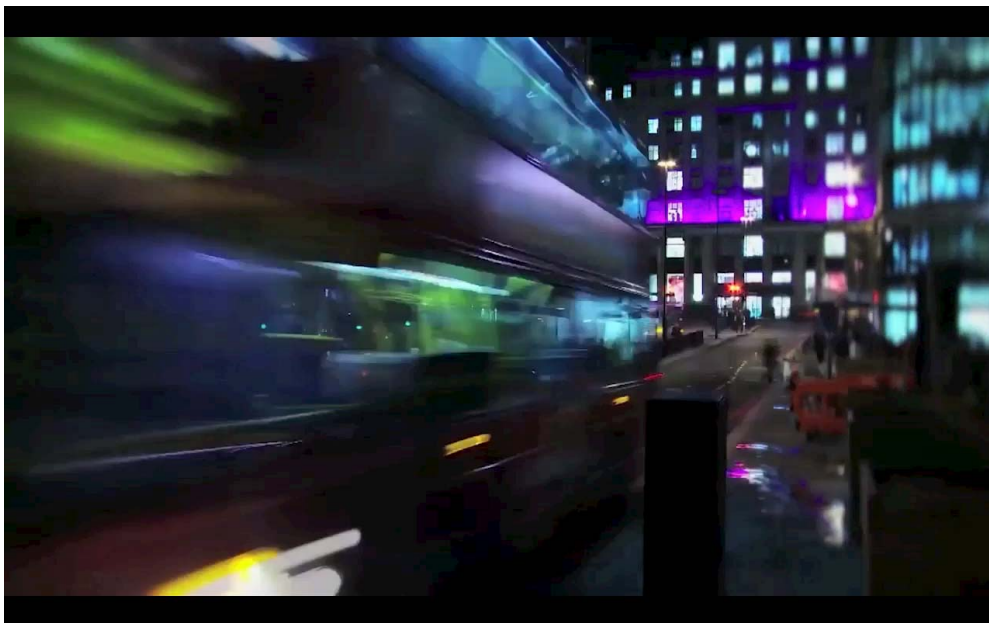


Figure 4: Snapshot from the CIPRNet Dissemination Movie, showing a city scene

### 3.3 Target audience

The target audience will be mainly composed by:

- Professionals in the domain of Risk Analysis, Critical Infrastructure Protection, Emergency and Disaster Management, Civil Protection;
- Critical Infrastructures Operators;
- Policy Makers, particularly from the Public Administration and Authorities which are committed to the protection of assets and citizens;
- Researchers and technologists of the different areas covered by the CIPRNet technologies.

### 3.4 Distribution channel

The CDM (CIPRNet Dissemination Movie) will be released to the public through different channels:

- it will be inserted into the CIPRNet website [www.ciprnet.eu](http://www.ciprnet.eu) and it will be downloadable by the website visitors. There will be also a way to show it on the web site (without downloading);
- it will be posted into the YouTube project repository, should it be created to distribute the CIPRNet products using that channel;
- it will be used by CIPRNet partners during expositions, lectures provided into Conferences or other scientific or technological events;
- it will also be inserted into the CIPRNet MOOC channel, as a sort of presentation of all the activities which will be extensively presented into the course repository.

## 4 Conclusions

Whenever a new technology requires a change in mentality to be successfully applied and then to be fully beneficial, it is crucial to engage as early as possible all the stakeholders involved both to take into account as many needs as possible and to disseminate the outcomes as widely as possible. In CIPRNet there is more at stake: not only a new technology but also a vision, a European framework for Critical Infrastructure Protection. Having in mind all that, the consortium has identified in a documentary movie a crucial (and hopefully efficient) instrument for promoting both outcomes.

This document describes the rationale of the making of a movie to show the CIPRNet technological achievements and benefits for the protection and the resilience enhancements of CI. It also contains a draft of the storyboard and the indication on the end-users, whose engagement has been considered as the primary goal of the movie diffusion. The consortium will put a lot of effort in making it effective and disseminating it as widely as possible, via the MOOC platform, in the website and showing in it all the relevant events and presentations.

## 5 References

- [DoW] Annex I – Description of Work (Annex to the Grant Agreement of CIPRNet).
- [GA] European Commission, represented by REA: Grant Agreement FP7-312450-CIPRNet.
- [D4.4] EU FP7 Project CIPRNet, TNO, Deliverable D4.4 “CIPRNet CIP resource integration strategy and implementation plan”. The Hague, The Netherlands, 2015.
- [D6.5] EU FP7 Project CIPRNet, Fraunhofer, Deliverable D6.5 “Documentation and user manual of the CIP MS&A based ‘what if’ analysis demonstrator”. Sankt Augustin, Germany, 2016.
- [D7.4] EU FP7 Project CIPRNet, ENEA, Deliverable D7.4 “Implementation of the DSS with consequence analysis”. Casaccia, Italy, 2015.