



**BRINGT ALLES
ZUSAMMEN.**
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High tech on industrial wasteland – every areal development is different

Waste land offers great potential for residential development. This is being used in Arlesheim to build a competence centre for Industry 4.0. The areal development is also being used as an idea lab to showcase the opportunities of digitalisation for the construction and property industries.

Urban quality of life is highly sought-after: three quarters of people in Switzerland live and work in cities or municipalities in urban agglomerations. The trend remains unbroken and the total urban area continues to expand. In order to counteract this, inward urban development is envisaged. Before unused building land is claimed, poorly used construction zones, vacant lots and waste land are to be consolidated.

The various types of waste land are conveniently located and represent an important reserve. It is thus no surprise that many of the 350 unused areas listed in a statistic by the Federal Office for Spatial Development in 2008 have since been dedicated to interim use or converted. The Wüest Partner developmental atlas shows that the potential for revitalising waste land remains unchanged. In 2015, they list more than 700 areas that are attractive due to their size and layout options. The analysis of the macro-location showed that 60% are in communities with a location quality rating of very good or even excellent. Conversion of the built-up development areas would provide housing for 288,000 people and an additional 257,000 jobs could be created. Overall, according to the evaluation at that time, all recorded development areas combined would make Zurich the second largest city in Switzerland.

Challenging revitalisation

However, the functional, economic and ecological upgrading of areas is ambitious, since every development is an isolated case. The revitalisation process, dynamic in all its phases, can last for years. There are various reasons for this. Even if the macro- and micro-location are promising, contaminated sites, monument protection regulations, unfavourable construction economics and official or private resistance can complicate conversion. The result: companies prefer to realise new construction projects in the open countryside.

Nevertheless, areal development has good chances of success. There are numerous projects in Switzerland to vouch for this. Innovative projects provide the necessary living space in locations where there is population growth. In areas with an expanding economy, state-of-the-art workplaces are created. And in well-developed communities, retail projects enliven the region.

Table: Success factors for areal development

Successful practices for investors, builders and owners
<ul style="list-style-type: none"> • Contacting planning departments and authorities well in advance • Involving experienced appraisers • Using the know-how and ideas of external partners • Careful site exploration • A consensus-oriented and cooperative planning process • Public-private partnership for project realisation • Continuous involvement of the community • Contractual regulation for dealing with risks • Personnel continuity • Vigorous public relations • Marketing under new names • Key projects and interim use as a marketing aid

Source: The future lies on waste land, Federal Environment Agency Germany

Lifestyles as a development strategy

No matter what goals are pursued for a development area, all projects have one thing in common. Success depends not only on factors such as profitability, easy accessibility or marketing potential. Increasing numbers of people are striving for sustainability. These include places that allow diverse and versatile ways of life and usages. A good social and functional mix and ecological sustainability are also sought. In the “Ananas” project, a supply strategy for sustainably consolidated cities, ETH Wohnforum recommends that different lifestyles should be considered as potential for identifying new habitats. These have different criteria characteristic depending on each individual.

Table: Fields of activity and criteria for sustainable lifestyles

Energy systems Reduced energy consumption Preference for public transport Lower mobility needs Sharing systems	Residential life Flexibility of use Communal areas Moderate use of space Identification with place of residence	Consumption patterns Local products Recycling and waste avoidance Repair and Maintenance Exchange and loan systems	Health care Access to health care provision Activity-friendly environment Residential hygiene Security needs
World of work Short commutes to work Proximity to child care and schools Efficient energy management Resource efficiency Co-working and co-creating Public transport	Recreational activities Proximity to recreational areas Attractive outdoor spaces Varied cultural and sport offer and catering	Social Issues Acceptance for social diversity Interest in participation Neighbourly commitment Long-term relationship networks	

Source: www.ananas.net

Competence centre for the fourth industrial revolution

The needs that are reflected in these lifestyles should not be neglected when waste land is to be newly developed as business locations. "A central location in the urban environment, good public transport links and a positive overall image are among the qualities that make revitalised waste land attractive as a workplace," says Hans-Jörg Fankhauser, Managing Director of Fankhauser Arealentwicklungen. When combined, for example, with a secure energy supply and a high density of qualified specialists, ideal conditions are met for a modern industrial location. The blend of positive qualities attracts companies with high quality standards in relation to their corporate identity as well as technology-oriented companies with knowledge-intensive production processes and service companies with a high proportion of skilled workers.

