Material Flows
Construction materials recycling and logistics hub, Brussels, Belgium

Summary and appraisal by the jury
The construction materials village at the Vergotedok in the Port of Brussels, Belgium is an illustration of sustainable urban logistics. By distributing construction materials to the city and collecting construction waste from the city, the village functions as an important logistics and distribution hub between port and city. Rather than purchasing an eco-label as an individual building, the village is part of a larger urban ecosystem. The modular and hierarchical structure of the warehouses makes the architecture receptive to different programmatic demands of various concession holders, for example the raw material collected on the large roof and the energy produced can be put to the service of the ready-mix concrete plant on site and serve future developments in the surrounding neighborhood.

Sustainability concept
A port in the city. The location of the construction materials village near the canal and in the city center is an opportunity to invest in inland navigation, reducing truck traffic, urban pollution and costs. Missing link in product life cycle management. Every year 2 million tons of construction materials are transported by ship to Brussels, and every year 702,600 tons of construction materials waste is generated in Brussels. Nevertheless, most of the loaded incoming ships are leaving the port empty and vice versa. As a distribution hub for construction materials and subsequent waste, the village at the Vergotedok becomes an important missing link in the product life cycle management of these materials.

Modular structure for a flexible program: To provide more uniformity to the disorganized site, an integrable and pliable with a cadence of 20m: the distance between two bollards on the quay. Two concrete plants at both ends of the dock, with their silos and peculiar landscapes of sand, cement and aggregates, will give the materials village a very striking character. The modular and hierarchical structure of the warehouses makes the architecture receptive to different programmatic demands of various concession holders. The architecture even allows surviving the initial allocation of a building materials village.

At the service of the neighborhood. The urban landscape around the Vergotedok is undergoing a metamorphosis. New residential areas, offices and park will most consume a large volume of water and energy. The large roof surface of the village can provide 5.3 million liters of water per year, while its needs are very small. Putting it at the service of the surrounding developments will generate a win-win situation.

Assembly and construction by ship: The upper structure is a dry construction. All preparations can be done in a factory. Almost all elements will be transported by ship to the building site. This has the added advantage that steel houses can be assembled and delivered in large dimensions.

Urban theater. The part areas splitting the urban agglomeration in two can be seen as part of a metropolitan landscape, as the backside of the city where industrial activity can be shown. Transparency by day and night evokes an urban industrial theatre. New residential areas, offices and parks will soon consume a large volume of water and energy. The large roof surface of the village can provide 5.3 million liters of water and 103,000 kWh per year, while its needs are very small. Putting it at the service of the surrounding developments will generate a win-win situation.

Further authors
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