

POLITECNICO DI TORINO
FIRST SCHOOL OF ARCHITECTURE
Master of Science in Architecture Construction City
Honors theses

MusEa

An Educational Museum for Energy and Environment in the ancient Stazione Idrometrica di Santhià

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This thesis wants to "ennobling" the ancient Stazione Idrometrica di Santhià, one of the many historic buildings with artistic and architectural value situated on our territory, trying to restore his historical identity, contextualized to the current economic reality and the needs of the territory.

In particular, this work has, as its aim, the establishment of a possible intervention strategy for museum purposes to enhance the complex area of the Santhià's Hydrometric Station: over the years, in fact , the station suffered a slow and steady decline, even though the place is considered one of the most important in the history of the hydraulics science.

The structure was built in 1893 to study the evolution of water in irrigation canals, it is composed of two main elements: the office building, which is similar to many architectures "fin de siècle , XIX," and the complex system of basins of measurement and experimentation.

The enhancement of the site is supported by its favorable geographical position : the Station is, in fact, on the route Turin-Milan and could become a reference site for new streams of tourists who will arrive for Expo 2015 in Milan.

The Station was established with a strong identity as a place of study and research, and this has been the starting point in the setting out of the project.

The project of restoration and enhancement of structures and buildings has as main objectives :

- Equipping the station for a comprehensive set of exhibition, educational, documentation, hosting and museum spaces that can have its own internal technology museum, a reception and information point, a restaurant, an event area, a reading room and documentation center
- Giving a homogeneous architectural and urban arrangement to the complexus area and the access roads to support such an increase in public activities that will be developed on it
- Combining the emerging needs with the memory of the ancient destination of the complex and its architectural profile

In line with the proposed objectives, the guidelines for the design of interventions have been as follows:

- Preserving the spirit of the place with its own specific architectural features, restoring the original image and the most significant elements
- Implementing the new activities as much compatible as possible, in their distribution and organization, with the existing structure, to minimize the impact or make clearly recognized the new additional parts

One of the biggest challenges has been to identify an exhibition purpose for the great surface occupied by the basins of experimentation.

Following the study of the area and the meetings with the managers of the Irrigation Association Ovest Sesia, the idea has been to develop the exhibition theme on renewable energy sources, a subject supported by the proximity of the hydroelectric plant, which would be made available for visits.

Fundamental role is given to the educational value, this is reflected in structures devoted to this purpose and plain language used for illustrative panels of the exhibition routes.

My main contacts have been two managers of the Irrigation Association Ovest Sesia: the president, Eng. Luca Bussandri and Dr. Ombretta Bertolo; both have shown interest in this enhancement project, though fully aware of the lack of funds for the implementation.

Despite the difficulties of the current economic framework, it would still be important even to secure the Station and to clean the basins, allowing the installation of a permanent exhibition on irrigation system.

