

# The CapaCities project: from Concepts to Actions for a Proactive Adaptation of Cities

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This paper presents the research project CapaCities (from Concepts to Actions for a Proactive Adaptation of Cities). The project builds on previous results about the difficulty, for urban designers, to rely on quick-fix solutions to fully participate to sustainable urban development (Bonhomme, 2013; Dubois, 2014). Even if knowledge about sustainable urban development is increasing and several related design-aid tools have been created, a major issue remains: those tools hardly find their way into the professional practice. As explanations, two problems are identified in literature. The first one is the lack of interdisciplinarity and interoperability among existing tools. The second one is that tools, typically designed by research scientists, are not suited to the urban planner's needs. There is some evidence that their experience and insight are rarely acknowledged.

The purpose of this research project is to create a prototype version of a multicriteria design-aid tool that is able to address the two aforementioned problems.

The first objective is to increase the suitability of the tool for urban planners. One major issue is the level of details given by existing tools that is often too precise and specific to be truly useful for the professionals. With this in mind, interviews and workshops are conducted with urban planners to acknowledge and document their specific way of understanding and using data. In addition, the results should allow us to identify new ways to integrate their experience and insight into the design of a new multicriteria tool. The paper will detail the methodology of these interviews and the main findings.

The second objective is to support interdisciplinarity. In order to do so, the tool will gather the results of several research projects conducted by some of the CapaCities project team members over the past years with regards to (1) energy consumption, (2) renewable energy production and (3) urban microclimates. The tool will be a GIS platform (as this type of tool is well known by urban planners) calculating simplified and aggregated indicators to guide the designer through the different stages of their project.

The prototype version of the multicriteria design-aid tool will be tested on the professionals involved in the development of real urban projects located in the Toulouse metropolitan area.

## Bibliography:

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