REPUBLIC OF CYPRUS

MINISTRY OF INTERIOR
DEPARTMENT OF TOWN PLANNING AND HOUSING

ESTABLISHMENT OF A SCIENCE / TECHNOLOGY PARK IN CYPRUS

Description of the different types of Science / Technology Parks and their physical planning requirements

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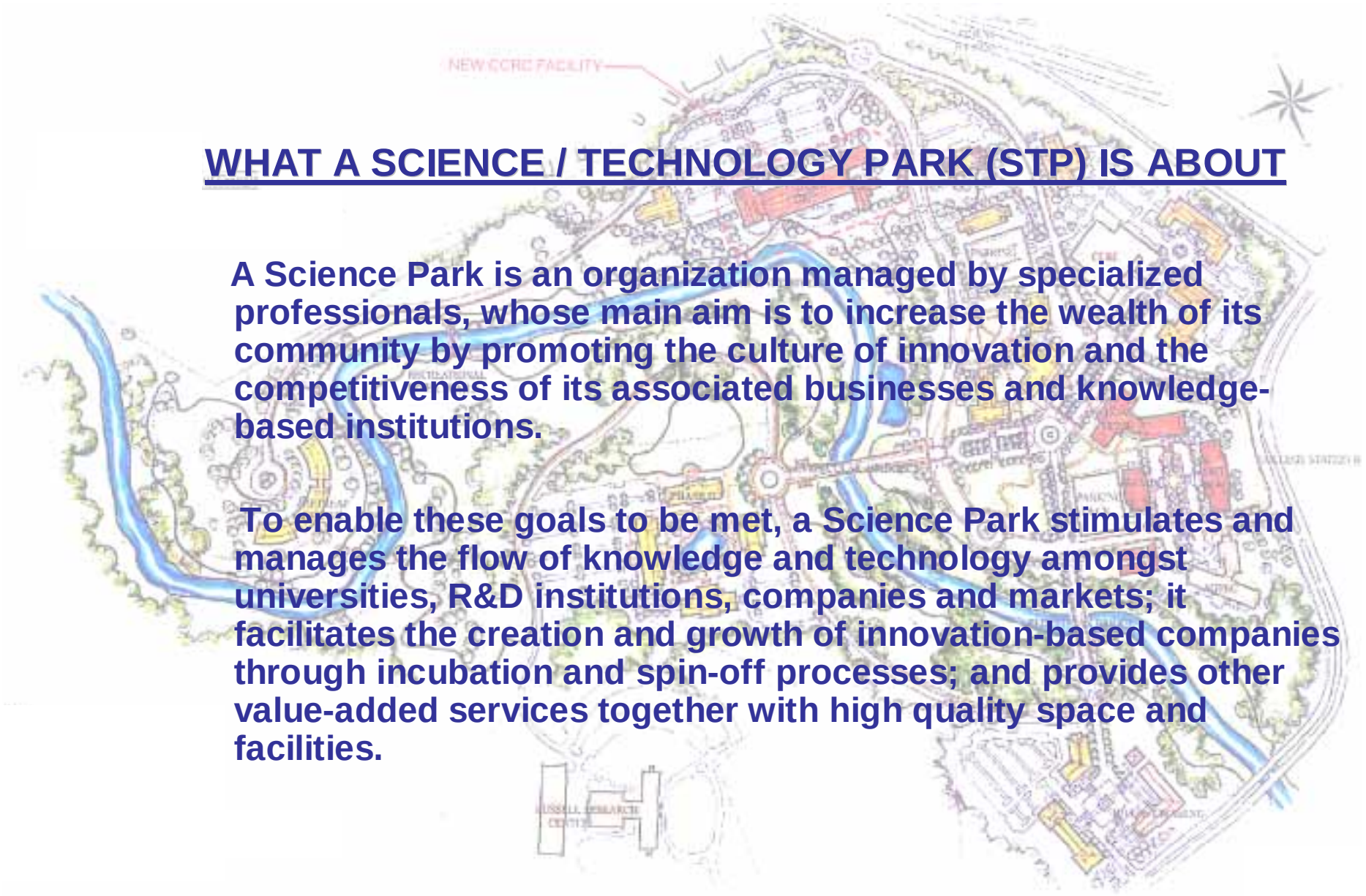


WHAT A SCIENCE / TECHNOLOGY PARK (STP) IS ABOUT

A Science Park is an organization managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions.

To enable these goals to be met, a Science Park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities.

SCIENCE/TECHNOLOGY PARKS (STPs) ARE ALSO ABOUT

Apart from dealing with high-tech Industry STPs also deal with:

- *Advanced Services*
- *Research and Development processes*
- *Creation of new companies*
- *Technology transfer*
- *Technology commercialisation*

but most of all

Innovation

CONTENTS AND FACILITIES OF STPs (BASIC COMPONENTS)

An STP in its complete form should provide the following:

- *Dedicated sector of the University involved in the study of the specific field.*
- *Research Centres*
- *Incubator – Innovation Centre*
- *Business Centre*
- *Centre for auxiliary industries – Containers*
- *Serviced sites/plots or pre-built factories*
- *Technological Centres*
- *Training centre for staff*

CONTENTS AND FACILITIES OF STPs (SUPPLEMENTARY USES AND SUPPORTING FACILITIES)

a) Supplementary uses:

- *a congress centre*
- *public or private agencies involved in research*
- *special elementary and high schools*
- *a business school*

b) Supporting facilities:

