

COMMON SURPLUS

tabakwerke linz - new city district - microprocessing

CONCEPT

Initial situation

Cities and regions are nowadays characterized by the typical spatial separation of work, housing and leisure. This requires great mobility, combined with high energy and time efforts. The main cause for this spatial segregation is the globalized economy. This is accompanied by the erosion of local supply structures. As a consequence, the added value shifts from regions to multinational corporations. Production is controlled centrally by corporations who create, move or close their production sites according to purely economic aspects - as in case of the Tabakwerke Linz. Economic and utilization cycles are calculated only for monetary aspects, in favor of profit maximization product-life-cycles are as short as possible, sustainability gets more and more left behind. The infrastructural conditions, particularly in urban areas are counterproductive regarding communication, which fosters alienation processes - with adverse side effects such as a lack of neighborhood support, decreasing relation of people to their own living environment and indifference regarding democratic processes.

Vision

Former Tabakwerke as model quarters with a new understanding of social values

- The model quarters are a self-contained cosmos of values in which an own culture and identity can develop. Yet it is open to the outside public to be easily accessible.
- The model quarters provide accommodation space for encounters, exchange and cooperation. They combine education with research, technology and nature, reality and utopia.
- The model quarters are based on the principles of permaculture. There is a synergy between sustainable agricultural and cultural use of space, the production and consumption of energy.

Phase 1: "IN TRANSITION"

Open Call (from 2011)

Especially those people who want to occupy themselves within micro structures in the quarters, those who want to do what they really really want to do (F. Bergmann), are invited to submit their applications.

Open Commons

Based on the principle of "creative commons" and "open commons", some areas at the model quarters are designated for public use. For the effective application, the expertise of a quarters' based NWNC Center (new work new culture) is essential. Digitally available information is utilized perfectly, creativity increases exponentially.

Basic supply of food

The quarters offer the opportunity to meet a basic supply of food and to sell it on its own marketplace. For this purpose, there are open spaces and experimental areas (former depots and areas in building 1) available, where cycle-oriented forms of production can be operated. As part of the basic service areas for aquaponic, chicken farming, vegetable and fruit crops (green empowerment) are available. By raising nearly extinct Danube fish species the link to the port area (as a breeding tank) and Danube (as new habitats) was rediscovered and newly produced.

Business cycles

As part of the production and consumption chain a local currency will be introduced to visualize the added value within the model quarters. This, designed as a pure medium of exchange voucher system, creates identity and accomplishes economic stability. Following the example of talent exchange circles, goods and services are charged in time units and exchanged on the marketplace (micro market) in the former dissolution hall. An exchange of euro against vouchers is possible, the exchange rate has to be - measured in hours - conjointly defined and adapted regularly.

Mobility

The neighborhood is located in the central region of Linz and is easily accessed by public transport (connection to future tram network) and by bicycle or on foot, for workers as well as for residents and visitors at the same time. Bicycles and scooters can be easily used on the "boulevards" within the premises. Railroad tracks and railway turntable can be used again for the future algae campus. Car parking is provided in a parking garage under the future front building.

Social Aspects

The quarters perceive themselves as integral living, working and creativity construct. In addition, social needs for recreation, culture and knowledge transfer are satisfied. If it's shared, it is more valuable (F. Nahrada). This can be attributed to food, crafts and skills, but also transferred to knowledge and decision making. This way the basic idea of "corporate identity" by Peter Behrens evolves into "social identity".

Open Source Tool

Participatory participation in the design of public open space through an appropriate open source tool - an "online calendar". Anyone may enroll and reserve space, temporary design or configure something, play on.

