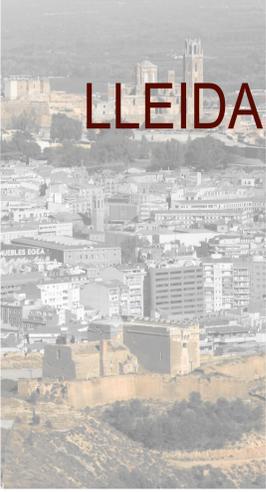


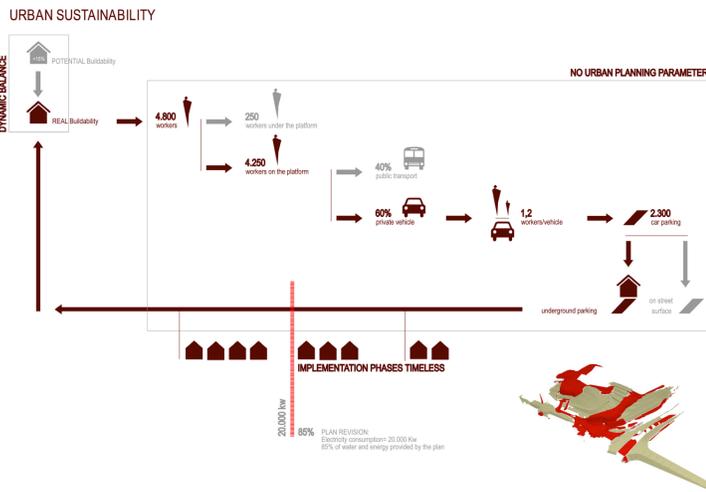
LLEIDA AGRI-FOOD SCIENCE AND TECHNOLOGY PARK (PCITAL)



VIEW OF THE TWO HILLS



URBAN SUSTAINABILITY



TRANSVERSAL ELEVATION



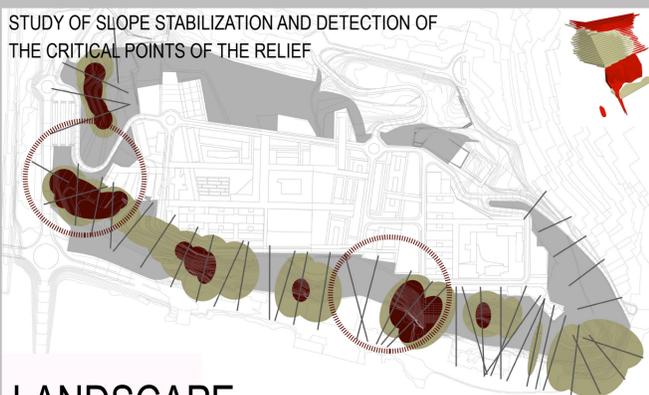
PERSPECTIVES



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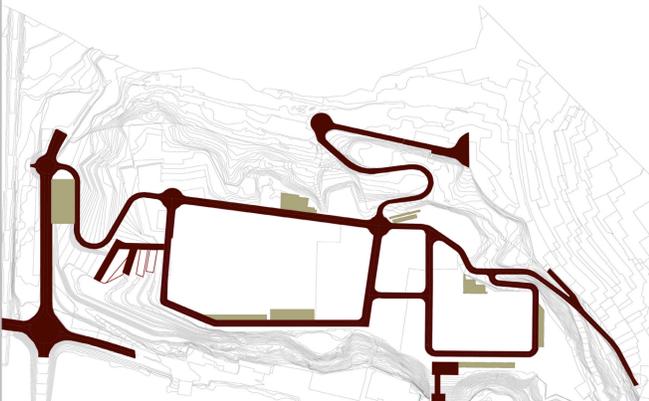
LANDSCAPE

The landscape deployment of the Plan should be achieved by regarding its silhouette at general scale and by stabilizing the hill sides



STRUCTURE

The open spaces system, together with the green belt around the Hill, is made of three bands which overtake the PCITAL and continue beyond



ACCESSIBILITY

Two alternative solutions are presented: on the one hand, the use of public transport, and on the other hand, a new road network to get a smart traffic management

The environmental criteria aim at taking advantage of passive instruments: the control of sunlight and shade, ventilation and thermal insulation, the increase of the thermal inertia and the use of recycled materials. If this is good to constructions, these recommendations focus on executing solutions to decrease heat absorption, the excessive waterproofing of soils by using vegetation to improve the comfort conditions of the open areas. From an energetic point of view, it is essential not to increase the electric power installed, although this would not be enough if we follow usual parameters, because we want to reduce energetic consumptions and ask new facilities to produce energy.

