



***An innovative concept for the transformation of
Universities and their relation to Cities:
the “Educational Campus”***

Pablo Campos, PhD Architect – www.utoplan.com

“Higher Education Spaces and Places: for Learning, Innovation and Knowledge Exchange”

OECD - Riga, 6-8, December 2009

Architecture and Motivation

*According to latest research,
IQ accounts for what portion of career success?*

90% OR MORE ?

50 - 75% ?

UNDER 50% ?

4% - 10%

Ref: Daniel H. Pink

*“A whole new mind: Moving from the Information Age to the
Conceptual Age” (2005)*

EDUCATION = SPATIAL ACT

10 PRINCIPLES OF THE “EDUCATIONAL CAMPUS”

A Campus will be educational if it integrates and gives testimony of the following values:

- 1.-Utopia and integral planning.
- 2.-Learning community.
- 3.-Spatial harmony.
- 4.-Affective&intellectual embracement.
- 5.-Nature and Art.
- 6.-Image and accessibility.
- 7.-Adaptation to the environment and sustainability.
- 8.-Memory and avant-garde.
- 9.-Relation University-City.
- 10.-Innovative teaching&learning modalities.

1.-Utopia and integral planning. Impulsed by Utopia as a transformative energy, the design of a University environment must be developed using integral planning strategies which translate into tangible form the necessary utopian principles, defining an evolution governed by a sound degree of freedom and flexibility in space-time. This occurs under the premise that the proper conception of a University precinct is not the formulation of an urban-architectural object but the definition of a whole process.



University
Berkeley, USA

2.-Learning community. Stimulation of personal contact and functional integrity, fostering the consolidation of an entire learning community where human scale prevails in its spaces, inside which a "feeling of belonging" is generated in the University member. Through an intentional design, the physical scene must set up empathies with the human being who inhabits it, in such a way that Urbanism and Architecture act as incentives for him to develop with motivation his activities of study, research, relation and general living.



University
Virginia, USA

3.-Spatial harmony. Crystallization of a global aesthetic for composing urban & architectural spaces, so that it becomes a part of the collective memory of society. The University physical implantation must transcend the mere supply of available built areas, getting involved in the visual education by means of designs which generate coherent arrangements where attention is paid in similar way to built volumes and open areas. The Campus, as embodiment and material reality of the University, will turn to be the first lesson that a student receives, a “three dimensional textbook” with an architectural corporeity.



University Salamanca – Campus Villamayor (Pablo Campos, 2005) , Spain

4.-Affective&intellectual embracement. Performance of a spatial metaphor of the “affective & intellectual embracement”, through an arrangement of the precinct, the conception of which intentionally activates affective impacts, awaking empathies in the community. The layout, volume, shape, and texture of the different architectural pieces within the Campus will have the mission to endeavor the psychological wellness of the University inhabitant.



Salk Institute, California, USA

5.-Nature and Art. Incorporation of Nature as a cultural value, integrating it in a global assembly ruled by the premise of "unity within diversity", in which the different components, buildings and open spaces, build up a physical scene where its purpose as a cultural product can be expressed, namely its academical content as a locus for study and research. In addition, artistic works can be exhibited either on exterior or interior, to complement through their contemplation the formative quality of the environment.



Universidad Central
Venezuela

6.-Image and accessibility. External projection of a sound University image, consistent with its transcendental missions of teaching, research and social commitment, fosters values related to conceptual and physical accessibility and exerts sensitivity towards the culture and traditions of the place. It thereby enhances expression of its full social, geographic, cultural and architectural meanings.



Illinois Institute of Technology,
USA

7.-Adaptation to the environment and sustainability. Adequate response of urbanism and architecture to geographical and climate conditions, promotes exemplary solutions in environmental, bioclimatic, and sustainability issues. This goal is achieved through the choice of materials, technical & constructive solutions, and the incorporation of mechanisms that foster the use of renewal energies.



Educational&Sustainable Campus, Madrid (Pablo Campos, 2007) , Spain

8.-Memory and avant-garde. The urban-architectural paradigms of memory, inherited from the history of spaces, serve as an intellectual resource for design. Accordingly, new plant projects, generated with a high degree of formal freedom, as well as the adaptations of preexisting buildings and uses (testifying to positive change of former functions), must contribute to a sense of contemporaneity and the cutting edge. Their presence invigorates and reinforces the intellectual identity of the University.



University Utrecht,
Campus De Uithof, Holland

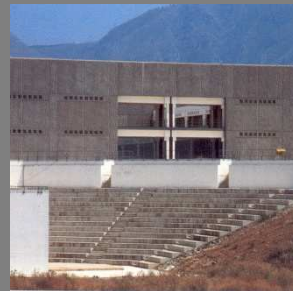
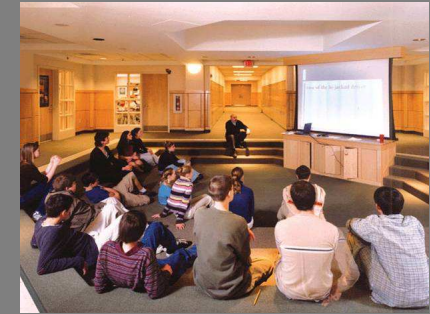


9.-Relation University-City. Generation of synergies between University and City, reinforcing the active presence of University people and spaces within social & urban contexts (as well as in a reciprocal sense). It fosters innovation, and invites other Institutions to share the global University project for the achievement of such a goal.

