



NARSIS

New Approach to Reactor Safety Improvements

WP6: Dissemination and communication activities

Del6.4 - Project presentation brochure



This project has received funding from the Euratom research and training programme 2014-2018 under Grant Agreement No. 755439.



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1 Executive Summary

This deliverable presents the project presentation brochure designed to promote the NARSIS project. This specific dissemination activity is part of the C&D plan (see Del6.2).

2 Type of the brochure

The choice has been made to prepare a 'Z' fold brochure considered to be a very good cost effective option. Indeed, it provides enough space to present the information with six panels, is easy to hand out and can easily fit into a pocket.

3 Layout, Structure and Content of the brochure

The brochure has been prepared taking into account the visual identity of the project.

The brochure is available in English as this is the working language of the consortium of NARSIS. Besides, the content provided in English will help to reach out to a large audience around Europe.

In Figure 1 and Figure 2, screenshots of the various panels of the brochure are presented.

The *front panel* of the brochure displays the project's name and logo, a short introduction text with a picture to illustrate.

The *inside front panels* provide a brief overview of the project, including the project's mission, outcomes and background and give the main facts and figures.

The *back panel* of the brochure highlights the partners and gives the contact info as well as advertises the public website (see Del6.3) and the bi-annual newsletters.

The *inside back panels* provide a diagram giving an overview of the main interactions between the project's work packages (WPs), with key tasks indicated for each WP.



Front Panel

NARSIS

New Approach to Reactor Safety Improvements

A European project with 18 leading European institutions to propose progress in Probabilistic Safety Assessment Fundamentals for Nuclear Power Plant Safety in case of multiple external natural events.

Mission Inside Front Panel

NARSIS aims at improving the nuclear safety assessment methodologies for generations II & III reactors, based on innovative research and tools.

Based on recent theoretical progresses, the main objective of NARSIS is to bring sound contributions to the safety assessment methodologies by reviewing, analyzing and developing/improving some aspects relative to the following topics:

- Assessment of external natural hazards focusing on scenarios with concomitant events (either simultaneous-yet-independent or cascading) and re-evaluation of screening criteria;
- Assessment of the physical and functional fragility of main critical systems, structures and components (SSCs) of Nuclear Power Plants (NPPs), subjected to complex aggressions, considering ageing effects and possible interactions (e.g. soil-structure in case of earthquakes);
- Constraining of expert judgments and treatment of parameter, model and completeness uncertainties;
- Integrated risk and safety assessment as well as Human Reliability Analysis, based on dynamic non-parametric Bayesian modelling;
- Level 2 Probabilistic Safety Assessment (PSA) procedures related to external events, including evaluation of accident management measures.

Four main primary hazards and then their related secondary effects/combinations, will be considered:

- Earthquakes;
- Riverine and coastal flooding;
- Meteorological hazards (wind, rain, temperature);
- Tsunamis.

Outcomes

The efforts of NARSIS will lead to providing a scientific framework to address:

- Theoretical improvements in natural multi-hazards assessment and their impacts, including the evaluation of the uncertainties and the reduction of subjectivity in expert judgments;
- Validation of the findings in the frame of the safety assessment through adequate model reduction strategies for simulations and finally,
- Application of the outcomes at the demonstration level by providing supporting tools for severe accident management.

Background

PSA procedures allow practitioners to better understand the most causes prone to initiate nuclear accidents and to identify the most critical elements of the NPP systems. However, lessons learnt from the Fukushima Daiichi nuclear disaster point out the necessity of upgrading the current methodological framework related to areas such as cascading and/or conjunct events characterization, structure responses and uncertainties treatment. New developments in those areas would even enable the extension of their use in accident management.

Facts & Figures

Call H2020 - NFRP-2016-2017-1
Research & Innovation Action

Sept. 2017 - August 2021

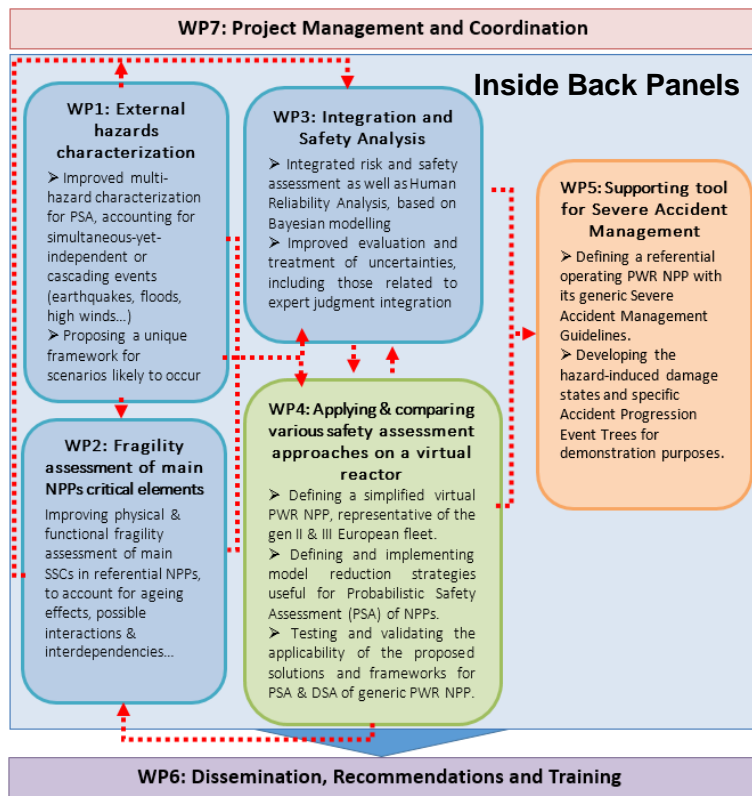
608 Person-months
18 partners + 1 linked party

Project Cost: 5,470,829 €
EU Contribution: 4,965,472 €

8 Work Packages (WPs)

Figure 1: Screenshot of the front and inside front panels of the NARSIS brochure

Activities



Partners Back Panel



Contact

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Figure 2: Screenshot of the back and inside back panels of the NARSIS brochure

4 Distribution of the brochure

The paper form of leaflets are expected for distribution at external events (e.g. international conferences, symposiums, workshop etc.) related to the different topics studied by the project.

The electronic version in PDF format will be sent by email whenever matters relating to the objectives and tasks of the NARSIS project are discussed as well as be downloadable from the website. Some specific mailings will be also performed, e.g. towards the NUGENIA community.