

Recycling Urban Infrastructures

Theses

The methodology of urban infrastructure recycling, made from the eight case studies discussed in the dissertation, leads to the following conclusions:

1. Growing needs of the city

The need for the recycling of urban infrastructures follows from overpopulation, from the incalculable quantitative and qualitative growth of cities, from technological development, and from the negative urban consequences of globalization, e.g., urban segregation processes and the dependence of cities upon external resources.

2. The evolution of urban infrastructures

The obsolescence of urban infrastructures, their lack of use, and their renewal is a natural evolutionary process. Development goes together with the loss of function, but a functionless urban infrastructure can assume a new role before complete amortization.

3. Unused urban resources

Urban infrastructures, among them public physical networks are usually accessible to the public only indirectly or to a limited extent, therefore, they often have unused reserves that can be recycled. Limited access to them can have three main reasons: i. the original function is secondary, supporting another use (e.g. the green area under a power-line); ii. the original function is obsolete (e.g. overhead railway); iii. the original function has to be protected from misuse (e.g. firehydrant network).

4. The significance of infrastructure recycling

If an existing urban infrastructure has unused reserves, and the reserves can be matched with real needs, then reconfiguring the given infrastructure is usually faster and more economical than establishing a completely new network. The more urgent the need, the more likely it is that an already existing urban infrastructure can provide the fastest and most efficient solution.

5. The new function as added value

If the new function is public and can be used directly, it also increases access to the old use, and thereby it results in a betterment also affecting the old function. It can even turn back an attrition process.

6. Connecting the new function

If an infrastructure has unexploited reserves, then it can assume any new function that reinterprets it without impeding the original use. The new means of access cannot hinder the existing operation, and should be extendable to the whole network.

7. New scope, betterment

Recycling operations have further possibilities beyond the reuse of a network. The matching of a given function with a given network can not only be valid locally but can also be adopted and adapted in a wider range, depending on the actuality of the need. Infrastructure recycling can also call attention to urban problems, and can show up hidden possibilities of the unexploited reserves of urban infrastructures.

8. Shareability

In the case of urban infrastructures, increased access and shareability can be manifested not only in public use but also in the possibility of the copying and spreading of the solution. In addition to open source recycling solutions, there are also cases that are too expensive or too complex to be reproduced by individuals. If their use is not only in the interest of urban citizens and the city government but companies and institutions as well, they can also have a share not only in their use but also in their production and their operation.

9. Changing economic interests

Infrastructure recycling can result in new markets – owing to both the innovative and the communicative value of the reuse. A recycling that is favourable to the public has a PR potential for the institutions and enterprises involved in its development, hence the recycling of urban infrastructures can be a new expression of the social responsibility of companies.

10. Changed meanings

Recycling brings about a change of context, as the new function arises in an unusual place, in an „alien“ network. This modifies the meanings of both the original and the new functions, which results in urban humour. In addition to creating association with a new use, urban humour can also be the starting point of further connections between existing networks and new functions, i.e., new infrastructure recyclings.