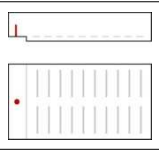

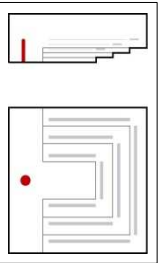

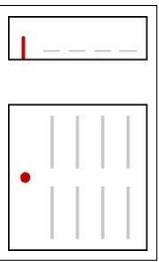

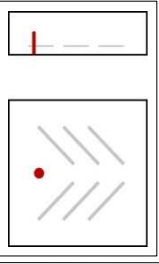

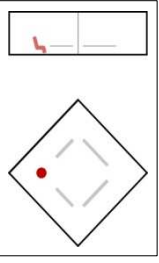



University Salamanca - City Campus, Spain

10.-Innovative teaching & learning modalities. Design of spaces which host and foster the application of innovative teaching & learning modalities, housed under a global pedagogic project. This should be done in such a way that the physical spaces that are alternative to the conventional classroom abandon their obsolete role in teaching issues. They are thereby transformed into intelligent places, stimulating a positive change in the attitudes of the relation professor-student.





	FEATURES	TYPOLGY	IMAGES
1. TRADITIONAL MASTERLY LESSON	<ul style="list-style-type: none"> Capacity: 50-400 (depending on type of career) Position of professor: edge (traditional) Type of furniture: fixed Furniture display: unidirectional Architectural typology: simple geometries Floor section: inclined or horizontal (more recommendable, as it enables partitions) Liturgical type of space (localized) 		
2. INTERACTIVE MASTERLY LESSON	<ul style="list-style-type: none"> Capacity: 50-400 (depending on type of career) Position of professor: center (traditional) Type of furniture: fixed Furniture display: unidirectional Architectural typology: simple geometries Floor section: inclined or horizontal (more recommendable, as it enables partitions) Liturgical type of space (concelebrative) 		
3. PANEL BASED MASTERLY LESSON	<ul style="list-style-type: none"> Capacity: 10-30 (depending on type of career) Position of professor: center Type of furniture: mobile Furniture display: unidirectional (small distance to panel) Architectural typology: simple geometries Floor section: inclined or horizontal (more recommendable, as it enables partitions) Drama-type of space 		
4. POLARIZED - PEER TUTORING	<ul style="list-style-type: none"> Capacity: 10-30 (depending on type of career) Position of professor: center or edge Type of furniture: mobile Furniture display: multidirectional (but oriented towards the professor) Architectural typology: simple geometries Floor section: horizontal (more recommendable, as it enables partitions) Complementary comments: <ul style="list-style-type: none"> Students pay attention to the professor, seminary-type, but they also exchange conversations, but they listen to the lesson, overall The professor teaches all students at the same time Scenario-type space 		
5. IDEA-SHARING SESSION	<ul style="list-style-type: none"> Capacity: 10-30 (depending on type of career) Position of professor: incorporated to the group; eventually, central or edge Type of furniture: mobile Furniture display: enclosed pattern, centripetal display Floor section: horizontal (more recommendable, as it enables partitions) Complementary comments: <ul style="list-style-type: none"> Students work in group and eventually get the professor's tutorial help The professor's lesson occupies a low % of the class time The professor teaches all students at the same time Scenario-type space 		

IMAGES

(order: left-right + up-down):

Aula magna of the University of La Laguna
University of Otaniemi.
University of Virginia: Lawn
Free University of Berlin

Masterly interactive lesson

Rembrandt van Rijn: *The lesson of anatomy of Doctor Tulp*
University of Utrecht: Educatorium

