

## **Explanation of the Competition Proposal, Code 32074:**

Instead of the most ordinary business buildings in the shape of a cube or square that can be assembled, hollowed out or distorted, the creators are proposing a building (mega)structure with a fractal construction and crystal shape. The new business building is reminiscent of the artificial relief of a rock mass or, if more imagination is applied, of a characteristically fluid, organic shape of an iceberg. With the unusual, unique shape of the building and its ascribed meanings, the creators illustrated the process of transforming the Petrol Company from a petroleum fuel trader into a supplier of green energy and characterised it accordingly. The dynamic shape of the building's volume descends in steps from the vertical emphasis of the connected building structure at the crossroads along the road over the low point between the corner and northern tower in the form of the lowest, greened terrace into the park behind the building. The irregular, topological shape of the building's mass that rises and descends in steps in accordance with urban planning parameters is supported by the uniform building structure on a correct modular grid. In the further process of developing the concept, by taking away or hollowing out the amorphous mass the creators succeeded in forming an entry niche on the corner, in front of the building, along the road an arcade foyer and in the back, towards the park a covered square. By taking away and hollowing out inside the building's mass, they formed vertical and horizontal empty volumes of indoor atriums where they placed the vertical communications and oriented the work areas. The indoor atriums are areas of multipurpose communications that create a feeling of connectedness between the users and visitors to the building. The feeling of connectedness is additionally strengthened by the complete transparency of indoor paths, the progress of work processes and the activities in the entire building. Individual work areas are arranged along the outer rim of the building, the common areas are arranged in the direction towards the indoor atriums. The building structure is thus connected inwards, with empty spaces of the lighted atriums, and outwards with the descending green terraces which are extensions of the work and social areas. The proposed modular structure of the space ensures all possibilities for a completely flexible organisation and free-form designing of more closed individual as well as common open and multipurpose work areas that are mostly combined in the corner office tower.

In accordance with the connected, all-encompassing characteristic of space structures, the proposed landscape arrangement of the park and paved surfaces is also incorporated into the architecture. The roofs of the building structure in the form of greened terraces descend in steps and cover the park behind the building. In this sense, the park as a part of the open public space is also designed on a uniform grid according to the so-called computer pixelization method of greenery and relief shapes that, similar to fractals, constitute a self-referential structure of the whole.

Entrances, accesses and driveways on the ground floor of the building and leading to the basement are sensibly arranged on all sides of the rim. They are designed based on the type of visitors, the control and the arrangement of access to various programme components that are more internal, semi-public or public. The programme components are arranged around three cores of vertical communications placed in the indoor atriums. According to the floor plan

and the cross section of various heights, they are arranged into three programme focal points that are flexibly designed and interlinked for various scenarios of use. In the highest, the southern part, there is a set of work areas and administration and in the northern, the lower part, there are multipurpose work and social areas, while the lowest, the central part of the public business lobby under the hanging multipurpose hall connects two programme focal points and ensures transparency of the indoor activities and events in the building.

The arrangement of the basement is simple and ensures transparency. The garage with central slopes is developed along the rim, while special areas for parking of bicycles, motorcycles and the archive in the first basement and the technical areas for machine rooms with air conditioning in the second basement are arranged in the central zone between three cores of vertical communications.

The construction of the ground floor and storeys of the building has a shape of a spatial grid composed of supporting steel and supported reinforced-concrete prefabricated components arranged on a uniform grid in a 3x3m module. Due to smaller spans, the construction appears slim and light and simultaneously enables freedom in designing the lighting of the spaces along the length and depth by omitting the intermediate supports. Via the indoor atriums, all work areas in the buildings are equally naturally lighted and visible. Besides the above, the empty indoor volumes ensure excellent conditions for energy-efficient cooling, heating and ventilation of closed and open areas in the building.

### **Assessment of the Competition Proposal**

Modern sustainable construction is based on the direct computer assisted transfer of design documents into preparation and assembly of all structures, elements and support systems into a building structure. In this sense, the proposed building is designed by the method of information modelling of mutually completely compatible and connected structures and the driving and control networks. It is conceived in the form of a complex space structure composed of simple, modular building blocks that are suitable for industrial preparation and industrial method of prefabricated building. The proposal is prepared in a way that ensures the complete control and mastery of developments of all procedures of constructing the building as well as its management and maintenance that uses computer capabilities.

The spatial structure of the building is computer generated so that it will be possible to construct it even with the assistance of complete and detailed, all-encompassing computer information and also managed with the assistance of smart systems as a manageable, co-dependent organism. The building concept conceived on these grounds is completely compatible with the method of information modelling of building (BIM) and supports it with its structure.

The proposed concept is thus supported by the idea of complete digitalisation of construction, from preparing design documents, its transfer into implementation and assembling all building blocks and networks of the building, its use, management and maintenance. The new business building will become a recognisable icon of the information age, but with all the

attributes of architecture that are expressed with the recognisable forms of full and empty space.

The unique shape of the building was created according to the method of parametric modelling with which the creators adapted the amorphous mass with urbanistic parameters of a certain largest building volume to the factors of location and specific requirements of optimal functioning of the programmes in the building. Using procedures of taking away and hollowing out the massing outwards and inwards they divided it into individual spatial sequences which gave the building structure its character and recognisability.

The comprehensively conceived and consistently implemented innovative concept is the result of understanding modern methods and technologies that change the understanding construction, usability and management of office buildings in the future. With its special form and open structure, the new business building and headquarters of the Petrol Company will ensure a comfortable and motivating work environment in areas that through time will be possible to organise and connected for various purposes and business and social events. Even though the proposed concept of a modern business building in the form of a complex spatial structure appears demanding, the creators set up the design so that it promises simple implementation and reliable operation of the building.

### **Decision of the Selection Panel**

- According to a thorough assessment by rapporteurs, the competition proposal corresponds to all conditions of the competition and also meets the expectations of the client as well as the assessment committee. Besides the above, compared to other competition solutions, it credibly addresses all posed questions on the implementation of the construction and smart management of the building so through time it will be able to maintain a high level of functionality and economy of the progress of business processes and accompanying events. The comprehensively imagined proposal of the business building that should become an icon and a trademark of the new, sustainable business vision of the company has to this extent convinced the competition committee to discard concerns regarding whether Ljubljana needs iconic architecture on this site. Based on the above reasons, the committee unanimously awarded first place to the competition solution code **32074** among the nine competition proposals and proposes the client to also implement the selected concept of the new business building. The selection panel also proposes the client and the selected building designer in the future stage of developing the project to harmonise in more detail the functional concept of the business building with the organisational structure of the company.