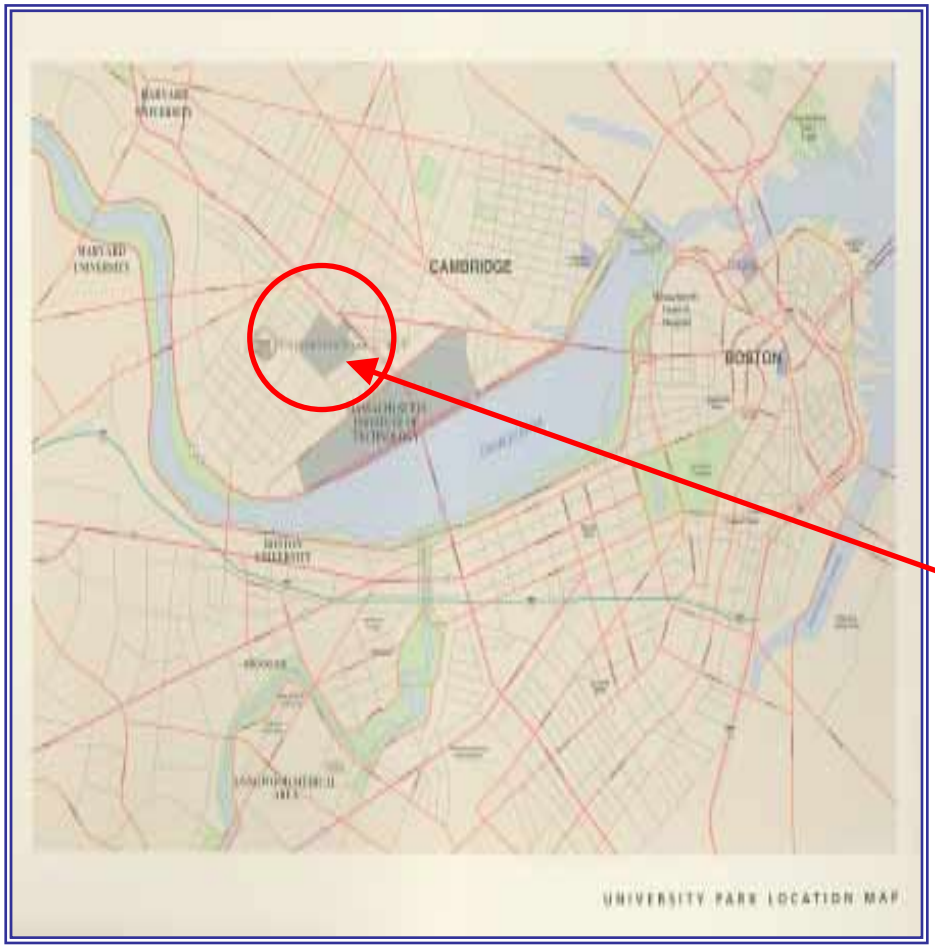
- *sports grounds*
- *recreation/commercial/ service areas*
- *housing*

TYPOLOGIES OF STPs

a) THE URBAN TYPE

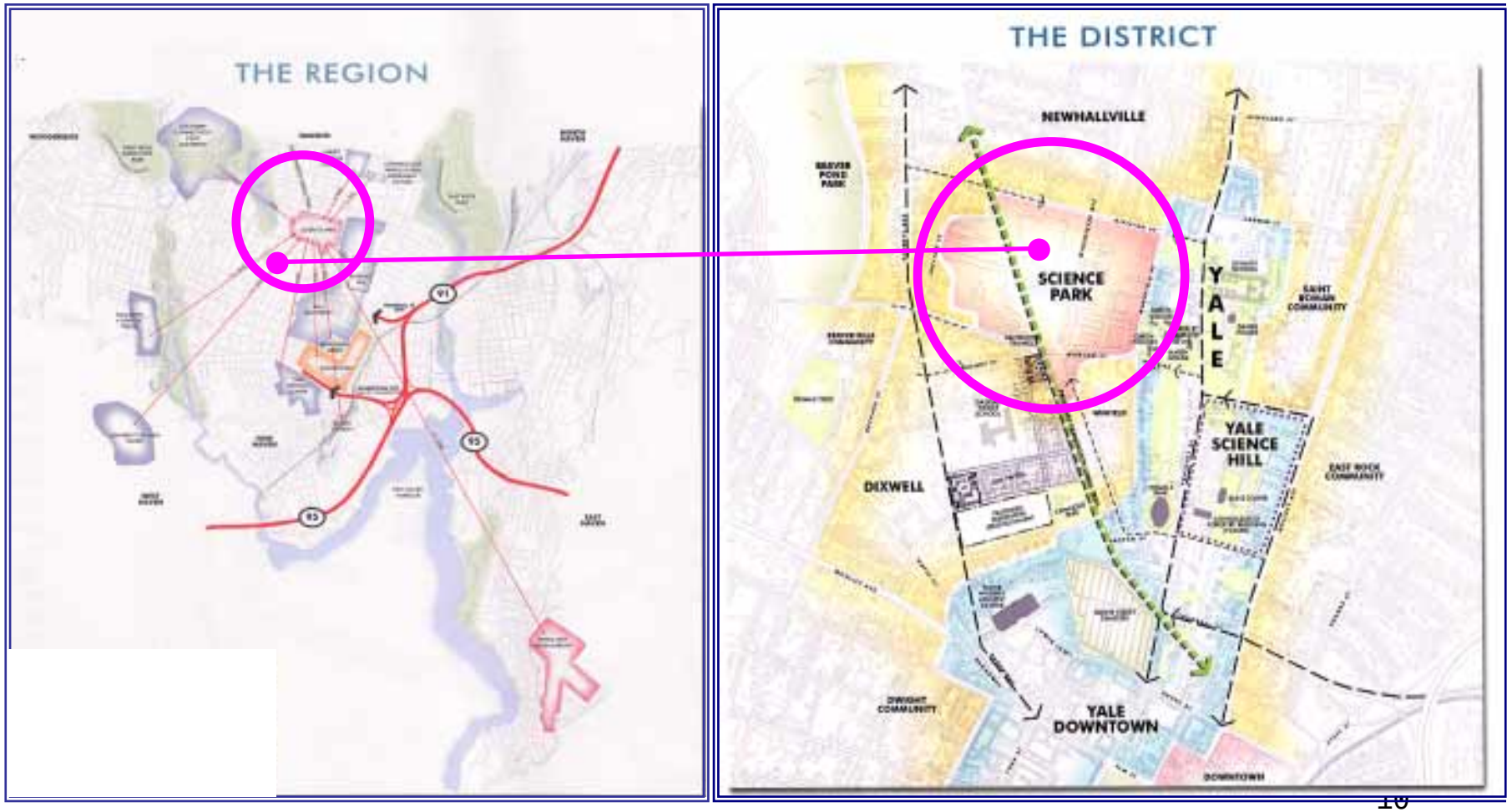
- Densely developed as part of cities' urban fabric.
- Usually next door to an existing university or research centre.
- It results from the need to be very close to an existing research establishment.
- It results from the lack of space within an existing neighbourhood.

