



# Framework for Collaborative Teamwork Between Robots and Humans

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## Aim & Motivation

The aim is to exploit the human-robot symbiosis in the development of support systems for collaborative teamwork between robots & human.

The project intends to increase safety of infrastructures as well to provide cost effective response to catastrophic incidents, through the use of robotic agents in cooperation with teams of human rescuers. The domain of the project is in security and safety for small-scale search and rescue missions in surveillance or catastrophic incidents, which will have unquestionable beneficial impact on society.

## Proof of Concept

A proof of concept will be developed for innovative techniques for cooperation between teams of human agents (e.g. human rescuers) and teams of mobile robotic agents (UGVs, UAVs or rescue robots agents) in a collaborative context.

## Scenario

- 1) A set of UGVs survey and monitor nuclear infrastructure, detect radioactive radiation and map the source within an area.
- 2) Information will be shared between human rescuers and robots to know what range they can come closer from the incident area.
- 3) The human rescuers team will monitor and use robotic team to neutralize or intervene within scene.



## Overall Architecture