University Carlos III: "bolonized" classroom

Lesson with panel using digital board

University of Navarra

Ipswich Middle School

School in Nagele

Illinois Institute of Technology: Crown Hall

University of Porto: School of Architecture

Illinois Institute of Technology: Crown Hall

Idea-sharing session

School in external spaces, Los Angeles

Orphanage in Amsterdam

OECD - Riga

INNOVATIVE TEACHING&LEARNING MODALITIES

Pablo Campos Calvo-Sotelo, PhD Architect

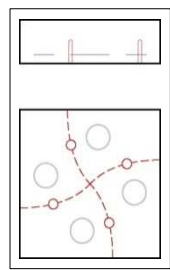
utoplan.com

6. GROUPS IDEASHARING SESSION (SEMINAR - PARTIAL TUTORIAL)

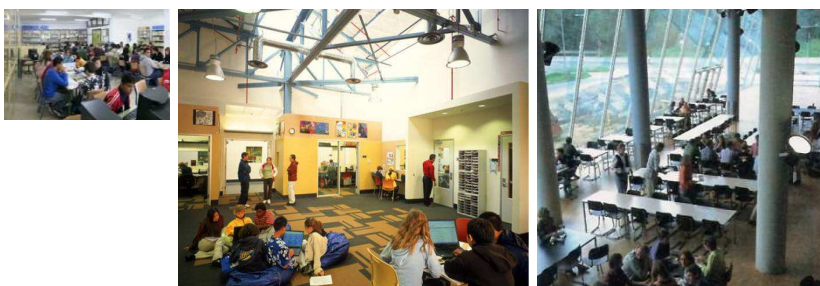
FEATURES

- Capacity: 6-20 (depending on type of career)
- Position of professor: alternatively, incorporated to each team (eventually, central or edge)
- Type of furniture: mobile
- Furniture display: in independent units (chair-table)
- Architectural typology: simple geometries (easy partitions performance)
- Floor section: horizontal (recommendable, as it enables partitions)
- Complementary comments:
 - Students work in groups 2-6, and eventually receive professor's tutorial help
 - The professor teaches all students, but alternatively
 - "Learning by making" modality is fostered
- Living-room-type space

TYPOLOGY

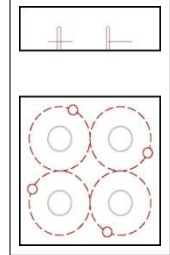


IMAGE



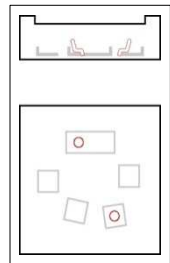
7. POLARIZED GROUPS

- Capacity: 6-20 (depending on type of career)
- Position of professor: alternatively, incorporated to each team (eventually, central or edge)
- Type of furniture: mobile
- Furniture display: in independent units (chair-table)
- Architectural typology: simple geometries (easy partitions performance)
- Floor section: horizontal (recommendable, as it enables partitions)
- Complementary comments:
 - Students work in groups 2-6, and eventually receive professor's tutorial help
 - Each professor teaches one group; there must be several professors
 - In each table-group, student use most of time % to professor's lesson or tutorial help
 - "Learning by making" modality is fostered
- Living-room-type space



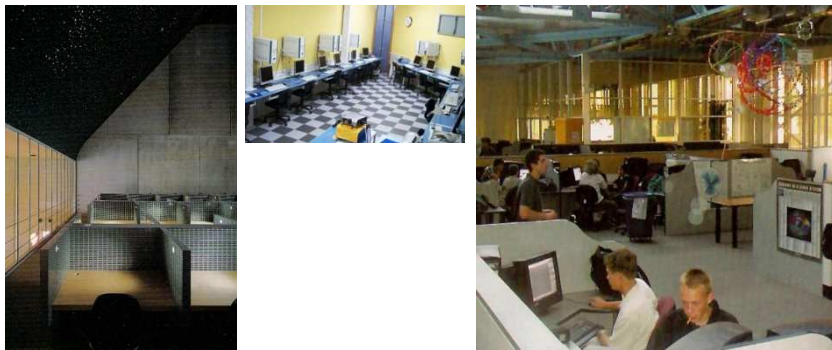
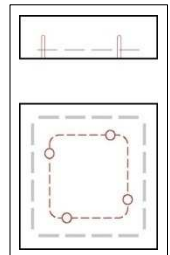
8. BRAINSTORMING SESSION - "soft-seat"

- Capacity: 4-10 (depending on type of career)
- Position of professor: incorporated to the group
- Type of furniture: mobile, sofa-type ("soft-seat")
- Furniture display: in independent units (sofa-table)
- Architectural typology: simple or complex geometries
- Floor section: horizontal (recommendable, as it enables partitions)
- Complementary comments:
 - Modality known internationally as "story telling-floor seating")
 - Domestic type of space



9. WORKING PLACES

- Capacity: 6-20, depending on type of career
- Position of professor: alternatively, in each working place, if needed
- Type of furniture: mobile, working table, sofa-type ("soft-seat"), or others
- Furniture display: in independent units or places
- Architectural typology: simple or complex geometries
- Floor section: horizontal or irregular
- Complementary comments:
 - "Cave" model (learning form oneself)
 - The presence of a professor could not be required
 - Learning based on bibliographic consult
 - Technology-based learning, using computers
 - "Learning by making" modality is fostered
- Office-type space



IMAGES (order: left-right+ up-down):

Groups idea-sharing session
High Tech Middle School San Diego
University of Utrecht: Educatorium

Northwestern University, Chicago
Universidad Nacional de Colombia, Bogotá
Universidad Politécnica de Cartagena

Saint Francis University
Brainstorming session "soft-seat"
High Tech High San Diego
Exhibition Superstudio
Theatre in Nagasaki

University of Utrecht: Minnaert building
Working places
High Tech High, San Diego

OECD - Riga

INNOVATIVE TEACHING & LEARNING MODALITIES

Pablo Campos Calvo-Sotelo, PhD Architect

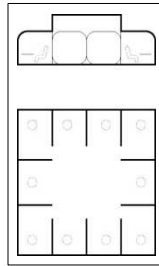
utoplan.com

10. INDIVIDUAL STUDY

FEATURES

- Capacity: variable, depending on the number of individual units
- Position of professor: alternatively, incorporated to each unit, if necessary
- Type of furniture: mobile, working table, sofa or others
- Furniture display: in independent units (chair-table)
- Architectural typology: simple or complex geometries
- Floor section: horizontal or irregular
- Complementary comments:
 - "Cave" model (learning form oneself)
 - The presence of a professor could not be required
 - Learning based on bibliographic consult
 - Technology-based learning, using computers
 - "Learning by making" modality is fostered
 - It takes place in the educational Center
- Office-type space

