

Idea

The clinker brick platform that forms the base of the 'District Office Complex' directly refers to the building traditions of the Toruń region. The color of this base harmoniously transitions into the 'skin' of the buildings. The greenery surrounding the structures reaches the lattice walls at ground level, climbing up them and blurring the boundaries between the terrain and the building.

The structure of the facility is composed of seven aisles of equal width, arranged along a north-south axis. Except for the single-story central aisle, all aisles have three floors. The lower floor forms the mass of the parking garage. The three eastern aisles make up the County Offices Complex, while the slightly longer western aisles form the mass of the District Office suspended over the entrance plaza and closing it off on the western side. An accessible garden has been designed on the roof of the single-story central aisle, available from both institutions. The project preserves a row of mature alders on the plot. In reference to their direction, density, and species of trees, two new rows have been formed that shade the entrance plaza and the external parking area, and also shield the complex from the busy Maria Skłodowska-Curie Street.

The tectonics of the facade enable easy division of the interiors into rooms of various sizes. Fixed, vertical glazing is separated by narrow, opaque panels, which provide individual ventilation for the rooms. Panels perpendicular to the walls effectively limit overheating of the interiors from the east and west, and external blinds are designed on the southern facade.

The priority in making design decisions was to optimize the total investment and operational costs of the complex and to care for the broadly understood green surroundings of the buildings.

Main design assumptions

The spatial context, functional connections, safety and comfort of users, as well as the optimization of investment and operational costs are the basis for the decision to construct a low-rise building – up to 12 m in height. Reducing the number of floors facilitates the location of basic functions on one level.

The strategic decision to locate parking spaces for passenger cars stemmed from the requirements of the competition, which called for the creation of 250 parking spaces. Attempting to place them at ground level would have occupied a significant portion of the plot. Due to the high groundwater level, the construction of an underground parking was abandoned, and the construction of a multi-level parking was deemed economically and spatially unjustified. Most of the parking spaces are located under the building, and the rest beyond the non-exceedable building line. The parking is naturally ventilated from the east-west direction. Due to the mandatory distances from the plot boundary, the southern wall of the parking serves as an acoustic barrier.

The entrance plaza is shaded by rows of alders. Trees in the hardened part of the plaza are surrounded by lines of latticed wooden platforms for seating, and water from the brick surface is directed towards the roots. The plaza transitions into a portico leading to the entrance hall of the District Office, where the customer service office is located. The lower hall also includes a buffet with the possibility of setting up tables outside under the portico during the warmer months.

Wide stairs, positioned along the main axis of the District Office building, and symmetrically arranged elevators lead to the first floor, where there is an operational hall that spans two stories in height and the full width of the aisle. The room is lit from above by northern light. Counters on both sides serve for seated customer service. The remaining department rooms are designed in the side aisles. The two-story central aisle to the north is closed off by the council chamber,

glazed from both the side of the operational hall and from the northern facade. Small halls on either side of the council room are indirectly lit from above and adjoin the rooms of the board and council members.

The second floor is designated for functions to which public access is restricted. In the County Offices Building, a similar principle for arranging functions is observed.

The ground floor entrance hall serves as a porter's lodge, information point, and mail reception. The first floor is allocated for institutions that frequently interact with the public - the County Labor Office and the Family Assistance Center. The inner courtyard has been designed as a square - a playground. Parents handling administrative matters can safely leave their children there without worry of them wandering off. From this level, it is also possible to walk to the garden between the segments of the District Office and the County Offices. The Disability Assessment Team, Road Management Board, and Building Inspection Office, which receive significantly fewer visitors, are located on the second floor.

The entrance halls are connected to a gallery-vestibule, flanking the entrance plaza from the south and separating it from the parking area. The gallery may host thematic exhibitions related to the Toruń region.

Architecture of Administrative Buildings

The times of administration functioning similarly to the judicial system described in Kafka's 'The Trial' are fortunately becoming a thing of the past. The images of long corridors and lost petitioners wandering them, unsure of which doors to knock on, are also disappearing. Furthermore, many administrative processes are moving online. The development of society necessitates continuous changes in the tasks set for administration. The architecture of administrative buildings should keep up with these changes. Open, well-lit with natural light spaces must provide easy orientation and allow for quick reorganization of the layout of designated rooms.

Administrative buildings, especially conference rooms, should serve non-governmental organizations and various cultural and educational purposes after office hours. This can be easily achieved with modern access control systems. An office cannot be just a building with corridors and closed offices, although it must also have such parts. Public spaces become very important: both open and enclosed. The District Office project in Toruń proposes a whole range of such solutions. The shaded entrance plaza is equipped with permanent seating platforms and movable chairs and tables. A sensory garden is designed to provide relief by affecting the senses of those who use it. The inner courtyard of the County Offices transformed into a square - a playground, allows for safe leaving of children while handling administrative matters. The arcades before the entrance to the district office serve as a summer garden for the buffet. The operational hall is large enough to be used for short, informal meetings. Conference rooms and the council chamber can be accessible in the afternoons without the risk of unauthorized access to the rest of the building. Even the connector visible from the entrance plaza between the segments serves as an open gallery. The building should be a place for society to meet with authority, not a symbol of its dominance.

Architectural, structural, and material solutions.

The facility is constructed from seven aisles of equal width, arranged along a north-south axis. The structural layout is clear and repetitive, based on spans optimized for the garage and higher floors. The structure consists of a prefabricated column-and-beam framework, covered with compressed reinforced concrete slabs.