Human-Energy-Link

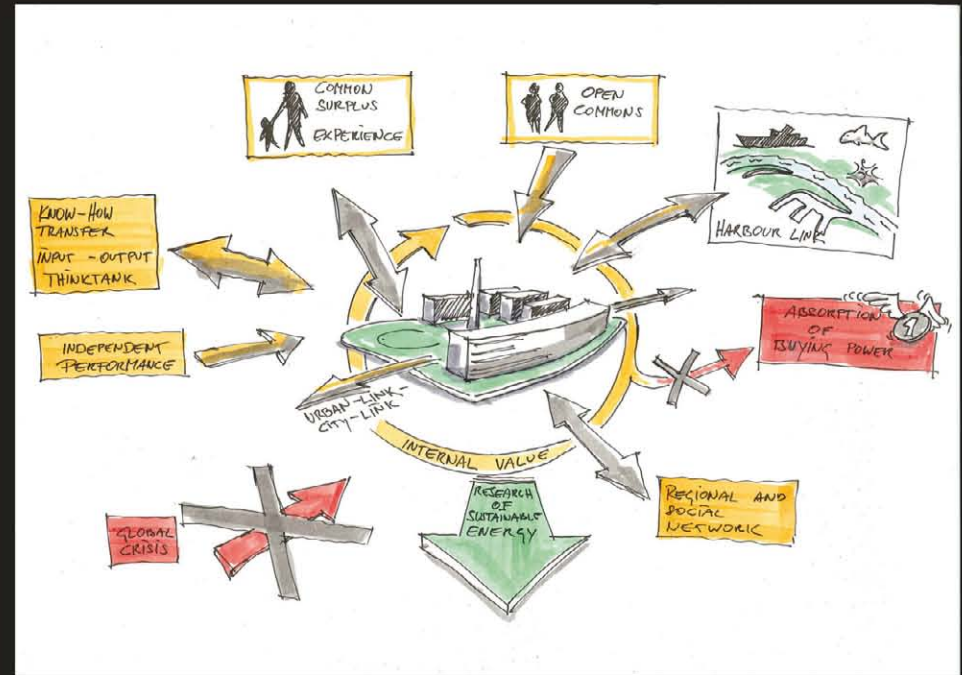
Your personal energy isn't lost here! By using various ergometers, or "dancing" on a portable dance floor which is situated in the quarters for free use, movement becomes visible through the use of a special lighting system on the brick structure of the power plant chimney. This way, the whole construction receives the character of a light-house - a symbol of a new society with luminance far beyond the boundaries of the district.

New synergies in the intersection between residence-work-nature

Temporary living is enabled in small compatible units (residential boxes) and "work" niches for micro-producers in front of them, or "Artists in Residence" with views of green or direct contact with crops. In relation to climate, the boxes are adjusted to the outer shell of the tobacco factory with a secondary insulation. The boxes are equipped with the minimum setup, aligned along the existing axis grid, and can almost freely be connected to each other. Depending on the position, exciting meeting rooms, intermediate zones, plant niches evolve.

Energy

The energy concept is based on the tradition of the tobacco plant and on the long run aims at the production of sufficient energy for the site and its surroundings in an environmentally clean way. In a first phase, there will be new concepts in algae research developed and tested in the former plant, which, in the second phase from 2020, lets the model quarters become energy independent. In order to sustain the step-by-step energy autarchy, solar panels on the roofs of the former depots are installed.



Phase 2: "RADIOLARIA-CAMPUS"

In phase 2, the well-functioning areas of phase 1 are adapted and expanded, possibly newly set up integrated. The model quarters will also change its architecture.

Algae research and energy self-sufficiency

Optimistically it is assumed that the key to efficient production of bio-fuel through algae reactors is discovered within the next few years. The algae research also has the potential to get people to work together interdisciplinary towards a technologically revolutionary vision. A stimulating research environment could be underpinned by international lectures and visiting professorships.

Laboratory building (Building 2)

Building 2 is the scientific heart of the quarters. Here, science and research are housed. They mainly deal with prototyping (algae reactors-lighting technology-LED), nanotechnology (algae-photosynthesis-light research) - and medicine (cosmetic products), but is open to other areas and crossovers.

Power plant

The currently existing power plant building will be entirely transformed to suit algae technology. The power plant within the lively and clean quarters should be distinguished as an active building, not a museum-preserving shell. CO2 emissions of combustion could be fed back into the algae cycle.