TYPOLGY

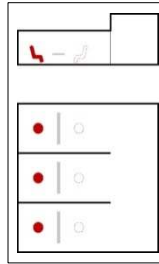


IMAGES



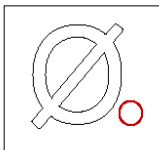
11. INDIVIDUAL TUTORIAL

- Capacity: variable, depending on the number of individual units
- Position of professor: incorporated to each unit
- Type of furniture: mobile, working table, sofa or others
- Furniture display: in independent units (chair-table)
- Architectural typology: simple or complex geometries
- Floor section: horizontal or irregular
- Complementary comments:
 - It takes place at the Educational Center, but can occur in alternative locations (classrooms, cafeteria, offices, outdoor spaces, etc.)
- Office-type space



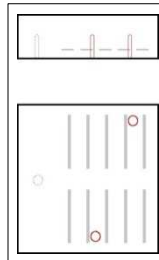
12. DISTANCE EDUCATION

- Capacity: variable, depending on the number of individual units
- Position of professor: not present
- Type of furniture: mobile, working table, sofa or others
- Furniture display: in independent units (chair-table)
- Architectural typology: simple or complex geometries
- Floor section: horizontal or irregular
- Complementary comments:
 - It takes place at the Educational Center or other locations (including the student's residence)



13. STUDENT PRESENTATIONS

- Capacity: 10-30 (depending on type of career)
- Position of professor: incorporated to the group, if necessary
- Type of furniture: mobile
- Furniture display: unidirectional, oriented towards the platform
- Architectural typology: simple geometries
- Floor section: horizontal (recommendable, as it enables partitions)
- Complementary comments:
 - It takes place in a classroom-space
- Drama-type space



IMAGES

(order: left-right+ up-down):

Ágora Space University Pompeu Fabra
Orphanage in Amsterdam
Exhibition "Mathematica" in Los Angeles
University of Porto: Schol of Architecture

Vassar College
Marist College
Universidad Nacional de Colombia, Bogotá
Universidad de Utrecht: Minnaert building

Orphanage in Amsterdam
Massachusetts Institute of Technology: Baker House
Turbinenplatz, Zurich

Coop Himmelblau: Performance
Esplanade Library, Singapore

OECD – Riga

INNOVATIVE TEACHING&LEARNING MODALITIES

Pablo Campos Calvo-Sotelo, PhD Architect

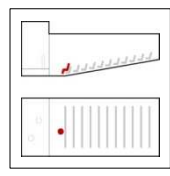
utoplan.com

14. PERFORMANCE AND LEARNING BASED ON OTHER ARTS

FEATURES

- Capacity: 50-400 (depending on type of career)
- Position of professor: edge
- Type of furniture: fixed or mobile
- Furniture display: unidirectional, oriented towards the stage, or others
- Architectural typology: simple geometries
- Floor section: inclined or horizontal (more recommendable, as it enables partitions)
- Complementary comments:
 - It takes place in classroom spaces
 - Learning based on music, sculpture, painting, theatre, etc..
- Drama-type space

TYPOLGY



IMAGES



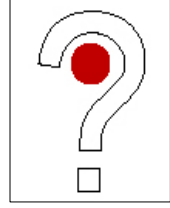
IMAGES

(order: left-right + up-down:

Swarthmore College
 University of Illinois, Chicago: Forum - Ágora
 Aula magna, Universidad Central de Caracas
 University of Valladolid – Palacio Santa Cruz

15. IN SITU (at place) EXPERIENCE (guided visits/journey)

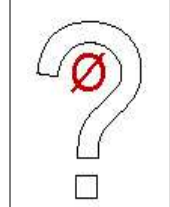
- Capacity: 6-20 (depending on type of career)
- Position of professor: incorporated to the group
- Type of furniture and its display: the proper one of the place visited
- Architectural typology: the proper one of the place visited
- Floor section: the proper one of the place visited
- Complementary comments:
 - It takes place with the presence of the professor, who orients the experience



Casa do Brasil, University-City, Madrid
 University of A Coruña- Campus-Bastiaqueiro
 Université de La Sorbonne, Paris.
 Museum of Art in São Paulo

16. INDIVIDUAL CONTEMPLATIVE LEARNING

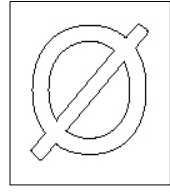
- Capacity: 1-6(dependent on type of career)
- Position of professor: not present
- Type of furniture and its display: the proper one of the place visited
- Architectural typology: the proper one of the place visited
- Floor section: the proper one of the place visited
- Complementary comments:
 - There is no presence of professor, but he might orient the experience in advance



University of Coimbra
 Rice University - Wiess College
 University Rovira I Virgili – Antiga Audiencia
 University of Sevilla

17. MOBILE LEARNING

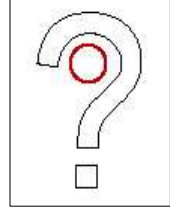
- Capacity: individual
- Position of professor: not present
- Type of furniture: not necessary, the proper one of each place
- Complementary comments:
 - Based on mobile technologies and cell phones
 - The professor prepares the contents, which he transmits to interactive technological tools
 - The goal is to fill the Campus with added interactive contents
 - It takes place within the Educational Center, but may occur in several type of places (classrooms, offices, cafeteria, outdoor spaces, etc.)