University Park at MIT (Location)

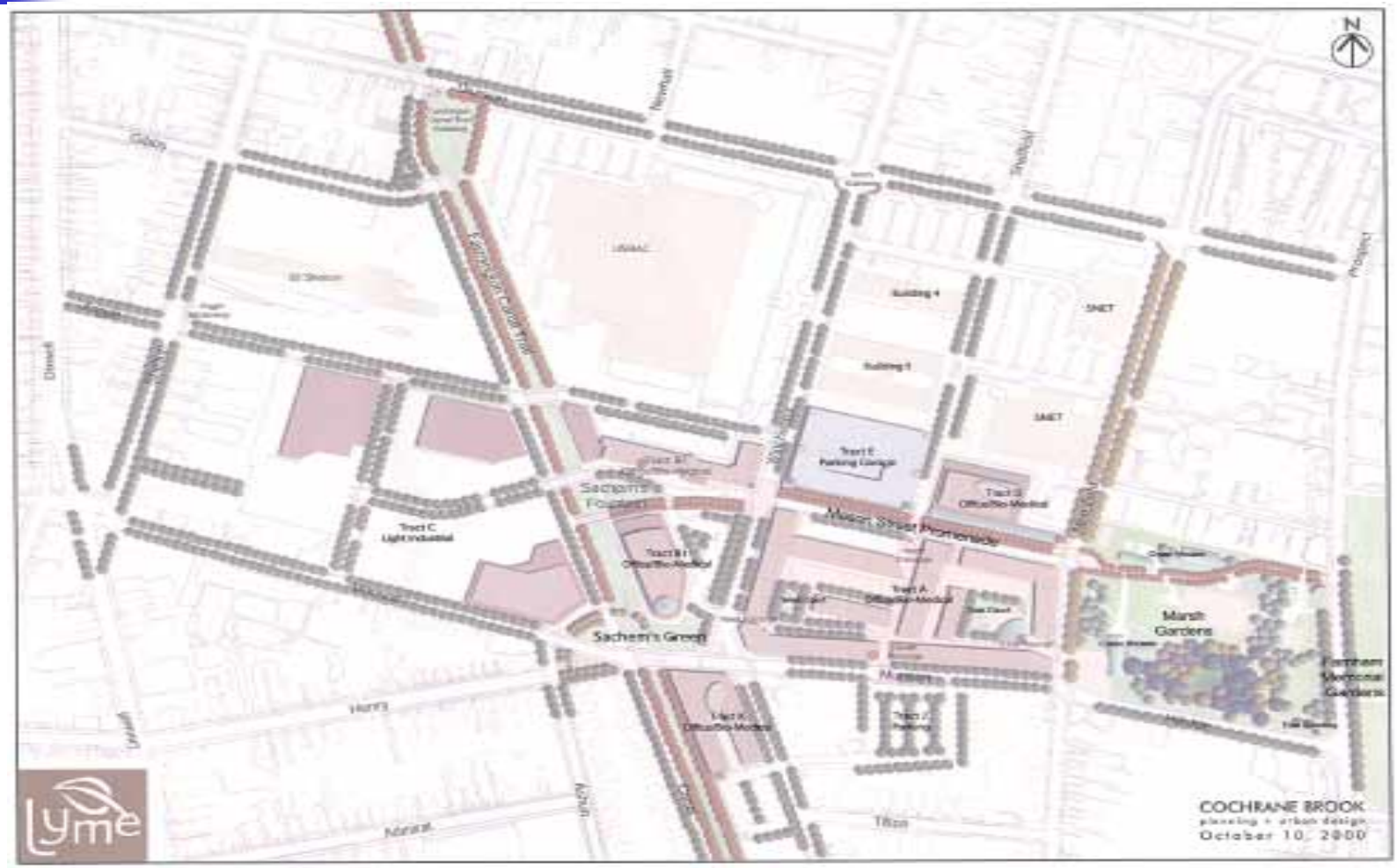


University Park at MIT (Masterplan)

New Haven Science Park (Location)



New Haven Science Park (Masterplan)

