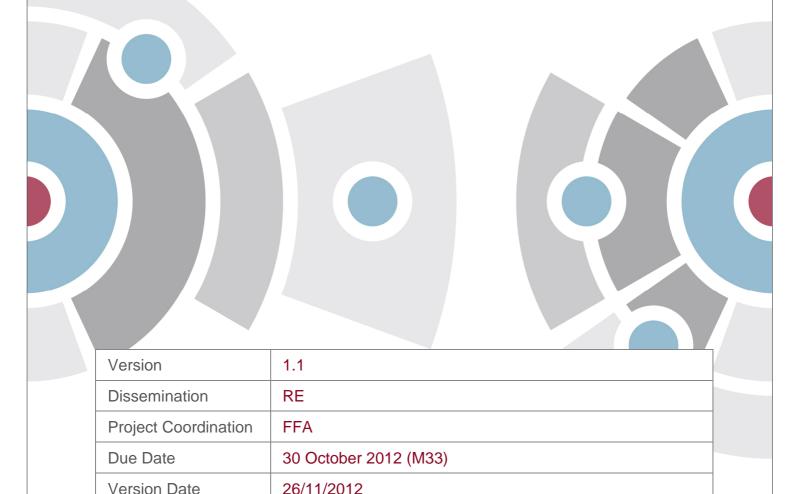
## Deliverable D33 | Final IWI Requirements & Specifications



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## Summary

The objective of this deliverable is to define and describe flexible but clear requirements and specifications for information, warning and intervention strategies (IWI). These has been adopted and used by demonstrators since the first development phase. Here is possible to find the technical information related to the hardware and behaviour performance used for implementing the IWI layer of the interactIVe project. In interactive the requirements are mainly related for a definition of the functions and the hardware features related to SP3 activities but it is also interesting to underline that this collection of requirements constitute an important reference for further studies also beyond the scope of the interactIVe project. Specifications reported in this deliverable are directly connected with the IWI strategies description that can be found in the previous deliverable D.3.2

A requirement is a physical or a software need that a particular system, product or process must be able to perform; those technical specification generally are the core directives for design even if they are often used as verification checklist at the end of the project. As general distinction a *functional requirement* defines a function or behavior for a specific system, while a *non-functional is a specification* either technical or descriptive (guideline), that indicates criteria that can be used to judge the operation of that system, rather than specific behaviour. Functional requirements drive the application architecture of a system and are expressed in the form "system must do *something*", while non-functional requirements drive the technical architecture of a system and can be expressed as "system shall be *someway*".

A function is described by as a set of inputs, expected behavior and one or more outputs, so a functional requirement could be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish. Behavioral requirements describing all the cases where the system uses the functional requirements are captured in use cases. Through use cases it is possible to illustrates behavioral scenarios describing one or more functional requirement and use the output of the use case analysis to refine the specification itself.

Functional requirements are supported by non-functional requirements; these specifications impose constraints on the design or implementation and are often called qualities of a system. Other terms for non-functional requirements are "constraints", "quality attributes", "quality goals", "quality of service requirements" and "non-behavioral requirements".

All the specification reported in this document, especially for those that are non functional requirements, have been developed based on an extensive literature and standards analysis, complemented by interactIVe SP3 testing results where applicable. The requirements here reported are restricted to the devices and interaction modalities that are actually or potentially used in interactIVe demonstrators and the functional specification are targeted for the IWI strategies and applied to demonstrators.

