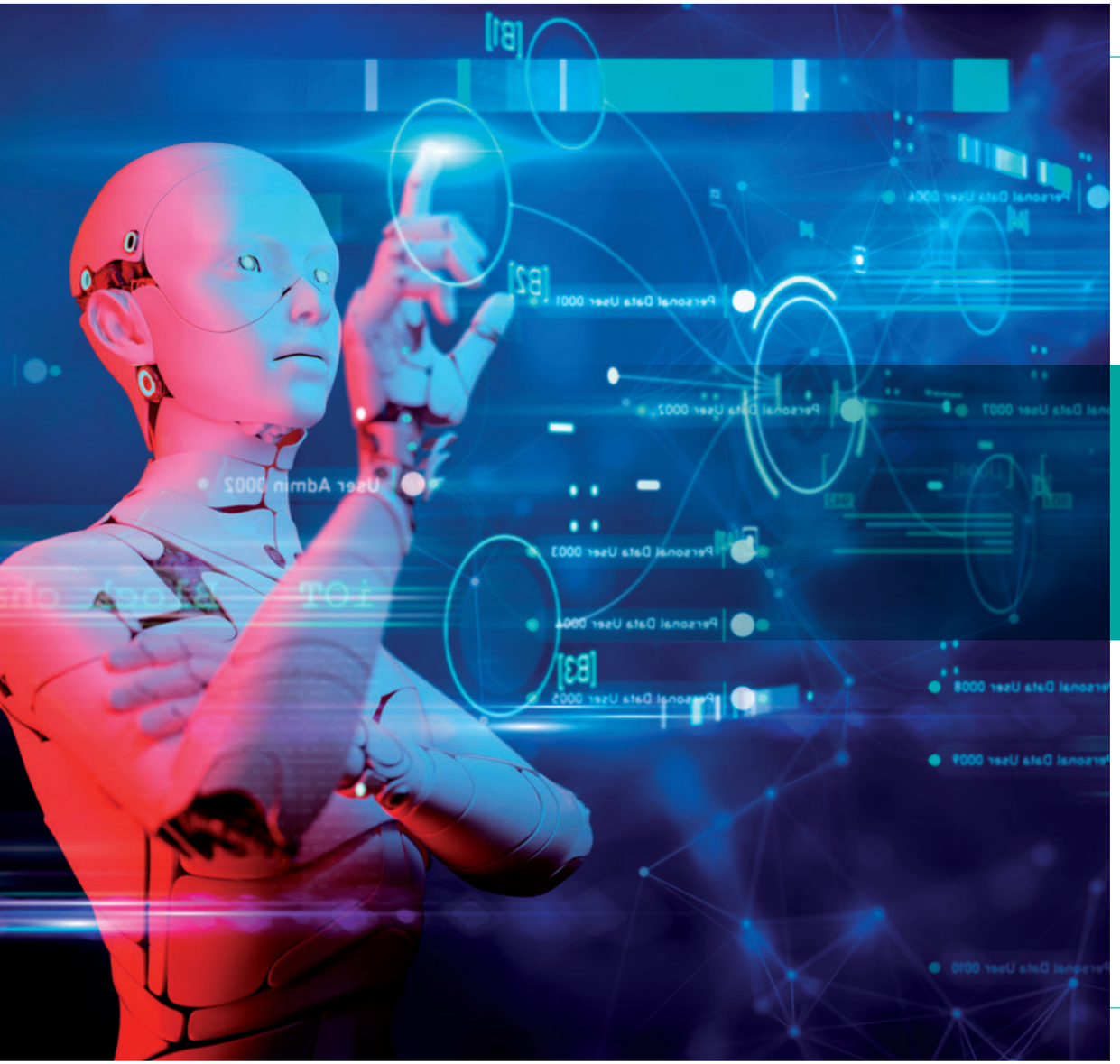

Knowledge City
Instructions Manual
TAGUSPARK
KNOWLEDGE CITY



# Knowledge City

## where the future is built

In the Knowledge City, Science, Technology and Arts interact in an environment of creativity, innovation and development for the cultivation of state-of-the-art technical and business solutions.

From Taguspark at Oeiras Valley, to the World. Create your own Valley!

In a calm and balanced environment, green zones and contemporary architecture live side by side in a symbiosis that promotes scientific and technological development. The Knowledge City transforms fiction into reality.