University of Vigo
 Universidad Central de Caracas
 Princeton University: Woolworth Center
 University of Utrecht: Educatorium
 University Mandurah - Tafe Campus
 Kronenwiese College
 M.I.T. – Baker House

18. SOCIAL LEARNING

- Capacity: 4-10
- Position of professor: present or not
- Type of furniture: not necessary
- Furniture display: u the proper one of the place, if so
- Architectural typology: the proper one of the place
- Floor section: the proper one of the place
- Complementary comments:
 - Interactive learning, based on the social interaction between students (and professors)
 - It takes place in variable, non-predetermined or multifunctional spaces.
 - It cannot be programmed, as it is character is fortuitous; it just depends on the predisposition of students and professors to activate it.

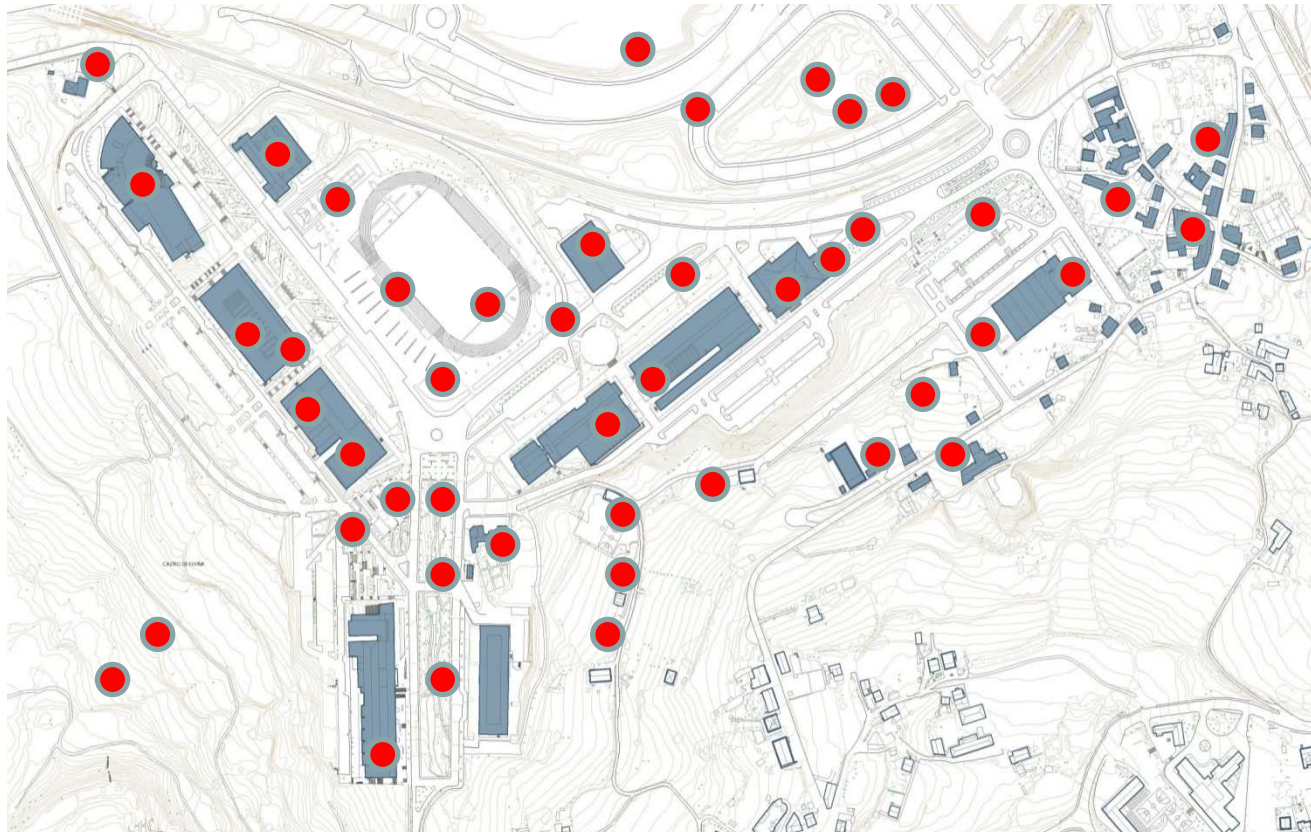


OECD – Riga

INNOVATIVE TEACHING&LEARNING MODALITIES

Pablo Campos Calvo-Sotelo, PhD Architect

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TOPONIMIA

EDIFICIOS PRINCIPALES DEL RECINTO

- 1.-Facultad de Derecho
- 2.-Facultad de Informática
- 3.-Facultad de Educación
- 4.-Facultad de Sociología-Comunicación
- 5.-Facultad de Económicas-Empresariales
- 6.-Escuela de Ingeniería de Caminos, Canales y Puertos
- 7.-Pabellón de Estudiantes
- 8.-Edificio "O Lagar"
- 9.-Pabellón Polideportivo
- 10.-Graderío del Estado de Atletismo
- 11.-Edificio de Servicios Centrales de Investigación
- 12.-Centro de Documentación y Archivo Edificio "Xoana Capdevielle"
- 13.-Guardería Infantil
- 14.-CITEC