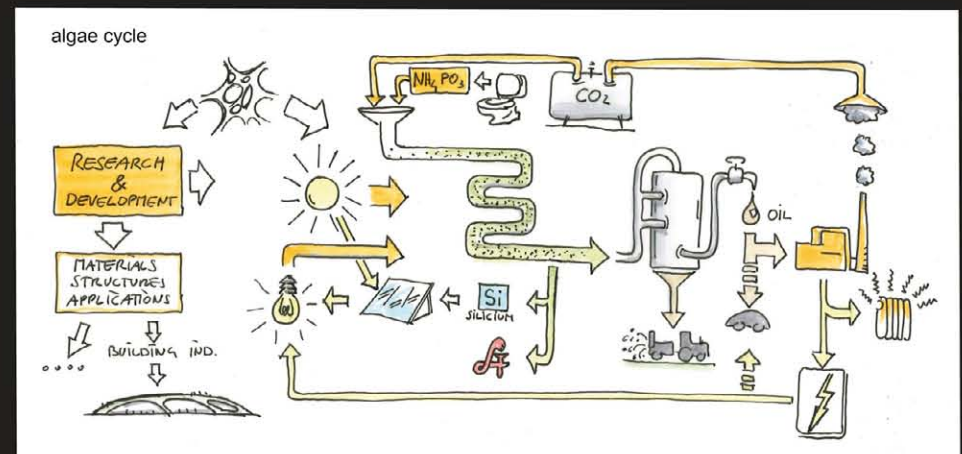
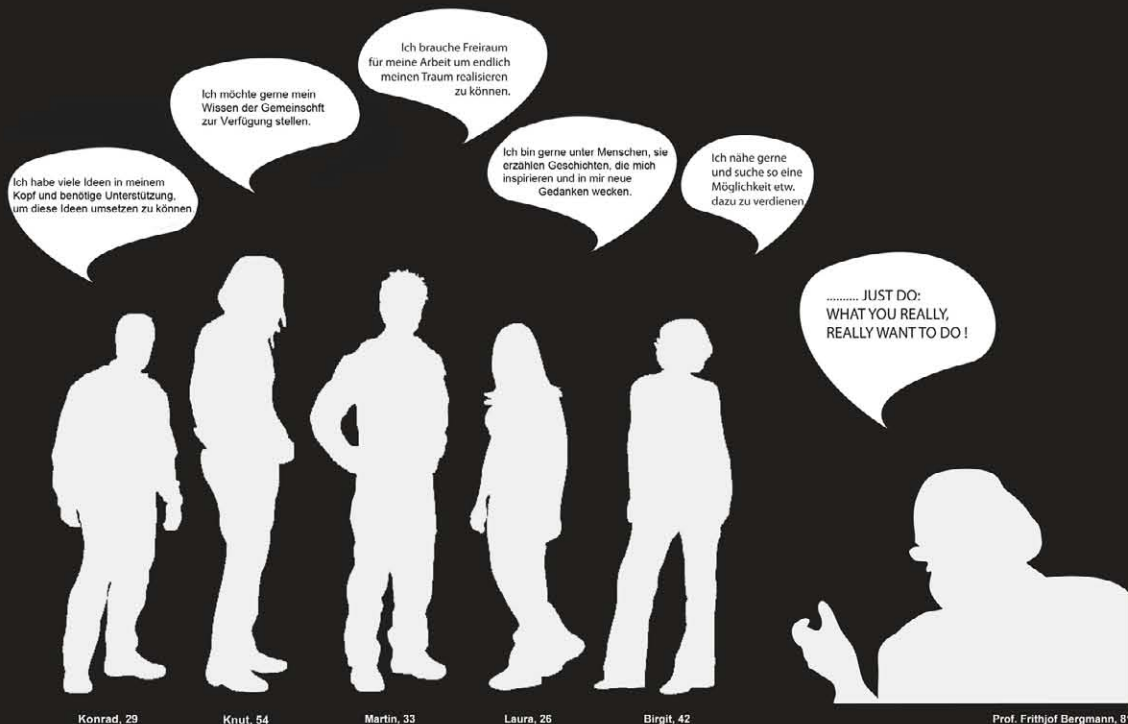
New front building as inner-city hub
The new front building is already trendsetting by its new construction technology, because the future quarters plot their buildings themselves!

With today's 3D printers, models can be generated, but only models. With special large printers, epoxy resin and natural stone granules, e.g. Dr. Dini Enrico in Pisa is coming closer to this vision.

Pursuing a modern Behrens' zeitgeist 2.0, Linz could here again take up its role as architectural pioneer. The building structure follows the structure of a radiolarian skeleton. Exterior and interior merge. This results in welcoming forecourt areas, atmospheric rooms, direct links to the City, the Danube and the courtyard. The visitor is part of an experiential adventure landscape.

An above-ground tram connection and a tram stop is proposed along the Eastern facade.

The front building houses visitor information, exhibition spaces on the history of the former tobacco plant, current research findings, a spacious meeting room, a molecular kitchen and presentation space for special exhibition pieces - a rich variety of "Quarters' design" - fashion, furniture, fine arts..