Robots and artificial intelligence are key elements in making the Knowledge City the place of choice for the most innovative brands and institutions in engineering, life sciences, energy, communication and information to establish their headquarters and R&D centres.

In a benchmark civic environment, the interaction between research centres, universities and companies stimulates and promotes creative dynamics, entrepreneurship, experimentation and the development of innovative solutions.

The prominence of the arts, leisure, events and sports gives the Knowledge City the required fabric for quality of life, well-being and human development in a collective space.

The organization and facilitation of meetings and debates encouraging the pooling of ideas and investment structuring state-of-the-art scientific and technological solutions is one of the areas of key importance to the synergistic vitality between the different actors.

The Knowledge City provides the environment for innovation and development that persuades and incites its members, be they individuals or institutions.

# Urban Concept

It is a city of science, technology, research and experimentation, of study, information, communication, arts and culture, varied events, sports, food experiences, training, entrepreneurship, socializing, debate, exhibition, based on a modern, technological and sustainable urban focus.

It provides workspaces to suit the needs of entities, based on integrated living solutions - the learn, live, work and play concept.

It promotes the presence of housing, restaurants, commerce, services and leisure, as well as all the essential support infrastructure for the creation of a smart and sustainable urban environment.

The Knowledge City is guided by three urban development attributes

## Integration

Proximity to other centres, clusters or research and advanced training institutions, creating a benchmark ecosystem in R&D development, entrepreneurship, attraction of companies and promotion of science.

## Multi-functionality

With a balanced combination of the main complementary urban functions: learning, working, living and relaxing.

## Sustainability

Providing active mobility solutions, promoting energy efficient buildings, using clean energy.

# Key planning and development criteria of the Knowledge City

## 250ha

**Plots of land** where companies, knowledge and advanced research institutions, housing, leisure spaces and services can be established - **minimum 250 hectares;**

## 0.60rate

**Maximum construction rate of 0.60** thus creating an urban structure with sufficient density to allow the cohesive and sustainable development of the various urban functions;

Near to the **natural environments** (coast, river, lake, forest, etc.) that enhance and add value to the Knowledge City in environmental, aesthetic and comfort terms;

## 0.30rate

**Maximum built area rate of 0.30** for a greater concentration of buildings and minimised land occupancy, thus enabling the creation of classified green areas of sufficient size to facilitate their enjoyment;

## Minimum distances

The **minimum distances** between constructions must facilitate:

- a system of views oriented towards nearby natural features;
- environmental and visual privacy and comfort;
- the creation of spaces providing access to green areas and public living and leisure areas;

## Maximum height

The **maximum construction height** must not exceed 18 metres (4 floors of offices or 5 floors of housing). Higher than this only in the most central areas or where, exceptionally, greater density is justified;

## Main road

Creation of a very wide **main road link**, chiefly for distribution and outside access, with no parking spaces. Connections to the main road infrastructures with access to other urban centres, airports, or multi-modal interfaces should be provided;

## Mobility

In order to reduce car traffic for short-distance internal journeys, emphasis is placed on **active mobility,** through a network of pedestrian and cycle paths;

## Parking

**Inclusion of underground parking** rather than outdoor parking, sized based on a ratio of 1 place for every 25m2 of gross built area, or another ratio that applies to the specific economic context, to meet actual needs;

## Maintenance

Creation of water, sewage, energy, telecommunications, security and gas infrastructures for general supply, through the implementation of a **utility tunnel** along the main road or distribution infrastructure, for optimal performance and ease of maintenance and renovation operations;

## Waste collection system

Implementation of an efficient **waste collection system**, using underground waste collection units solutions sized for the specific uses involved, and which reduce visual impact and eliminate odours;

## Signage rules

**Planning and definition of signage rules**, with the inclusion of technological systems that guide and identify locations, enable the information made available to be quickly adapted and guarantee interactivity with users. Definition of rules for the inclusion of logos and signage that identify the activities carried out in the various locations, to ensure maximum exposure and dynamism, while maintaining aesthetic and architectural harmony;

## Urban Air Mobility

**Urban Air Mobility**. Regarding urban air transport, conditions must be provided to accommodate spaces for state-of-the-art aircraft to land and take off;