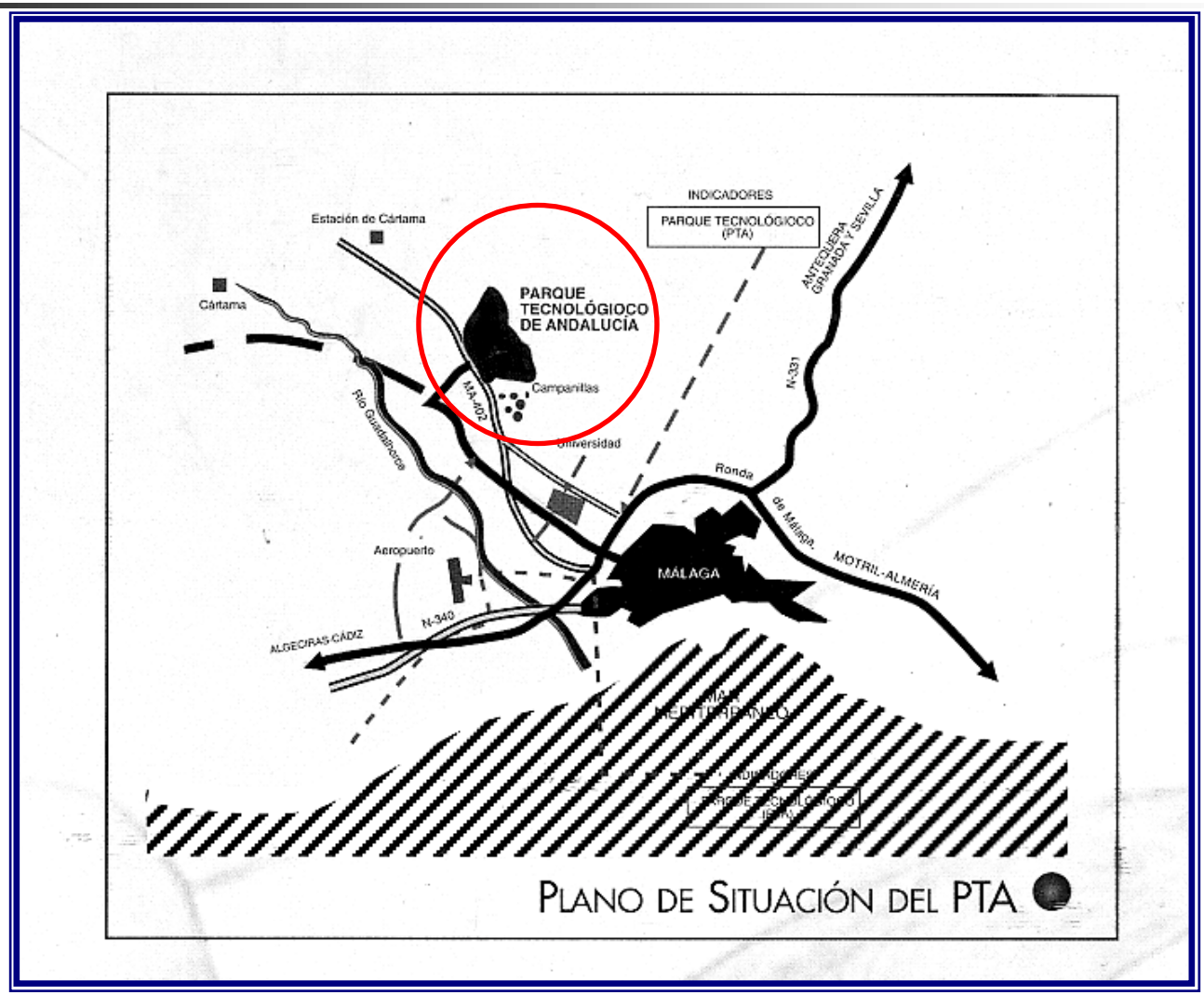


TYPOLOGIES OF STPs

b) THE PERIURBAN TYPE

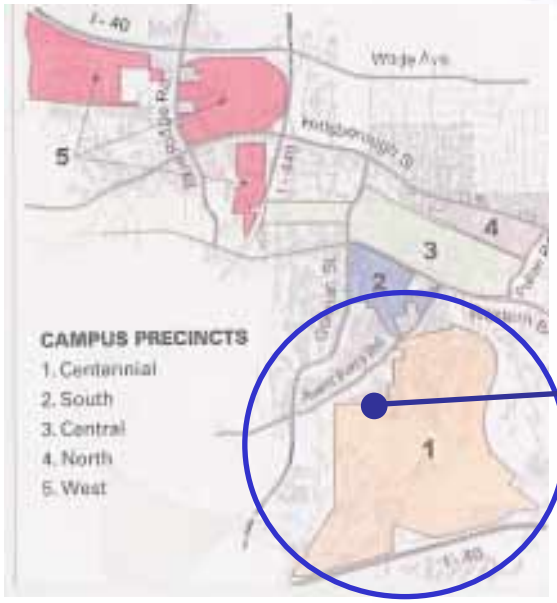
- Developed in a looser layout.
- Organised in a way that facilitates the interaction between education, research and technology development.
- Usually found on the outskirts of cities.
- Combines built up areas with some green open spaces and landscaping.

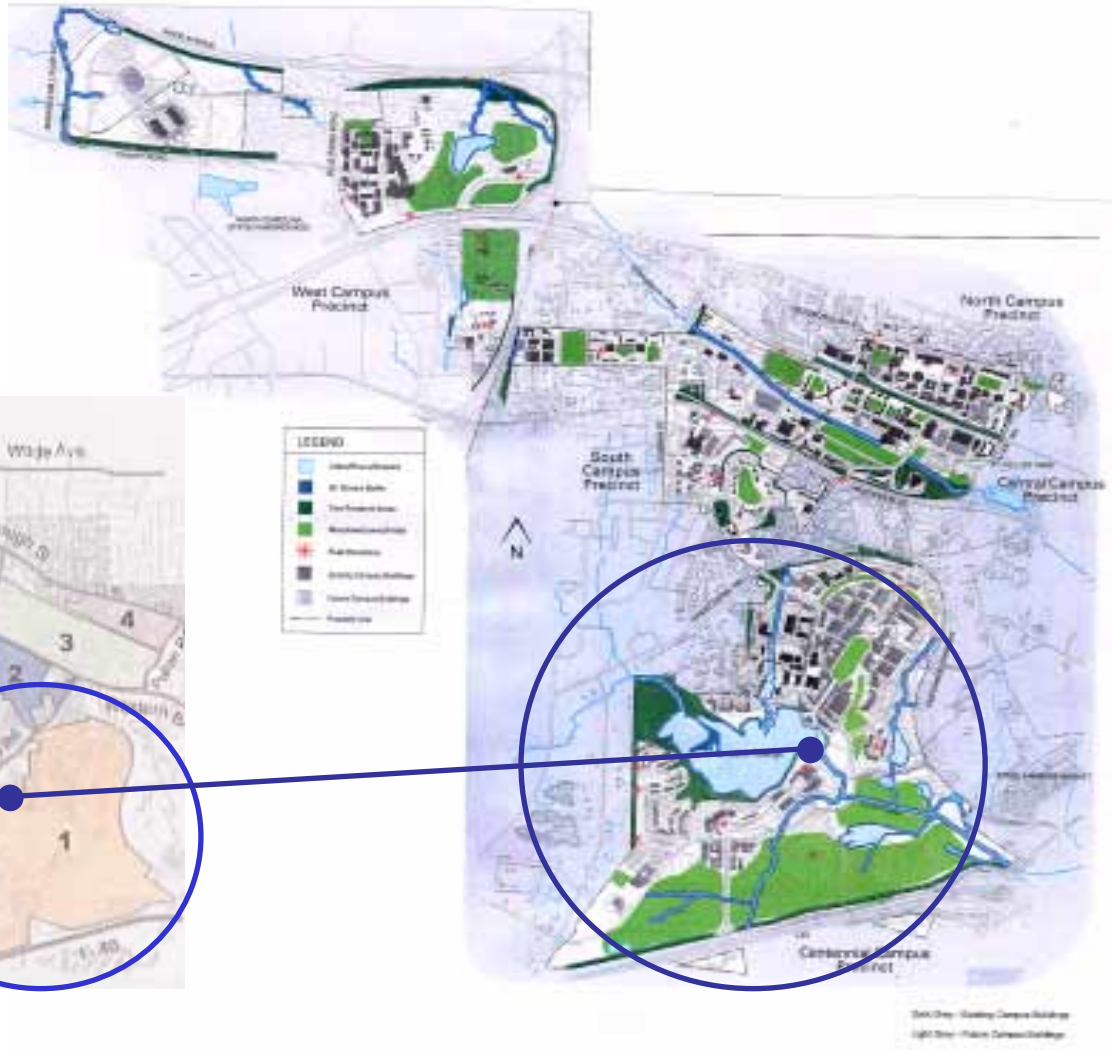
Technological Park in Andalusia (Location)