Finally, concerning landscape we must pay special attention to the formal values of the plateaus. Both hills play a key role in the spatial mark of the city landscape. The PCITAL forms a counterpoint with the Seu Vella Hill and the background plain where the motorway leads to the city. Thus, the landscape project must be more than a decorative action. It must reinforce its identity to become a key role together with the Seu Vella Hill. This means it must be displayed as a key element of the skyline of the city and a foundational member of the general structure that is composed of the river and the two plateaus. The PCITAL must be important not only because of the innovative activities, but also because of its privileged location and landscape.

The proposals of the Plan can be explained from four points of view:

- Landscape personality
- Urban structure
- Urban planning
- Accessibility

The landscape deployment of the Plan should be achieved by regarding its silhouette at general scale and town planning according to the natural features of the site. The Hill is an elevated platform, rectangular, with very different sides. The North side is a slope, the South and East ones are vertical and empty, and the West side is an abandoned quarry. The Hill is composed of a superposition of rock layers with diverse hardness.

Due to the erosion there are landslides and rock fall. In the Seu Vella Hill works have historically been carried out to minimize the erosion. In the Gardeny Hill, concerning the most unprotected sides, a vertical garden is designed in order to stabilize the ground. In the West side, the creation of a new road justifies the movement of the most instable parts and the building of a new topography. The different functions of the PCITAL have been designed according to the landscape and topographic characteristics: the top platform hosts the installations and research buildings, while the hillsides host the accesses and the green area. The North one, a green park next to the main entrance. The South and West host some lifts and a vertical garden made up of balconies and viewpoints. The West one has a new topography that permits the creation of a new road and a large parking area.

The urban structure of the PCITAL is based on a double entrance scheme, one that comes from the barracks and a new one proposed within the open spaces system, on a local scale. The starting grid is made up with the military buildings to which has been overlapped a second one based on the historic city, a bit lopsided, next to the river. The open spaces system, together with the green belt around the Hill, is made of three bands which overtake the PCITAL and continue beyond: to the South until the river, and to the North, to the future developments on that area.

The Plan conserves preserved buildings, paying special attention to the defensive tower from the twelfth century. It also coordinates new installations according to the patterns of the urban structure of the whole. The new Science Museum, next to the traditional path that heads to the hill, new hotels to be built near the PCITAL and the rest of them, following the road network spread along the top platform. Construction is not only regulated according to environmental and energy saving criteria, but also adaptability.

The structure gauges allow a superior capacity than what can be built in each plot. Research centres have different spatial needs than speculative housing. Regulations should not be an obstacle: double rooms, open patios, double skin façades, natural light, sound barriers, insulation or the need to build up singular constructions. The parameters are adaptable in order to offer innovative architectural and environmental solutions.

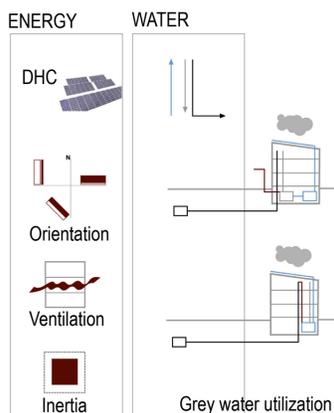
The solution to the problems of accessibility to the PCITAL is a key urban issue. The topographic conditions of the hill and the massive use of private car could hold up the Park. Thus, two alternative solutions are presented: which turn out to be better than a maximized road network to be operative during the rush hours. On the one hand, public transport: a shuttle bus service direct to the top platform, and lifts through a services and offices building located on the South side, at the foot of the Hill, or large park-and-ride facilities and escalators on the West façade. On the other hand, a new road network to get a smart traffic management, by choosing one direction over another, or by giving priority to public transport or high-occupancy vehicles.

The PCITAL Special Planning Area is aimed at a sustainable urban growth, so this is ecological and energetic sustainability criteria are present in its design. It also avoids consequences of the recent economic crisis: empty buildings and residential areas. The sustainability of the project depends on the self-sufficiency of the stages to be implemented. The City Council management makes this easier. Thus, a flexible implementation agenda has been considered, according to activities carried out and the public or private investment at every moment. The urban project wants to avoid speculation, which would not be good for the project. The PCITAL wants to be an instrument to create knowledge and activity.

The Lleida City Council understood that the closing of the barracks was an opportunity to promote an exemplary urban project in terms of environmental and energetic sustainability and promote the economy of the city and its region.

ENERGY EFFICIENCY IN THE URBANIZATION AND CONSTRUCTION

LONGITUDINAL ELEVATION



ECONOMIC EFFICIENCY WITH ATEMPORAL PHASES & SOCIAL EFFICIENCY