EXTERNAL LETTINGS

in transition

BASIC SERVICES : food & energy

peak oil

C2C

ecologic turn

OPEN CALL

CREATIVE COMMONS

New Work new Culture

ENERGY BY PUBLIC SERVICES

2011

2015



view vertical microfarming

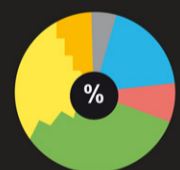
LATRO:
Algae-Powered Latro
Lamp transforms CO2
Into Light

"As advances in nano-
technology lead to
increasingly energy
efficient products,
plant life such as algae
will become attractive
sources for tapping
energy," Mike Thompson, Artist

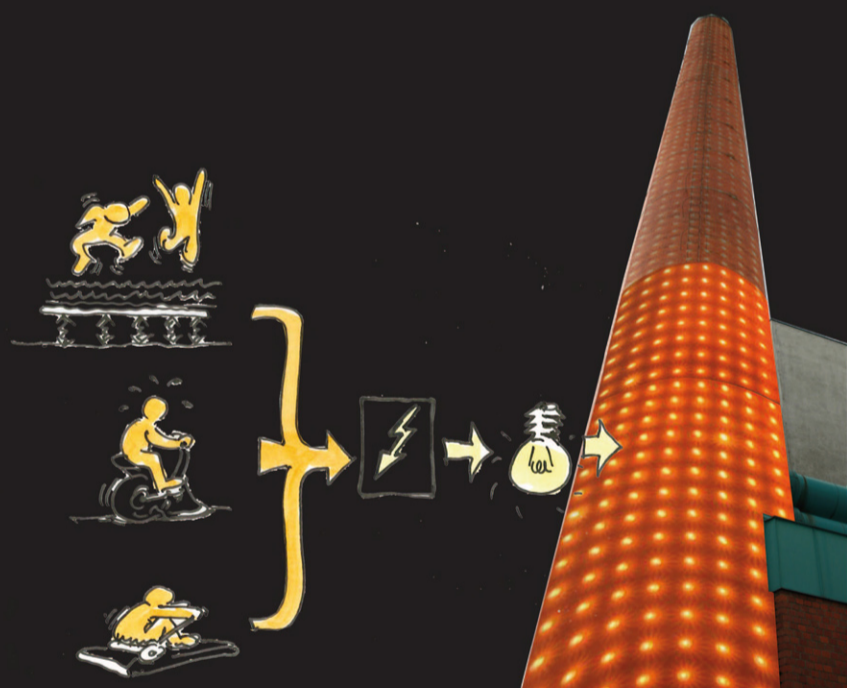
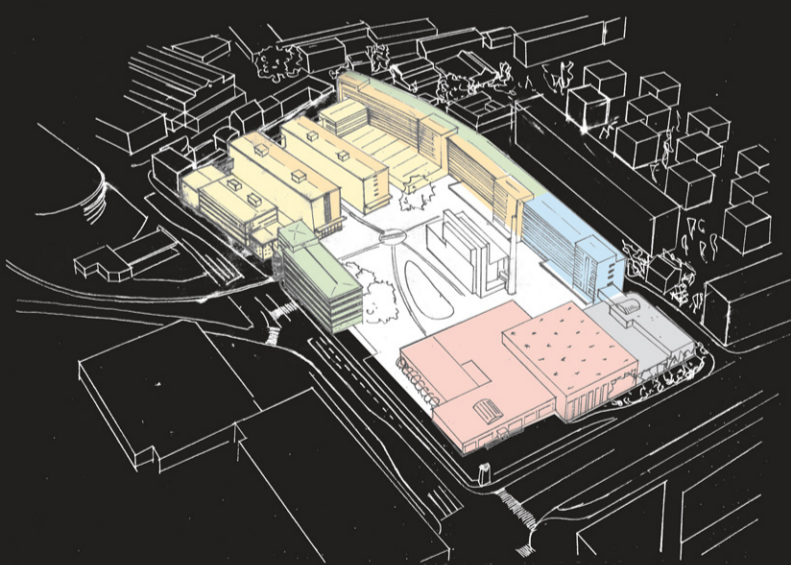


section magazines + buiding N°1

type of use



- External Lettings
- Science Center, Events, Multifunction
- Research+Produktion (alt. Energy)
- Open & Creative Commons
- Housing
- Administration