OTROS ÁMBITOS

- 15.-Parque Tecnológico
- 16.-Área Residencial futura
- 17.-Núcleo de San Vicente de Elviña
- 18.-Castro de Elviña
- 19.-Parcelas II-A y II-B (pp-1990): Futuros usos universitarios
- 20.-Apeadero FFCC

(Fuente: BingMaps y elaboración propia)



UNIVERSIDADE DA CORUÑA
PLAN DIRECTOR



RECINTO: CAMPUS-ELVIÑA

SITUACIÓN ACTUAL - TOPONIMIA

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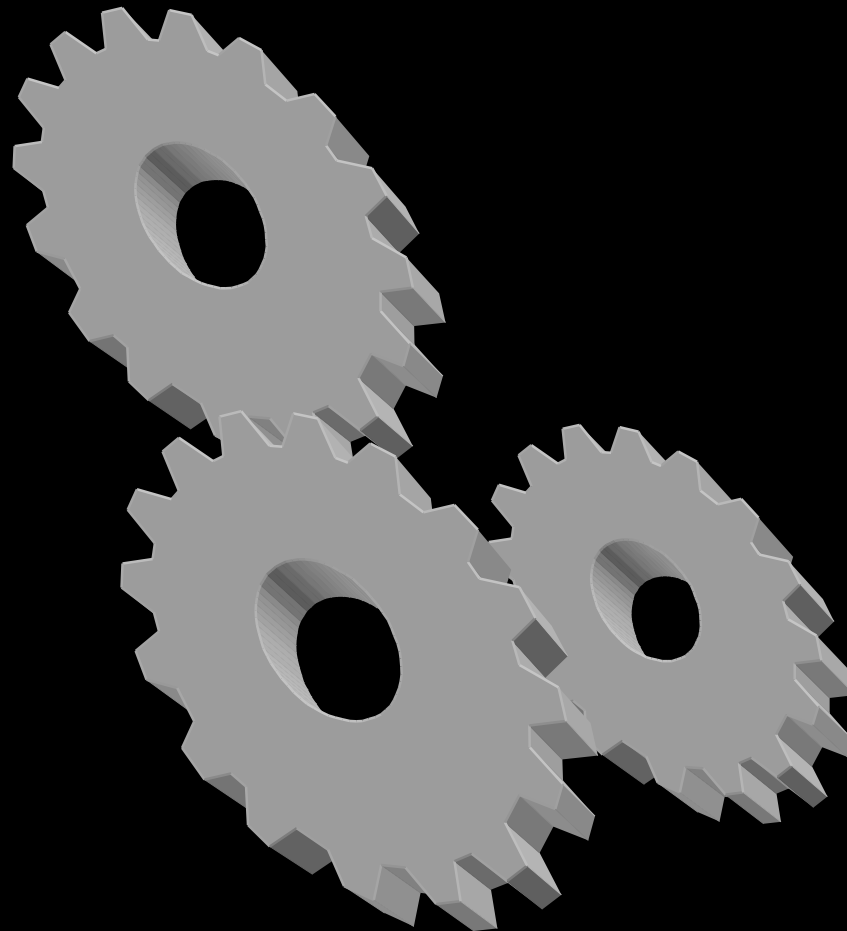
Octubre 2009