The Schoren site in Arlesheim has a variety of success qualities. Going by the name of "uptownBasel", a centre of excellence for Industry 4.0 is to be built 15 minutes from Basel by 2025. In other words, the digitalisation of industrial production is to be promoted in Arlesheim. For example, the Internet of Things, Virtual Reality, robotic technology or 3-D printing are closely linked.



Images: Visualisation of uptown Basel, Source: uptownbasel.ch

The size of the area (70,000 m²) enables holistic planning. Ideal conditions are created for medium to large companies operating in the Industry 4.0 area. For this purpose, new halls will be built and existing buildings reused. "The former post office parcel centre is a hall that we would hardly have been able to build ourselves." Thus Hans-Jörg Fankhauser, who is responsible for the development of uptownBasel, sums up the advantages of the existing buildings. 16 meters high, without interfering columns and fitted with an extraordinarily high load-bearing capacity floor, the hall offers ideal conditions for industrial, robot-supported production.

The entire competence centre will consist of seven modular production halls and will be supplemented by 35,000 m² of office space. "The mix of production and offices makes the project more economical," explains Fankhauser. The success potential for the design is demonstrated by the fact that tenants have already signed up for the first hall. The anchor tenant of the building alone brings 350 new jobs to the Basel area.

Idea development in virtual space

"uptownBasel" is dedicated to the future in another sense, too. The Swissbau 2020 special show for digital transformation, the Swissbau Innovation Lab, is using the areal development as an idea lab. The example of this real project demonstrates the opportunities and challenges that digitalisation contributes to the construction and property industries. "I think it would be exciting to actually implement one of the solutions from the Swissbau Innovation Lab," says Hans-Jörg Fankhauser, outlining his hopes for the cooperation.

In order to explore which digital solutions are suitable for the site in Arlesheim, five cross-industry working groups have been working on digital case studies since March 2019. These focus on construction-relevant approaches that can be used through the life cycle of a property.



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Table: Topics Swissbau Innovation Lab

Topics	Focus of the case studies
Intelligent buildings	Solutions to increase flexibility, quality of life, security and resource efficiency
Energy and climate	Solutions for reducing energy consumption, CO2 emissions and climate protection
Digital services	Service offerings and digital services to support planning, construction and operation
Mobility	Solutions for energy-efficient, safe, low-emission, comfortable, cost-effective mobility
Cooperation	Collaborative processes for more efficient, qualitatively better and more sustainable buildings

Source: www.swissbau.ch

At the same time, the resulting digital use cases take into account factors that are important to building users. In addition to near-natural landscape architecture, on its own list of requirements "uptownBasel" includes the use of renewable energy to provide heat and electricity, promotion of the use of public transport, electromobility and slow traffic. These are all factors that promote the image and take into account the individual lifestyles of the employees.

The results of the working groups will be staged at Swissbau 2020 in the iRoom of the Swissbau Innovation Lab. Trade fair visitors can rate the individual projects and thereby choose the winner. "Through the cooperation with uptownBasel, the Swissbau Innovation Lab is dealing with a real issue for the first time," says Rudolf Pfander, Exhibition Director of Swissbau. "The digital use cases are therefore not theoretical mental games, but must stand up to use in practice," emphasises Pfander, explaining the importance of case studies for their potential use in other areal developments.

Swissbau 2020

"Trial and Error" is the slogan of Swissbau 2020 and is a common thread running through the three main sections: Fair, Swissbau Focus and the Swissbau Innovation Lab. At the trade fair, visitors have the unique opportunity of finding out about new and proven products all at once and in a single location. The interdisciplinary event and networking platform Swissbau Focus is an industry platform on which over 7,000 decision-makers from business and politics exchange views. The Swissbau Innovation Lab, the special show for digital transformation, renders the opportunities and relevance of the new technologies in the construction and real estate industry tangible in a variety of ways.