

## Les Glories Mall

Barcelona



CLIENT	<b>Unibail-Rodamco</b>
PROJECT DATE	<b>2014</b>
LOCATION	<b>Barcelona, Spain</b>
FIELD OF ACTION	<b>Wind Study</b>

Les Glòries shopping mall is situated on the surroundings of the renowned Les Glòries Plaza in Barcelona. The mall is comprised by three independent buildings which meet at the open sky central square, providing the clients with all types of leisure activities, restaurants and trendsetting shops.

Currently, the mall is being subject of a renovation project in which it is foreseen to reuse the underground level as a food market provided with many snack stalls.

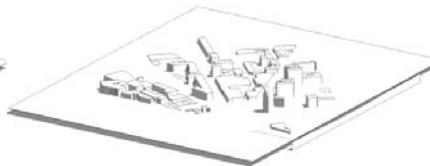
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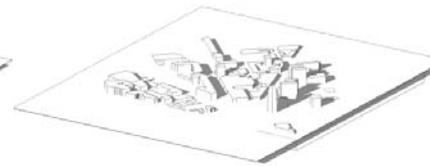
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Shadows study

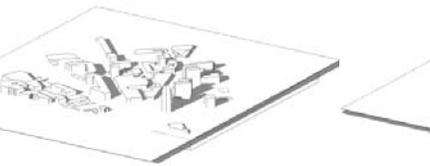


Shadows study



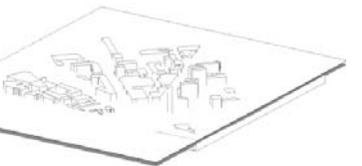
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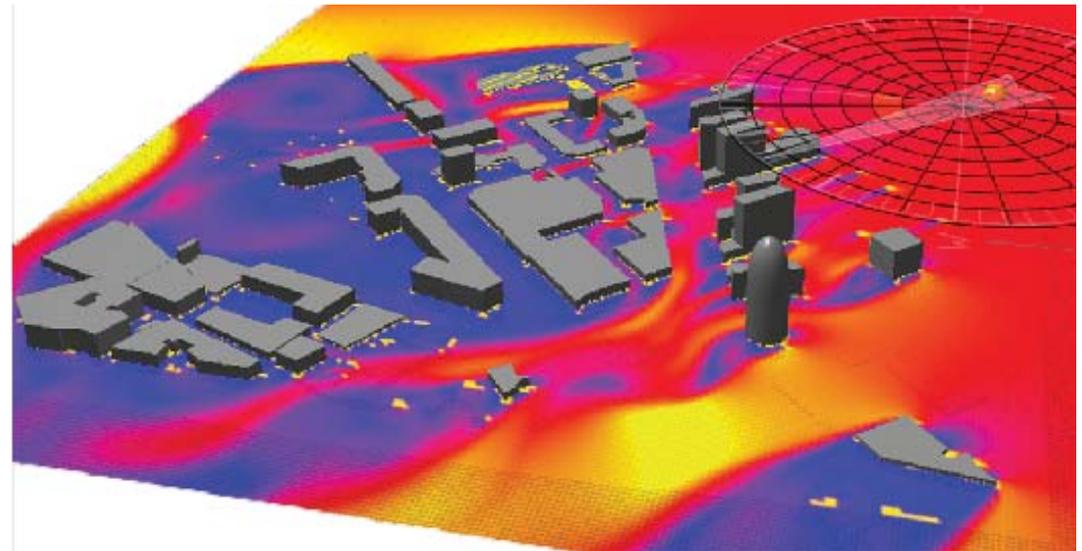
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It's condition of partially open air structure has arisen commodity issues for the users due to the wind currents generating through the aisles and at the central square. There is also certain concern regarding the risk of strong wind currents generating at both the entrance and exits to the future food market.

INES Consultant Engineers carried out a thorough study focused on the generation of wind currents affecting the shopping mall, hence having a direct effect on the users comfort. This study will be further on used for the decision-making regarding the solutions needed to minimize the wind action.