## Knowledge ecosystem

**Space for Universities, Companies, R&D Institutions and Business Incubator** - a percentage of 50 to 60% of the total construction potential;

## Community

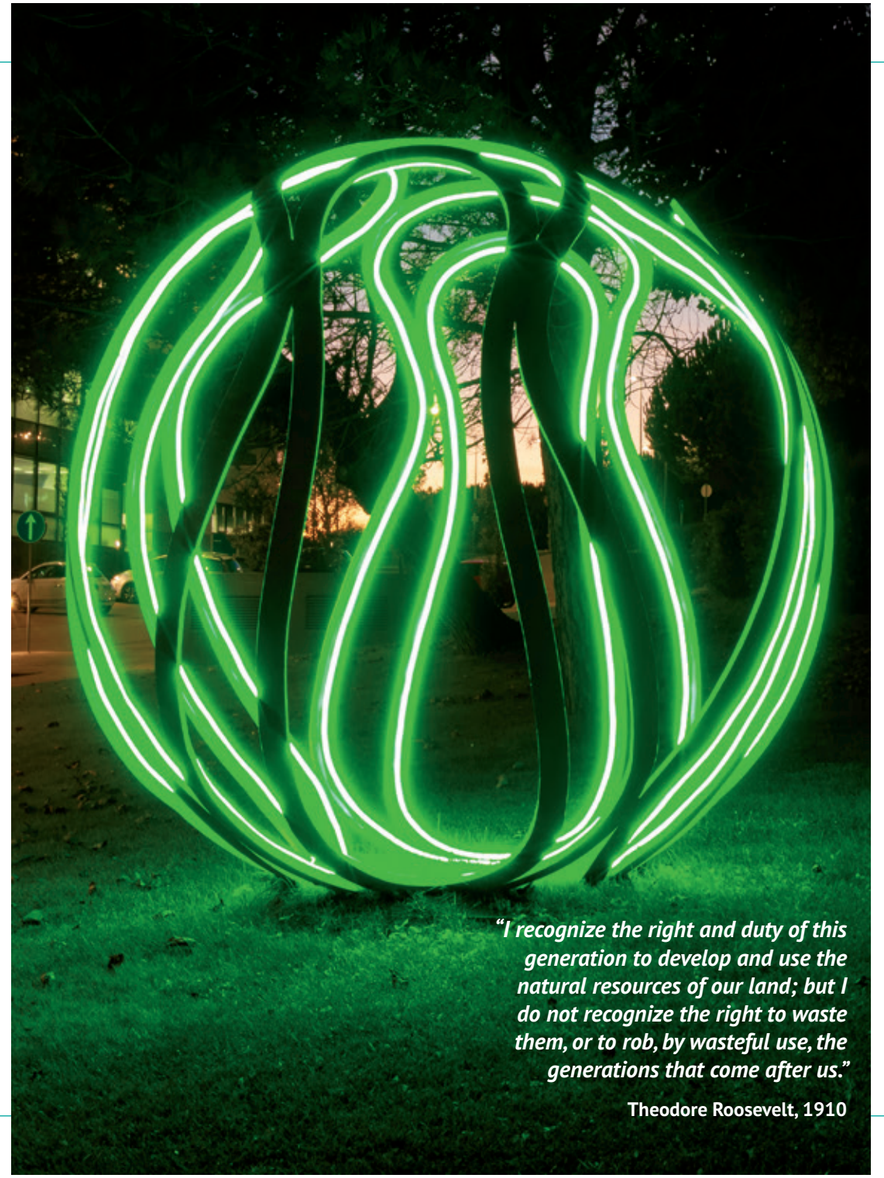
Creation of a strong spirit of community and sharing, based on a knowledge network and on the creation of synergies in the **clusters** which the Knowledge City seeks to foster, properly managed in the specific context of the place (Sea Sciences, Aeronautics, etc.);

## Residential areas

Inclusion of or proximity to **residential areas**, around 20 to 30% of the total construction potential, with differentiating arrangements for short, medium or long stays (work/live lofts; student residences), intended for users and visitors;

## Services

**Range of services complementing** the main use and housing such as catering and trade/services (bank, supermarket, gym, laundry, hairdresser/barber, aesthetic services, conference and events centre, hotel, co-working areas, pharmacy, print and office supplies shop, newsagent, clinic, dentist, car rental);