Technological Park in Andalusia (General Plan)

NC State University – Centennial Campus (Location and Masterplan)





NC State University – Centennial Campus (Masterplan)

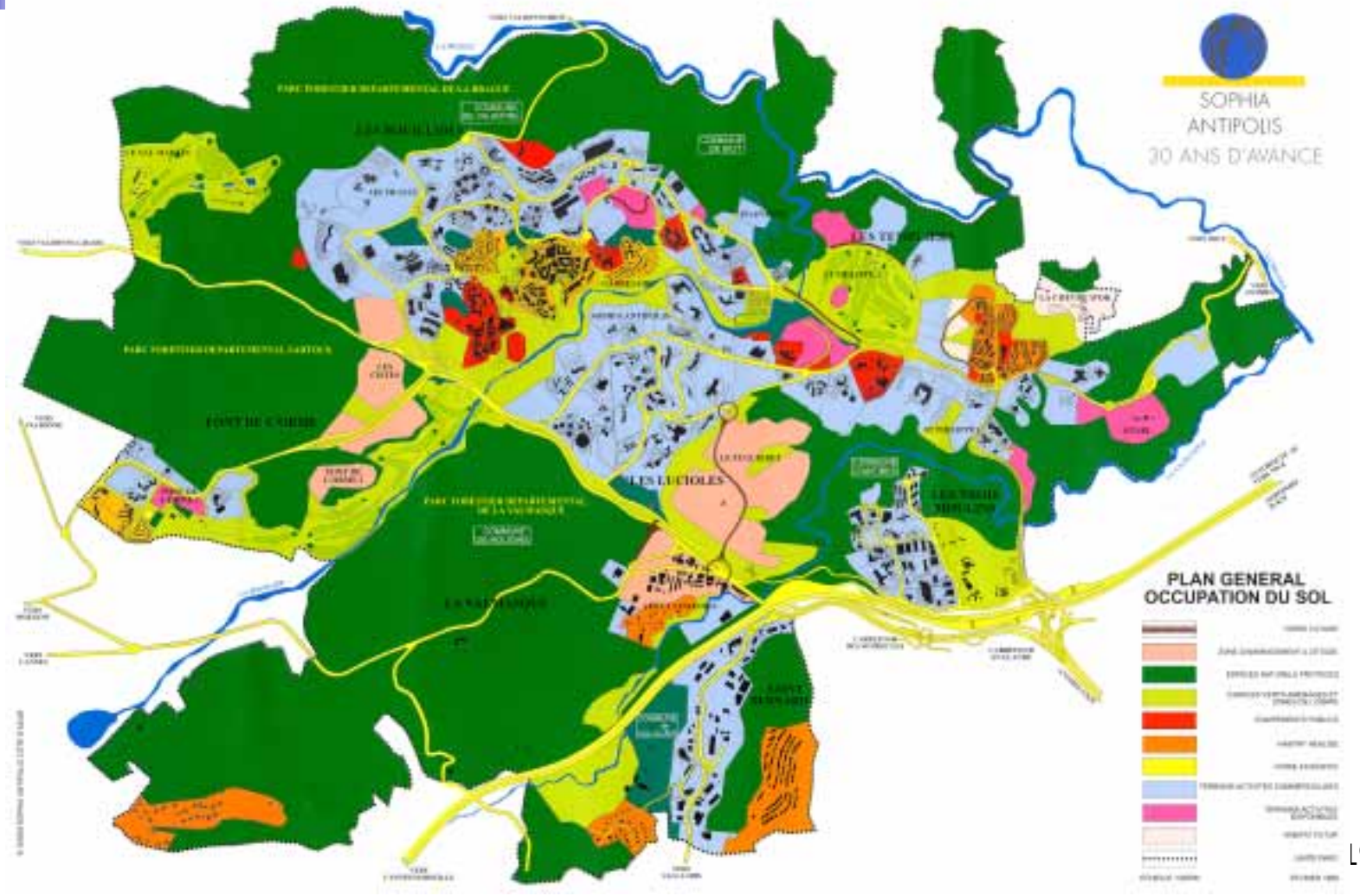
TYPOLOGIES OF STPs

c) *THE GREEN TYPE*

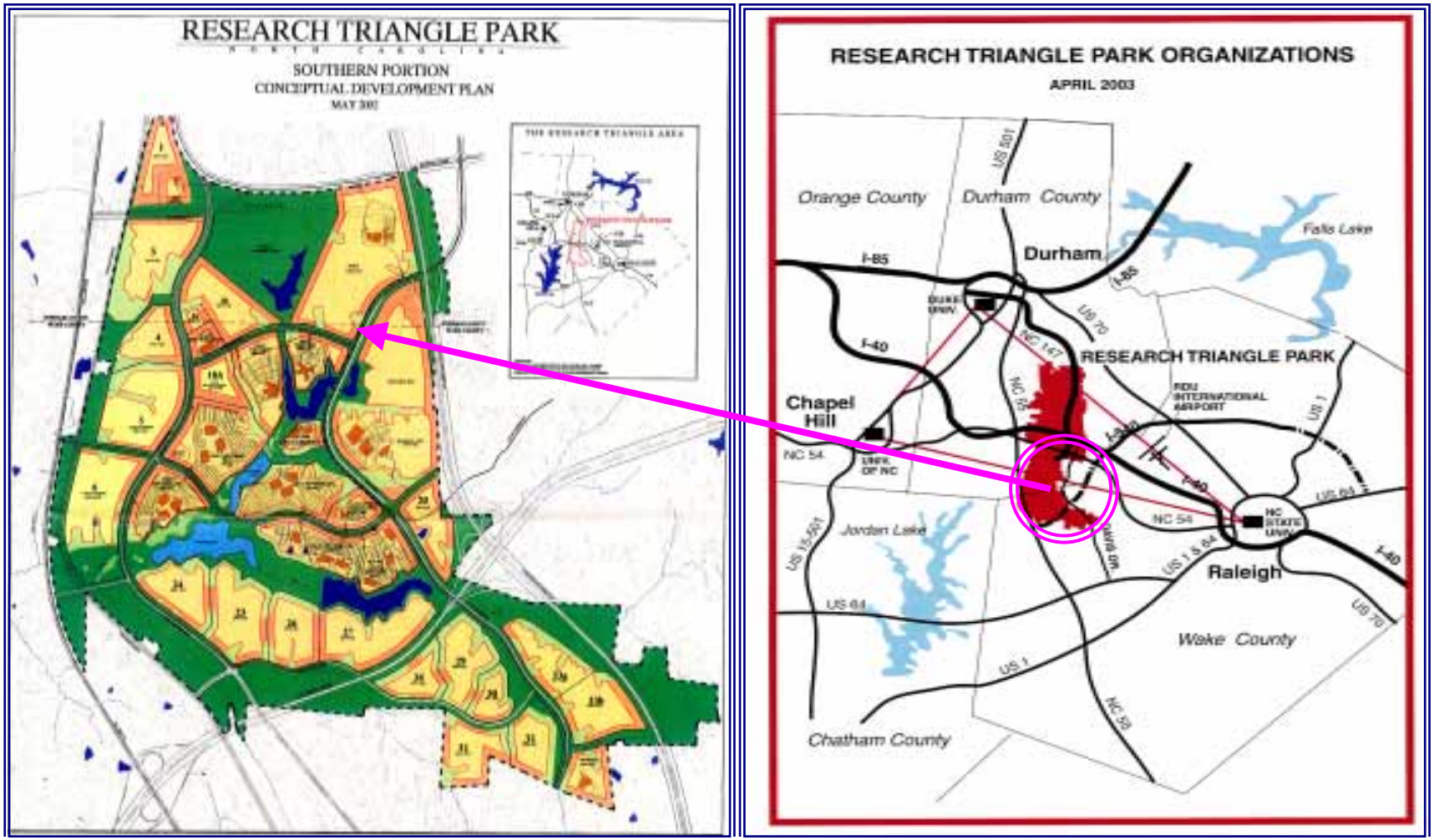
- Looks like a real park
- Is made out of clusters of buildings integrated in existing large green areas.
- Very low density and freer layout
- Usually exploits woodland which is found in the countryside
- Usually equipped with a full range of facilities

Sophia Antipolis Science Park (Location)

Sophia Antipolis Science Park (Masterplan)



Research Triangle Park – North Carolina (Masterplan and Location)



PHYSICAL PLANNING OF STPs

THREE DISTINCT LEVELS:

- ***Supra – regional and regional level***
- ***Local level***
- ***Internal level (layout and development guidelines)***

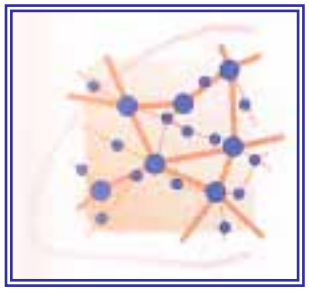
PHYSICAL PLANNING ASPECTS OF STPs
Supra – regional level

a) STPs at supra – regional level

These can distinguish a region and map it out as an R & D node in overall European spatial development scenarios. This could allow the expansion and development of regional networks and could attract financial assistance from EU funds.

PHYSICAL PLANNING ASPECTS OF STPs
Supra – regional (Europe and the ESDP)

Europe and the enlargement



ESDP policy aims

Polycentric and Balanced Spatial Development in the EU

Dynamic, Attractive and Competitive Cities and Urbanised Regions

Polycentric Development Model: A Basis for Better Accessibility

PHYSICAL PLANNING ASPECTS OF STPs
Regional level

b) STPs at regional level

As means to economic development, they should be integrated into the existing innovation system of the country (University, Colleges/Institutes, Research Centres etc). They should also be networked and linked with the rest of the world.

PHYSICAL PLANNING ASPECTS OF STPs

Regional level (approach by the Shannon Development Agency)

PHYSICAL PLANNING ASPECTS OF STPs
Local level

The final site selection has to do with:

a) Location criteria

- Site properly zoned in the relevant statutory Development Plan.
- Site in a clean environment with good drainage and good soil bearing capabilities.
- Site capable of presenting a high physical profile in the region.