Colab. temas EEES

utoplan.com

UNIVERSITY RESEARCH-PLANNING-TEACHING "FEEDING" PROJECTS

RESEARCH

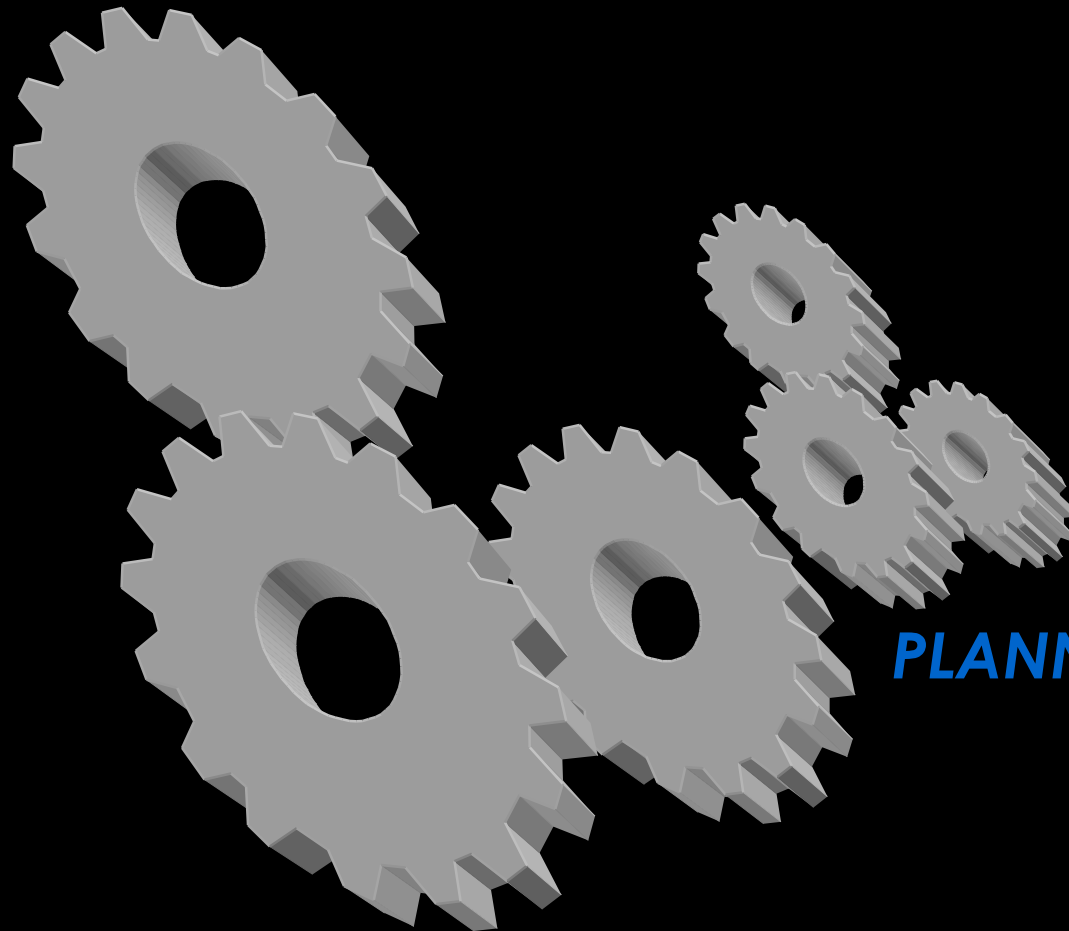


TEACHING

PLANNING

UNIVERSITY PLANNING-"FEEDING" PROJECTS

RESEARCH



PLANNING

