Materials reuse and regional transformation scheme, Gijón/Xixón, Spain

Project description by author

The project can be explained attending to different architectural tools and concepts that try to construct a sustainable society, based on a minimisation of the human impact and energy waste and maximum welfare conditions to citizens.

> RE-designing: This proposal is set in one of the many abandoned industrial sites of the central area of Asturias (Spain), which has been mined for years in a process of de-industrialisation. The project takes the opportunity of this critical restructurating situation of the actual production system to propose an integral, sustainable transformation. The proposal researches into the concept of conversion to improve and minimize the energy wasted in the way we build, produce, consume, work, meet and live.

> RE-programming: An alternative, socioeconomic model is proposed through the relocation of production and sale places needed change through restructuring situation of the actual production system to alization. The project takes the opportunity of this critical restructurating situation of the actual production system to propose an integral, sustainable transformation. The proposal researches into the concept of conversion to improve and minimize the energy wasted in the way we build, produce, consume, work, meet and live.

> RE-supplying: Minimum energy consumption, hydrothermal comfort and water self-sufficiency are achieved by the use of specific devices: solar water heating and purification system, water-treatment and ventilation conditioning, heat accumulators, etc.

> RE-assembling: The reuse of industrial elements lead to new designing possibilities, whose behaviors and necessary implementations are analyzed here.

Innovation and transferability – Progress

Although the project is designed as an integral solution, each of the novelties proposed represents a reproducible system. Regarding urban planning, we propose regulations allowing the integration of virgin natural areas into urban space and the transformation of former constructions into urban self-sufficient infrastructures and unprecedented spaces (dry docks converted into water-treatment plants, natural swimming-pools) A spreadable socioeconomic system underlies the way programs are invented and formulated: production and sale places getting cleared, creation of productive communities. Hence, the main point is how the project steps up to the evolution of building design related to the reuse of constructive elements and materials and the innovation in minimum energy systems.

Ethical standards and social equity – People

Dwellings are arranged in communities in order to offer several ways of spatial sharing and facilities: varied dwelling typologies make possible that different economic levels can mix and live together. Firstly, the multigenerational community is created in order to allow users to combine familiar and working life. Apart from considering special public places for children and elderly people, the dwellings (called kitchen sharing) admit different temporal combinations of rooms so as to adapt to varied family organizations.

Secondly, the artisan community is conceived to provide workshops for manual workers at a low price and within urban areas. Besides, the community comprises cooperatives: rooms where users would customize their own houses. The cooperative model permits architect and user to collaborate in the design from the beginning. Finally, in the Working at home community, liberal workers can afford their own working space due to the special design of the dwellings.

Environmental quality and resource efficiency – Planet

The proposal sets concrete goals to achieve Water zero rainwater harvesting and treatment inside the building, supported by a water reservoir and treatment-pools at urban scale; energy zero: renewable urban energies and hygrothermal sensitivity in building design; material energy tends to zero. 70% of materials are reused, the rest are recycled or wood. Besides, urban planning proposes land naturalization and its efficient use; the whole building optimizes materials and resources.

Economic performance and compatibility – Prosperity

The project proposes an alternative socioeconomic model in a region affected by industrial dismantling. High unemployment is addressed by new working possibilities (tele-working, innovative production industries). Besides, the development of a construction industry based in reused objects and materials would imply a real productive conversion. Present devalued waste places would be improved, specialized workshops would be created, a new designing industry would flourish.

Contextual and aesthetic impact – Proficiency

The project proposes, by reusing constructive elements, a relatively new and attractive aesthetic. However, most of these elements will be taken from the region itself (not more than 4km away), so it will incorporate the identity of the site and will make it contemporary at the same time. Moreover, the city will get back one of its prides: it will re-live its industrial patrimony by leaning to its exuberant nature, for which Asturias is well known.