*"I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us."*

**Theodore Roosevelt, 1910**

## Facilities

Inclusion of or proximity to health, education, sport, leisure, cultural **facilities**, such as clinics, top-rated schools and colleges from primary to university education, multipurpose sports halls and fields, conference centres and museums;

## Culture

Development of a **cultural and artistic agenda**, promoting and facilitating meetings and use of the public spaces created;

## Environment

Requirement of **high standards of environmental and landscaping quality**, in **classified green spaces and leisure areas**, which promote their use for meeting and spending time;

## Master plan

Introduction of the **BIM methodology,** from the planning and development of the master plan, to the development of building projects;

## Water system

- Promoting the **efficient operation of the water supply and consumption system** with the contribution of the local waste water treatment and rainwater drainage system;
- **Use of rainwater or other sustainable sources to water green spaces**;

## Construction

- **Provision for the treatment of waste from activities related to the construction** of the development;
- Development of **plans to mitigate the impacts of future construction** on each of the plots, on the existing infrastructure, particularly by advance planning of alternative access routes and the definition of cleaning measures and mitigation of dust emissions;
- **Automated and intelligent management of buildings and infrastructure**, through the introduction of advanced security systems, centralized technical management and waste management.

# Maintenance and Operation

Facility Management is essential for the functioning and development of the Knowledge City. It is one of the foundations of its smooth operation.

The maintenance management and implementation process is increasingly intelligent and proactive, unlike the classic approach which is more involved with reaction to damage. The introduction of models based on Artificial Intelligence means that the Knowledge City can use Predictive Maintenance to avoid the occurrence of damage.

Maintenance algorithms using sensors and new technologies signal deterioration and breakdowns in equipment performance. Permanent audit rigorously estimates and predicts the occurrence of failures, thus contributing to the definition of the maintenance schedule to be applied and avoiding disruptions in the processes.

Regarding Intelligent Resource Management, at the Knowledge City we are particularly focused on:

### Renewable Energy

Installation of Photovoltaic Systems

### Sustainable Lighting

Installation of LED fixtures systems

### Electric Mobility

Installation and availability of EV Chargers

### Efficient Energy Use

Installation of highly energy efficient equipment.

# Communication

The Knowledge City must stay close to its Community, keeping it constantly informed and included in an ecosystem prioritising user quality of life and well-being.

Life in the Knowledge City must be characterised by wide-ranging well-being, with regular lunch-time or late afternoon concerts, art exhibitions and regular traditional markets (fruit, vegetables, bread, etc.), thus providing human spaces enhanced through a focus on the quality of everyday life and, whenever possible, involving the local and surrounding community.

The Knowledge City must have a strong presence in local, national and international media, to promote and disseminate its activities, its resident companies and brands and to spread its civic practices to the wider society, stimulating quality of life, innovation and sustainable development.

# Planning and Management Monitoring

Economic and financial performance are subject to systematic, rigorous and regular measurement in the Knowledge City. Planning and management monitoring are essential for the definition of targets and evaluation of levels of compliance.

Advanced planning and management monitoring models are used to anticipate international innovation and business competitiveness movements, constantly placing the Knowledge City at the forefront of innovation and development.

The Planning and Management Monitoring system must ensure appropriate support for decision making in order to achieve efficiency gains.

In this context, a range of mechanisms support the Planning and Financial Monitoring model of the Knowledge City:

- Implementation of an integrated information system across the entire organization to ensure data reliability, homogeneity and quality, reduction of errors, processes optimization and consequent efficiency and productivity gains;
- Definition of the management indicators panel and its different categories – financial, operational, technological, commercial and human resources – in line with the Organization's strategic objectives;
- Preparation of the annual Activity Plan and Budget, with input and collaboration from all Departments of the Organization;
- Preparation of monthly Management Monitoring Reports, to measure deviations from budget, so that timely corrective measures can be adopted;
- Monthly preparation of Cash Flow charts;
- Feasibility analysis of all proposed projects.

OEIRAS VALLEY

MUNICÍPIO OEIRAS

Knowledge City is a key element for the creation of qualified and sustainable wealth.
It is the basis for the development of countries and regions.

We are your key partner for the development of a Knowledge City in your country and region.

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