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Honors thesis

COURSE OF
Sustainability Design

**The railway station:
a sustainable mobility from the dutch experience**

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by

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Today the different ways how people and goods move around the Earth is one of the main topic of the political and scientific debate on sustainability. The wide discussion about the mobility, which for over ten years has kept the major European countries busy, is focus on the main negative effects that the various means of transport produce on environment and people.

The infrastructure sector has a primary and strategic role for the national economic development, but on the other hand it exerts the most pressure on the environment and the natural resources.

Today the transport by car is the most common mode of travel in throughout Europe and, although the recent economic crisis reduced the numbers of trips, the environment quality is increasingly compromised: the number of vehicles on the road is increasing, the cars are even more ancient, the use of more environmental friendly fuels is still not so widespread.

If we add to this the air and noise pollution, the use of earth, the land fragmentation, the interferences on ecosystems and biodiversity, visual intrusion and damage to historic and artistic heritage and landscape, it is clear that the current mobility is causing serious impacts on the environment and people, so it's necessary find quickly a remedy to this situation.

The following work wants to identify some sustainable transport models, that can be a practical and realistic alternative to the current Italian transport system, that is responsible for almost the 50% of the fine dusts in the air and the 30% of the emission of CO₂.

In addition, the ways and times of travel, together with the needs and demands of users, changed enormously in the recent decades, nevertheless the public transport have failed to follow this evolution and currently do not satisfy the demand of its users. This has led to an increasing use of private vehicles, contributing to the formation of a unsustainable mobility.

The first step was to interrogate the above aspects, to recognize the main problems that afflict the current transport system and to identify the characteristics necessary to ensure that mobility can be defined as sustainable.

Once we have understood the goal that we wanted to reach and have thought about how to achieve it with real operations realizable today, we identified in the railway station the place that can respond to the new needs of the users better than any other one and it is able to offer a mobility respectful of the three sustainable dimensions (environmental, social, economic).

In an effort to collect data and information to support such this thesis, I worked for six months in Netherlands at the international architecture office "Maxwan architects + urbanists", next to the architects Hiroki Matsuura and Rients Dijkstra, current Dutch State Advisor for urbanism. During that period it was possible to study directly the Dutch mobility and identify those principles potentially transferable on the Italian case.

Among these I would like to stress the importance of the "Butterfly" model, which defines an original interpretation of the railway station and allows a quick and clear identification of quality and \ or deficiencies that characterize it.

In the end I wanted to express some personal opinions, mainly aimed at empowering ourselves of what surrounds us. Change is necessary and can only take

place thanks to the collaboration between public and private agencies, but not for this we have to consider us mere spectators.

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