

WASTE OR RESOURCE? THOUGHTS ABOUT OUR INDUSTRIAL INHERITANCE

Rasmus RADACH

RASMUS RADACH ARCHITEKT, Lottbeker Weg 82, 22397 Hamburg, Germany, post@radach.net

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Our contemporary life is shaped by the age of industry. Most of the items we use or consume stem from mass production, while mobility, medical care, education or entertainment are unthinkable without the technologies and infrastructure of industrial fabrication. By consequence, a significant share of the building stock from the last two centuries is dedicated to serve industrial production, administration and distribution. Surrounding our settlements and punctuating the surrounding landscape, industrial areas have a huge impact on our quality of living – a fact we respect but like to blank out. Thus, we rarely realize that Billions of Euros are invested annually to build, alter, maintain and demolish industrial building stock.

Lately, global economics have triggered a structural change of industrial ventures in Western Europe. Due to lower wages and less restrictive legislation, an increasing number of productions are outsourced or sold to Eastern Countries, facilities of the heavy industries in particular. Furthermore, the accelerating technical evolution is rendering entire series of technical facilities dispensable, as the example of railway switch towers demonstrates. An inconvenient inheritance remains: large industrial wastelands with an extensive stock of abandoned buildings that need to be addressed.

Without their original function, most of those constructions are perceived as worthless. Consequently, an overwhelming majority of industrial facilities is rather demolished than reused. An expensive decision: Decontamination, demolition and regeneration of former industrial locations require a lot of energy, time and money. Moreover, large quantities of waste – often contaminated – present a mortgage to future generations. Is this necessary?

Industrial areas have a distinctly negative image; they are perceived as dirty, dangerous and ugly. This perception is not without reason, as the industrialization of our society changed the structure of our cities profoundly. Noise emissions and unpleasant odours of industrial facilities resulted in migration effects that established the spacial segregation of working and residential areas; later on, legislation was crafted in order to protect all residents from inconveniences and hazards by banning industrial activities from the inner cities, but locations near industrial areas are still considered unattractive.

Industrial facilities are built to be both serviceable and profitable by primarily serving their intended function. Although the need for representation has created some spectacular industrial architecture like the *Zeche Zollern II/IV*, the primacy of economic efficiency quickly eclipsed any efforts regarding the appearance or urban qualities of industrial facilities. By consequence, industrial complexes rarely comply with our common aesthetic standards. Consisting of increasingly large-scale, purely functional and heterogeneous structures with a high degree of sealed surfaces and a general lack of vegetation, industrial areas are conceived as rather hostile environments with a bleak atmosphere.

Considering the many negatives, should our industrial inheritance be simply disposed as waste? The erection of industrial buildings requires huge investments. Although those

costs are apportioned to the manufactured products and therefore paid for by the consumer, the material value of the constructions and the invested energy should not be willingly sacrificed. In regard to the short lifecycle of many industrial facilities, this strategy is neither economically nor ecologically convincing.

Moreover, industrial facilities represent an important chapter of human development. By reflecting the technological advances that have shaped our society during the last two and a half centuries, the preservation of industrial buildings, plants and landscapes offers a valuable contribution to our identity. Accordingly, the designation of important industrial remnants as listed monuments and industrial cultural heritage has helped to recognize and mediate the value of technical buildings.

Still, their preservation and reuse is too often depending on legal protection, public funding or the conservation as a technical museum. While it is obvious that we can't keep all of our abandoned industrial building stock, many plants and facilities might not be considered heritage, but offer qualities well-suited for urban regeneration and adaptive reuse.

At the urban scale, industrial areas often resemble city structures, consisting of buildings separated by streets, alleys, squares and courtyards. Some of them form private towns within the surrounding city. Although of different shape and scale, these structures have shown potential to be transformed into public spaces. As examples like the *Pfanni-Werke* in Munich or the *Kulturbrauerei* in Berlin show, inner-city plants in particular have been developed into popular new quarters with economic success. Industrial plants at the outskirts face tougher challenges to attract new users, but offer less restrictions in regard to usage, traffic and parking space, noise control or space supply. The *landscape park* in Duisburg, the world heritage site of *Zollverein* in Essen or the *Nordwolke* plant in Delmenhorst have built strong cases for developing a unique brand from difficult outsets.

As for individual buildings, industrial heritage comes in a broad variety of typologies, sizes and constructions. They generally offer powerful bearing systems, adaptable structures and flexible spaces to serve multiple requirements. Common types include conventional administration buildings with a high degree of reusability, as witnessed by numerous quality office and residential uses. Halls of different designs and dimensions have been successfully transformed into cultural centres, exhibition halls, event locations, education facilities, hotels, restaurants, and even into sacral rooms, as the new synagogue of Bad Segeberg/Germany shows. Given time and publicity to find the right fit, specific technical facilities and equipment can be adopted to new uses, too. Inspiring adaptations of the gasholder in Duisburg as a diving pond or the transformation of a grain elevator into office spaces at Hamburg-Harburg are proof of that.

Adaptive reuse of industrial buildings and spaces can contribute to our quest for sustainable building in Europe. Extending their lifespan and optimizing their properties reduces land consumption and waste while preserving important documents of our technical and social development. This process takes more time than demolition and therefore requires proactive advocacy. As a reward, our inherited „waste“ might turn out to be full of potential.