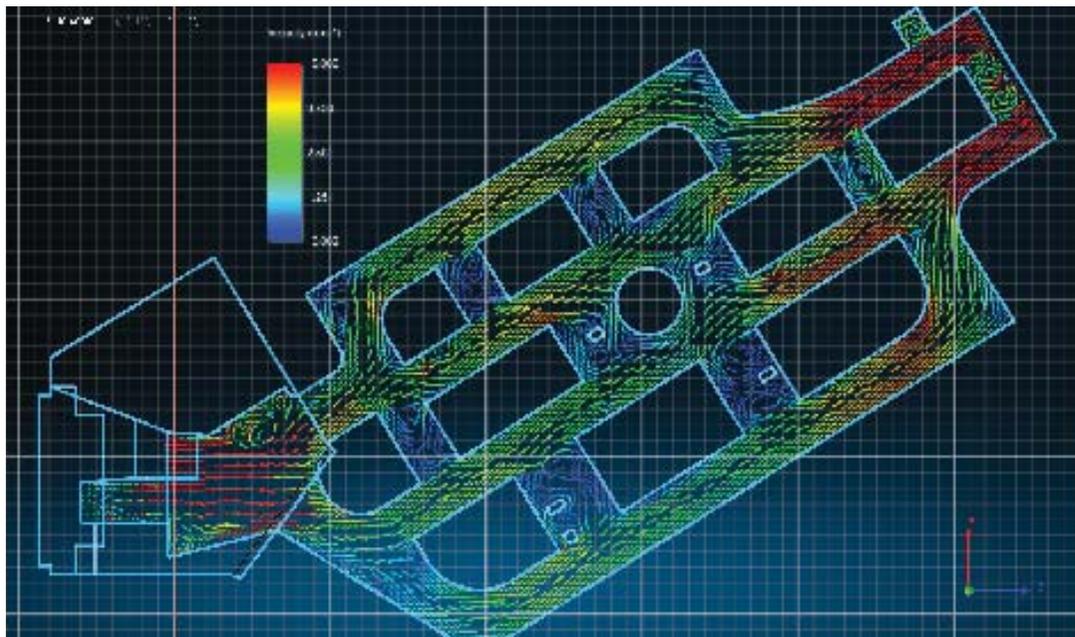
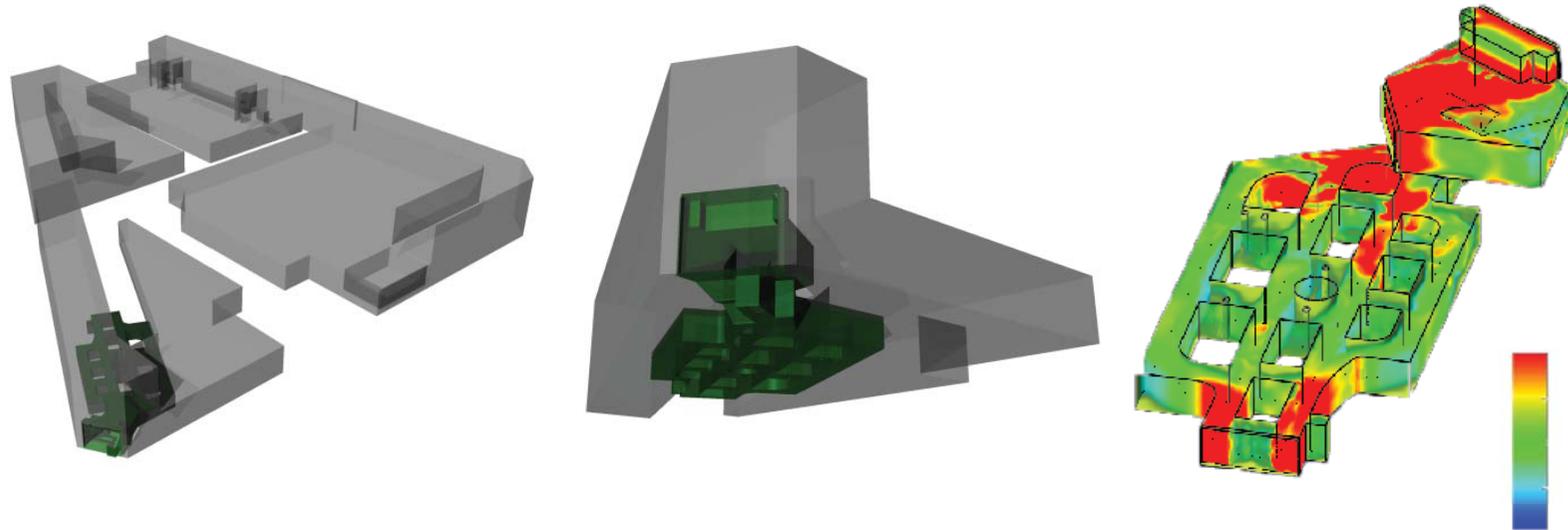
In order to obtain accurate results a thoughtful procedure had to be accomplished, studying on the one hand the wind affecting the overall syting of the shopping mall, and on the other hand the wind currents generated inside the underground level.

First of all, the study determined the variables and parameters related to user comfort as well as the maximum thresholds acceptable concerning wind affection.



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On a second phase, a statistical research was carried out to determine the weather conditions affecting the shopping mall environment, being the utmost variables the wind speed and direction.

Lastly, a detailed study of the wind currents being generated both at the exterior and interior (underground floor) of the shopping mall was executed using Computational Fluid Dynamics tools and the expertise of INES Engineers team.