Composite plate shaping in acoustic and thermal insulation

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summary
Contemporary housing in Algeria does not meet the requirements of comfort in general and thermal in particular. This observation is reinforced by the lack of support, in the initial design, of several criteria, namely, an architectural design that adapts to the climate, a thermal insulation of the outer shell of the building and finally a thermal stabilizing inertia of the interior atmosphere of the building. The region South Algeria is characterized by a hot and dry climate, and a very important daytime thermal amplitude. Indeed, the maximum temperatures can reach 50 ° C during the day, for the diurnal amplitude, it is around 15 ° C. These climatic conditions in turn encourage the discomfort and their consideration in the initial architectural design is more than desirable to ensure not only thermal comfort to the occupants but also to avoid any thermal rehabilitation operation often very delicate and expensive.

Introduction
Architecture must be thought for all, sometimes taking into account our differences. By living particular spatial experiences, how architecture should be made to meet the needs of all, incorporating the concept of different types of disability. They will then imagine intelligent architectures through new processes.
Research, design, modeling and construction for the best match between building, climate and occupant, with the aim of developing and developing, in the context of sustainable development, the theory of climate architecture and sustainable architecture. To this end, it also carries out scientific monitoring of experimental projects. the new requirements developed concern the dynamic phenomena of thermal (comfort), natural ventilation and natural and artificial lighting of the building, water and materials as well as the links between these models. The search for the optimal energy efficiency of buildings and their equipment, in order to satisfy the needs of comfort of the occupants, making the best use of energy resources. To this end, it also conducts studies and expertise audits and energy guidance.
The Architecture and Climate business line offers a range of research related to sustainable architecture: it takes advantage of the advantages offered by the contexts in which it operates, protects itself from the disadvantages of these, makes benefit the environment in which it is part of its contributions, protects it from its own nuisance. Thus at the climatic level, the architecture aims to use the resources of the climate to reduce the energy expenditure devoted to the heating, cooling and lighting of buildings, in order to achieve the comfort of the occupants: winter thermal comfort and summer, luminous comfort, breathing comfort.
The same philosophy is developed in the areas of energy efficiency of buildings (at the level of management, renovation of facilities, motivation of occupants), the problem of comfort and that of materials, from the scale neighborhood to that of the building components. Finally, Architecture and Climate activities affect housing, office buildings and schools, both in new buildings and in renovation.

The new requirements of the development programs of the arid regions, the specificity, the extent and the fragility of the Saharan environment, impose an effective management of the problems of the Saharan world and the environment and an approach adapted to the needs of the populations.

Development actions and interventions on the environment and its dynamics require the knowledge of this environment and the implementation of a net management strategy for the protection of the environment that alone guarantees sustainable development.