In a nutshell: the main goal of the SWAP project is that of designing, implementing and ultimately testing a new breed of wireless sensor nodes with energy scavenging capabilities. Our design will include novel energy scavenging hardware as well as network protocols and algorithms.

Most innovative aspects of the project: first of all, SWAP aims at studying and realizing a novel sensor board which exploits removable energy source by means of harvesting systems. This platform will enable multiple harvesting systems to be inter-changed, in order to provide the best solution for many different environments. A novel protocol suite will be studied, including the most energy-efficient techniques from the state of the art and, also taking into consideration the issues related to the energy availability offered by harvesting systems. The entire design process will be assisted by validating mechanisms, such as simulation campaign and components prototyping. The final sensor board will be made available to both scientific organizations and commercial companies.