ATMOSPHERES: EXPLICATION AND EXCESS
-ARIUM, WEATHER + ARCHITECTURE
SEAN LALLY - WEATHERS

Climatic Lungs (Light & Thermal)

Artificially Controlled Garden and Public Spaces
Public Garden with ‘Climatic Lungs’
ATMOSPHERES: PHENOMENOLOGICAL VS. ATOMISTIC
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Energies
New Material Boundaries

When Cold Air Sleeps
WEATHERS in collaboration with Morris Architects

**Estonian Academy of Arts**

Tallinn, Estonia, 2008

WEATHERS' proposal for a new Estonian Academy of Arts (EAA) asserts its identity and position within Tallinn at both the level of the school's internal operations and that of its integration and connection with the city's need for public programmes, including parks, galleries and shops. This relationship between the internal operations of the EAA and its contribution to the city's infrastructure is a critical feature of the school's design.

The relationship between students and the city is mediated by a year-round public park. A series of Artificial Climatic Lungs located in six zones along the building connect the school above to the public park below. The park itself is located on top of the school's primary mechanical systems and workshop half a storey off the street, collecting and amplifying the building's captured energy to produce lush artificial gardens throughout Estonia's long winters. The zones also provide full-spectrum lighting to counteract the short daylight hours at this time of year. The building's light source for close to a third of the year comes not from the sky, but from the glass 'lungs' which form the true facade of the building and visually connect the student studios to the public on the streets below while maintaining a necessary security of space. As the lungs move up the building through three levels of studios, they also act as thermal collectors as heat rises to the top towards the upper floors. It pools internally within the enclosed roof for external use by students as they enter from the floor above. These organisational devices are exposed to the external environment, but are needed internally in the building envelope and fed by the building's heat.

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Model showing the Artificial Climatic Lungs located above the park, moving up through the floor plates of the academy.

Organisational strategies throughout the site.

Artificially Controlled Gardens and Public Spaces

Public Garden with Climatic Lungs

View along the street looking onto the public park with the academy programmes above. The public city park is located above the school's primary mechanical systems and workshop, collecting and amplifying the area's captured energy to produce lush artificial gardens throughout Estonia's long winters.
“We as designers should be seeking the creation of contexts and sites previously unseen and untested for these materialities are no longer out of the range of implementation and they themselves should be absorbed, absorbing the responsibilities associated with architecture.”

-Sean Lally, “Future of Technology”, 2010
View along the street looking onto the public park with the academy programmes above. The public city park is located above the school’s primary mechanical systems and workshop, collecting and amplifying the area’s captured energy to produce lush artificial gardens throughout Estonia’s long winters.
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Tamula Lakeside Planning
Võru, Estonia, 2008

Urban planning is generally associated with a process of programme allocation and siting. The programme volumes are then tethered to a particular infrastructure that provides access and resources. Such planning strategies can often be one-dimensional in their approach, resulting in a rigid and isolating organisation of space. Existing regional climates and local site microclimates are rarely operated upon, and only defended against. Yet they play a large role in a programme's use, acting as the determining factor in the spatial allocation of programmatic activity over the course of a year. These climatic materialities (artificial or otherwise) have proved to be just as important in a site's organisation as the structures built to house specific programmes and activities. They can also play equally essential roles in larger spatial and urban planning. Many – if not most – activities at the urban scale, such as recreational or commercial activities and traffic circulation through a town or city, are linked to the exterior environment, thus climatic factors are a crucial component of any development plan. The Tamula Lakeside proposal is an attempt to meet the programme and activity needs of the site while simultaneously addressing seasonal planning: an attempt to consider how activities change throughout the course of the year while also creating opportunities for their artificial extension. These are neither landscapes nor building strategies, but climatic strategies.

above: View of the proposal showing the building masses lifted from the ground to form energy sources collected in the pyramids above to spill into the site and activities below.

left: Pyramidal shapes atop the top floor of the building mass, capturing the wind within the floor plates. These forms are made of insulating materials based on the programme activities below and serve to warm and trap energy, which is then used as heat and light to produce the artificial climate below the mass. Such climate zones expand and contract in size and strength, growing to merge with other buildings and zones in the summer months and shrinking back into the building during the colder winter months.

Gradation climate zones are created on the ground floor of each of the buildings, growing and shrinking with the seasonal changes. These gradation shifts in size and intensity, often spilling over and connecting with each other in suitable seasons, while shrinking and acting as desolate entities in the more extreme winter months.
Seasonal Expansion

Summer Months

In the warmer summer months, climatic zones and gardens are at their most expanded state. These climatic zones of activity feed into each other as they mix with the surrounding environment.
PHILIPPE RAHM
Thermodynamics cities