PHYSICAL PLANNING ASPECTS OF STPs
Local level

b) ***Access criteria***

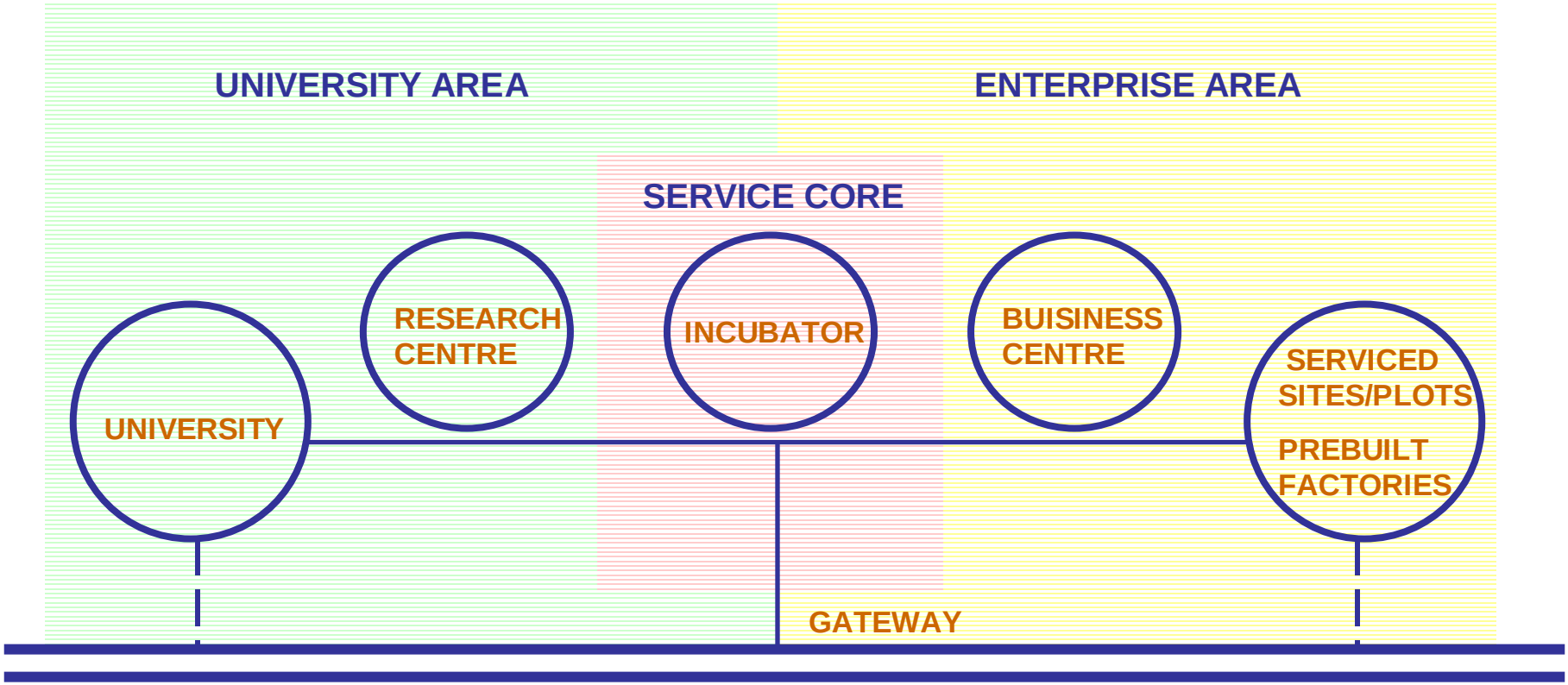
- Access to labour force (qualified and non qualified staff).
- Access to markets and communications (roads, airports etc).
- Access to utilities (water, sewerage, telecom etc).
- Access to supplies and services (social, commercial, business).

c) ***Critical mass of people***

d) ***Site size and possibilities for expansion***

PHYSICAL PLANNING ASPECTS OF STPs
Internal level (layout and development guidelines)

Layout of STPs of Periurban Type

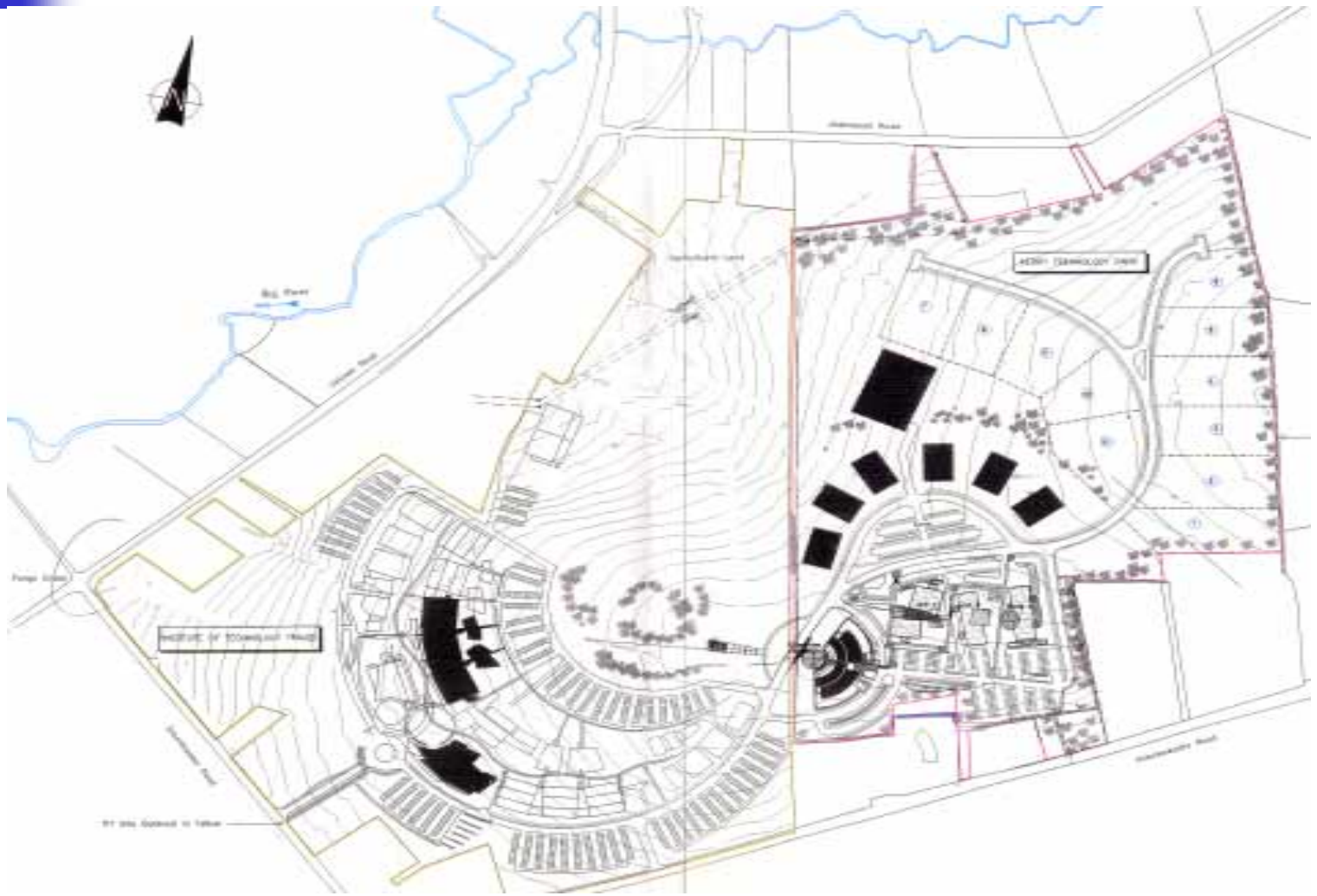


PHYSICAL PLANNING ASPECTS OF STPs

National Technological Park, Limerick, Ireland (Masterplan)

PHYSICAL PLANNING ASPECTS OF STPs

Kerry Technology Park (Masterplan)



PHYSICAL PLANNING ASPECTS OF STPs
Internal level (layout and development guidelines)

Development guidelines

- Development density or plot ratio.
- Vehicle parking standards.
- Building heights.
- Set backs.
- Building materials.
- Landscaping.
- Boundary treatment.
- Environment.

