

## OBJECTIVE AND TARGET

SafeCOP project addresses safety-related issues in cooperating cyber-physical systems, characterised by wireless communications, multiple stakeholders, and variable operating environments.

**Do you need a 5 meter long mobile robot to transport autonomously a 5 meter long object? Not necessarily!**

You could, instead, use multiple smaller mobile robots that can collaborate on the task in a safe and robust manner, together with safety sensors installed in the environment to provide the robots with extra capabilities to detect people and obstacles all around. These robots need safe and robust vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) cooperation and collaboration.



In SafeCOP we have been addressing the use-case of autonomously collecting, transporting and delivering empty hospital beds from the hospital wards to a central bed washing facility and back again. This has in part been demonstrated in a Danish hospital using two small mobile robots able to operate as independent units, but also in pairs able autonomously to join with and transport a hospital bed. STAMP/STPA have been used to conduct hazards/risks analysis and part of the SafeCOP wireless safety layer have been tested with the V2V communication links.

