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Decision support tool for seismic risk mitigation in earthquake prone areas

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Earthquakes are a serious threat for many countries of Europe, particularly for those around the Mediterranean Sea. The SAFER (Seismic eArly warning For EuRope) Project is aimed at fully exploiting the possibilities offered by a real time analysis of the signals coming from seismic networks for a wide range of actions, performed in a time interval of all few seconds to some tens of minutes. These actions range from the shutdown of critical systems of lifelines, industries, highways, railways, etc. and the activation of control systems for the protection of crucial structures, to decision support for rapid response of the emergency management.

cedim AG is a recent German SME formed as spin-off from the Centre of Competence CEDIM. It is specialised in the design and realisation of efficient information systems for disaster management, a relevant final objective in the logical sequence of early warning systems.

In the frame of the SAFER project, cedim AG will mostly contribute with the implementation of a user-oriented "Decision Support Module (DSM)" for earthquake early warning in densely populated urban areas such as the megacity Cairo. In particular, the DSM will permit scenario simulations and support rapid response in case of seismic catastrophes. The module will consist of a general software frame that is independent of the urban area being considered, as well as a database, which may be significantly different for individual urban areas, depending on the regional availability of information. The paper will give some examples of application of the decision support tool.