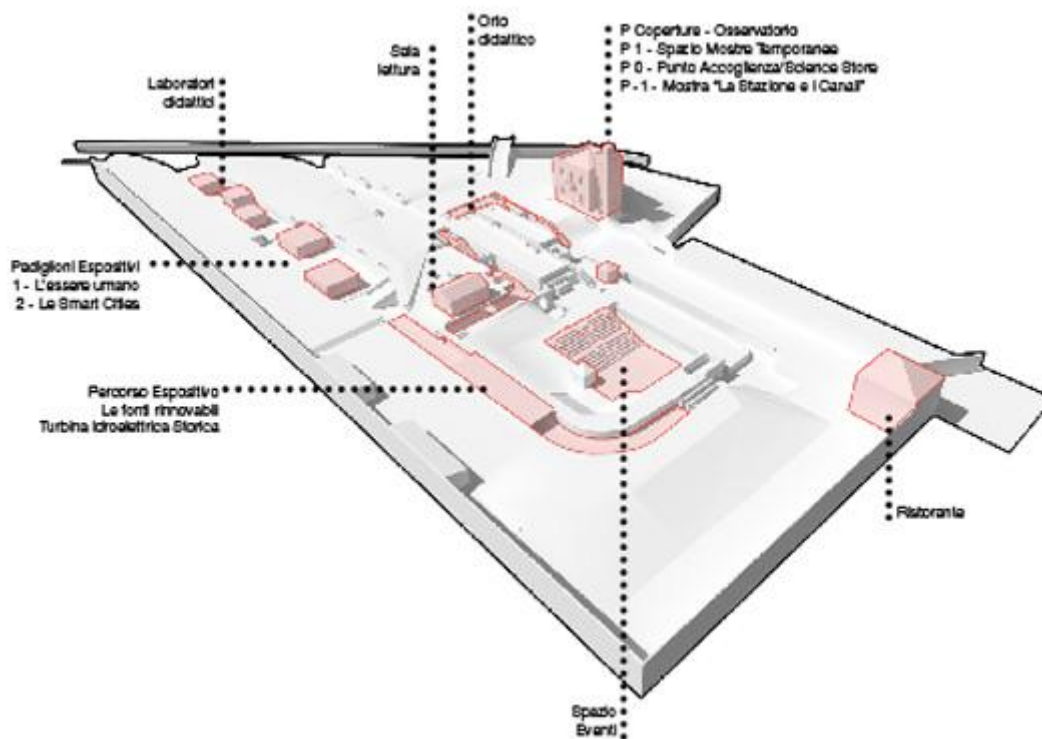
ECOPERCORSO LUNGO NAVIGLIO

Il progetto prevede la realizzazione di un **ecopercorso** che collega il Museo delle Arti e dei Mestieri Fir'13 na vira con il nuovo Museo Didattico per l'Energia e l'Ambiente MusEa, costeggiando il Naviglio di Ivrea.

La passeggiata sul Naviglio include un **padiglione informativo**, **sedute** e un **ampio spazio di sosta**.



Site plan



Axonometric Plan

INFO



IL MUSEO DIDATTICO DELL'ENERGIA E DELL'AMBIENTE

MusEa sorge all'interno dell'antica Stazione Idroelettrica di Santhà. Il complesso è nato nel 1953 per studiare l'impiego dell'acqua nei canali Inga e si trova in un luogo isolato, silenzioso ed immerso nel verde. È per questo che si diventa luogo ideale per lo studio e la ricerca.

Tutte le attività educative di base si svolgono al Museo, con il supporto di esperti e tecnici. L'obiettivo è suscitare interesse per la tecnologia, incrementare l'attenzione per la comprensione delle scienze e favorire ogni persona a scoprire un patrimonio ricco di memoria.

Il Museo vuole essere un centro di dibattito e di ricerca, un vivace luogo d'incontro, un laboratorio di sperimentazione per progetti educativi e culturali.

Al Museo potete:

Visitare un esempio di archeologia industriale e agricola praticamente unico in Europa.

Conoscere la storia del sistema delle acque Inga, dai versosetti attraverso i disegni dei progetti e gli strumenti originali ricostruiti per la musea delle foto e delle acqueri e per il funzionamento dei canali.

Scoprire di più sulle fonti di energia rinnovabili, sulla crescita demografica e sulle smart cities, attraverso percorsi filmati e multimediali.

Partecipare a numerosi laboratori didattici, partecipare ad attività festival, colture e fuochi e visitare mostre temporanee.

Esplorare una vera centrale idroelettrica in funzione e vedere una turbina storica per conoscenza tutte le parti.

Partecipare a conferenze o eventi per fare un'opinione su temi di attualità.

20.000 MQ DI SUPERFICIE
4 SEZIONI ESPOSITIVE
3 LABORATORI DIDATTICI
4 CANALI VISITABILI
1 BIBLIOTECA
1 SPAZIO EVENTI
(220 POSTI)



Museum's overview

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