The glazing, except for door openings, is non-opening and installed without the use of external clips. In the spaces between windows, the internal glass is laminated in graphite color, and the frames are hidden behind the facade columns. Despite the non-opening glazing, every room adjacent to external walls can be naturally

ventilated through narrow, tiltable panels, mounted between doubled columns. Columns placed perpendicular to the facade plane provide protection against excessive sunlight on the east and west elevations. On the southern facade, office spaces are shaded by external blinds.

The roof structure over the two-story operational hall and the council chamber is made of glued wood, and light wood acoustic panels are used on the walls. These interiors, despite their considerable scale, are intended to be warm and cozy, with soundproofed acoustics. The interiors are also warmed by natural greenery in the central part of the operational hall. The council chamber is open to views from both the operational hall and the exterior. While waiting for service or resolution of their case, visitors can use the sensory garden located at the level of the operational hall or go down to the buffet on the ground floor. Visitors to the County Offices can also use the garden and buffet. For children accompanying parents during visits to the District Office Complex, a shaded and safe playground has been designed.

The architecture of the building is intended to foster the image of an open, citizen-friendly local government authority.

Communications

Due to concerns about violating competition conditions, and also because of the organizer's ambiguous stance on this issue, the project anticipates powering the investment area via an existing exit from Maria Skłodowska-Curie Street. However, in the authors' opinion, using the road on the eastern side of the plot, which leads to several city institutions and clearly has the character of a public road, would be much more convenient and safer. Responses to inquiries from competition participants suggest powering the investment area from Skłodowska Street, but do not contain the word 'directly.' Therefore, according to the authors, using the existing road plot does not violate the provisions of the local spatial development plan. The diagram of this power supply, which extends an additional

inclusion lane at Maria Skłodowska-Curie Street, has been presented in the attached diagram next to the PZT. The construction of such an important facility for the city should consider the reconstruction of the entire road strip along its length. It is regrettable that the scope of the competition study was limited to the plot outline.

Installations

On the relatively large surface of the roof, a green roof covered with perennials has been created, which stabilizes the interior temperature and stores a large portion of rainwater. The southern slopes of the skylights and the remaining parts of the roof have been covered with photovoltaic panels. It is estimated that the installation of 1,100 panels, each with a capacity of 450W, will provide an installed power of 495 kWp, which will enable the generation of about 450,000 kWh of electricity annually.

Despite the large use of the generated energy, 'on the fly,' the project includes the construction of an energy storage used as continuous emergency power supply (UPS true online) for about 500 kW with batteries of 2 MWh capacity, which realistically provides about 3.5 hours of power. Additional requirements for the storage include fire separation REI240, fire extinguishing systems, and ventilation and air conditioning systems. The cost of such storage is estimated at around 8 million PLN, and the justification for its construction will be confirmed by a detailed economic analysis, including the possibility of obtaining subsidies.

Most rooms have been designed to utilize natural lighting, which, combined with energy-efficient LED lighting providing high color rendering, allows for a reduction in electricity consumption. The exterior lighting, based on soft and evenly dispersed light, minimizes the risk of intense glare. The presence of motion sensors allows for lighting activation only when needed, further limiting so-called 'light pollution.'

Based on abundant resources of cheap electricity, the project assumes the use of reversible air heat pumps, located on shaded

technical terraces on the south side of the building. Ventilation units will be equipped with heat exchangers with an intermediate agent to achieve the highest possible recovery of heat [cooling] from the exhausted air.

The project allows for the possibility of disconnecting rooms along the external walls from the central ventilation system. During transitional periods, these rooms will be ventilated through tiltable facade panels.

The use of green roofs and shading of the area around the building helps to reduce the heating of these spaces and maintain soil moisture. All rainwater will be directed towards trees, and any excess collected in retention tanks and used for irrigating the green roof, green areas, and as so-called greywater. The green roof also serves as natural air conditioning for the rooms on the second floor.

Sustainable architecture, greenery, biodiversity.

Sustainable development plans are already influencing the decisions of conscious investors who certify constructions and apply a detailed ESG strategy aimed at decarbonization, biodiversity, and a closed-loop economy. Increasingly, they are reaching for materials produced in low-emission processes or from recycling, which is reflected in the assumptions of this project.

However, in the pursuit of creating sustainable architecture, one must not forget about all elements of the construction process, including the very important economic aspect. When creating a project for implementation, rather than an experimental one, it is necessary to consider the financial capabilities of the investor. In the case of local government authorities using public funds, which could be allocated for other purposes, such rationality is particularly important.

The simple and compact forms of the complex, balanced amount of glazing protected from overheating, and the ability to use natural

ventilation, combined with heat pumps powered by photovoltaic panels, will reduce energy consumption and minimize the building's carbon footprint.

The project places a strong emphasis on reducing the negative impact of the building on the natural environment. A dense row of old alders has been preserved, allowing for the migration of small organisms at the ground and canopy levels. The existing ecosystem, adapted to the soil and moisture conditions of the plot, has been replicated in two newly designed rows and in plantings around the facility. Perennials and herbs on the roofs and in the sensory garden will provide a source of food for insects nesting in trees and insect hotels, and nesting boxes will attract birds to the site. In the green belt around the building, plantings of trees, shrubs, ground covers, and climbers will be introduced, which will climb up the latticed walls of the ground floor. In the remaining green belts, instead of traditional lawns, the use of ground covers or high and rarely mowed grass is proposed.