DEVELOPING THE STP IN CYPRUS
Fundamental issues

a) ***Difficult venture due to***

- *competition with other states*
- *rapid advancements in technology*

Need for a very decisive and well defined proposal

DEVELOPING THE STP IN CYPRUS

b) Areas/fields of Research and Technology have to satisfy the needs of the following markets:

- The University of Cyprus and other institutions for applied research purposes.
- Technological support to Cyprus' enterprises.
- Location of companies from Europe and the Middle East who might want to operate from Cyprus.

DEVELOPING THE STP IN CYPRUS

c) The development should be:

- gradual, safeguarding the success of each step,
- focused on an initial pre-selected site allowing for future expansion,
- linked to already existing education and research institutions involved in the specific fields, and
- have a rather flexible layout.

DEVELOPING THE STP IN CYPRUS

d) Avoid copying from others

e) Aim at an innovative project respecting Cyprus' specificities in terms of:

- scale,
- capabilities,
- insular character,
- the Cyprus political issue,
- lifestyle/mentality and expectations of the local employment force.

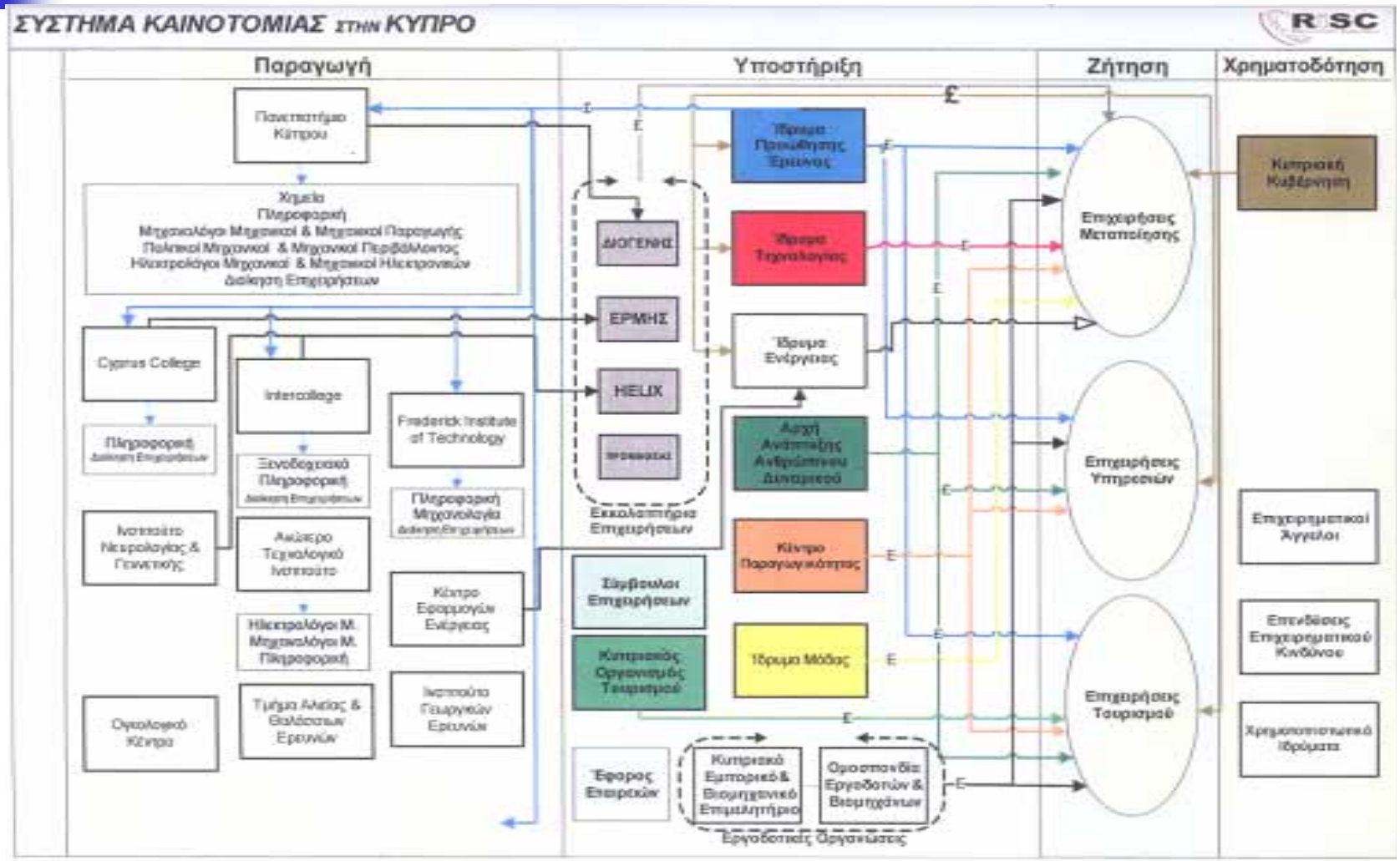
DEVELOPING THE STP IN CYPRUS
Concluding remarks

a) Being close to urban areas would be beneficial to the project because it could:

- Attract more easily the necessary labour force (critical mass of people).
- Rely on existing infrastructures, services and institutions (innovation system of the country).

DEVELOPING THE STP IN CYPRUS

Innovation system of Cyprus (Table taken out from the RISC Report)



DEVELOPING THE STP IN CYPRUS
Concluding remarks

b) *The locations indicated for R&D purposes in the various Local Plans seem to be appropriate (similar provisions will be introduced in the Policy Statement for the Countryside).*

c) *Set priorities and remain focused, rather than spread the effort in many places and directions.*

d) *A "periurban" STP, easily accessible from motorways and the airport, would be the most convenient solution for Cyprus.*

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THANK YOU FOR YOUR ATTENTION