NEW 3D PLOTT

100% inter

ALGAE-REACTOR

CO2
SUPPLY

REUSE OLD POWERSTATION

IPCC alga

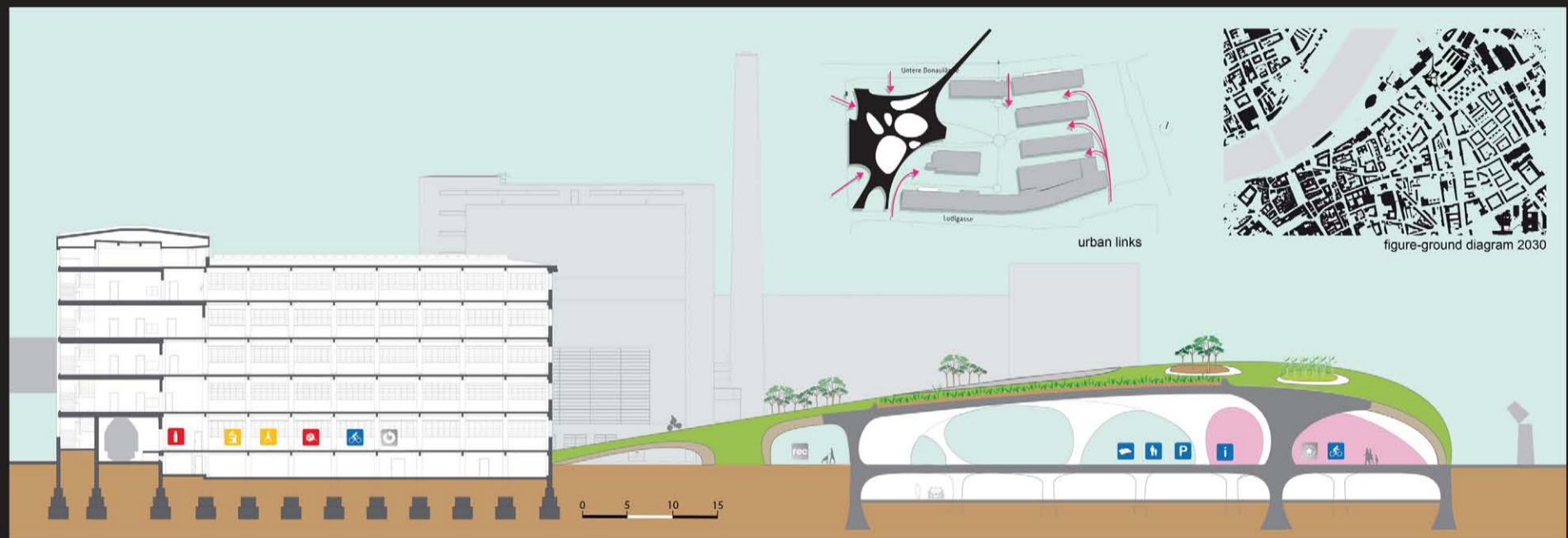
2020



interior view building N°1



concept 2030

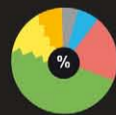


section science center 2030

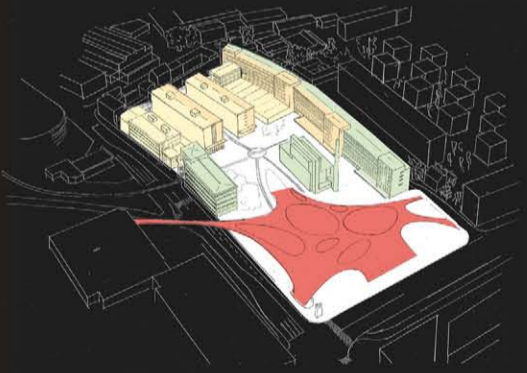


floor plan building N°1
1:200

type of use



- External Lettings
- Science Center, Events, Multifunction
- Research+Produktion (alt. Energy)
- Open & Creative Commons
- Residence
- Administration

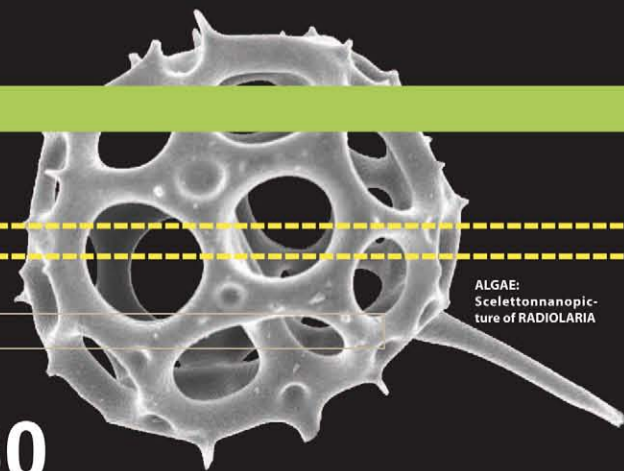


TECHNOLOGY FORMS THE NEW MAINBUILDING ON SITE

ernal value

ENERGY
SURPLUS

ae campus



ALGAE:
Scelettonnanopic-
ture of RADIOLARIA

2030

IT'S
FASCINATING!