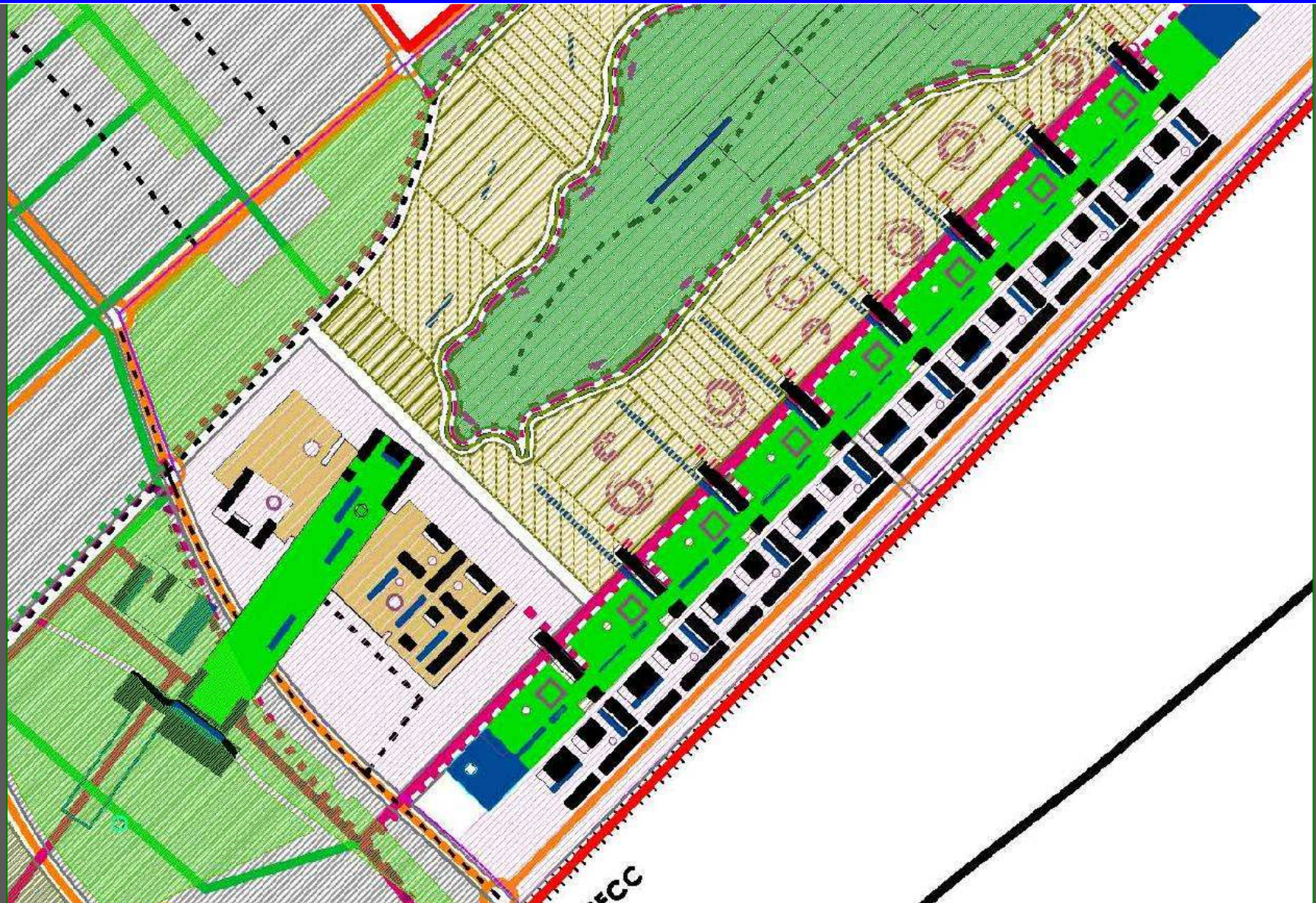
TEACHING

External Campus Master Plan / 2008

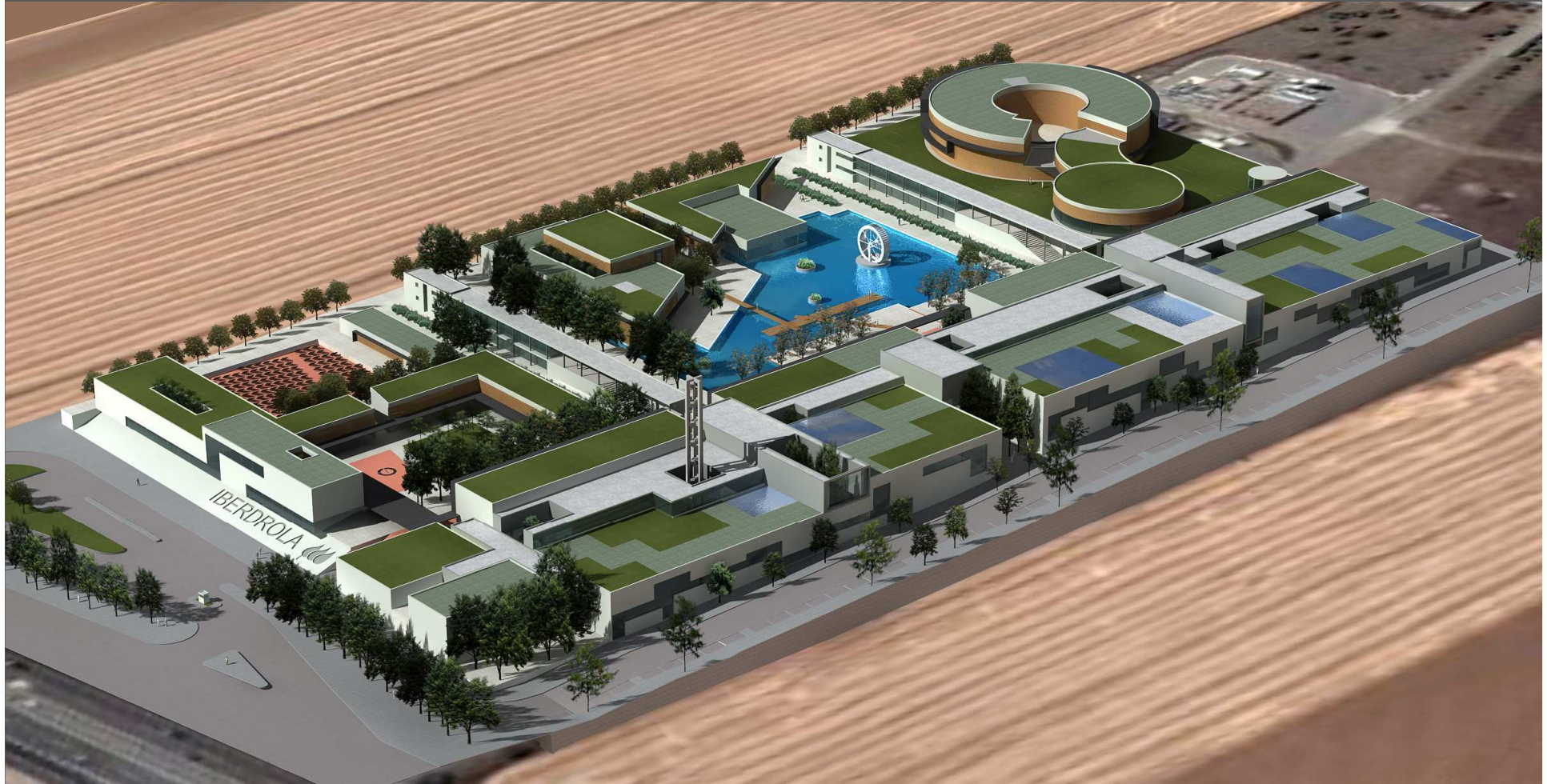
University of Alcalá (founded 1293)



Linear Botanical Park – R&D Area – Scientific Park
MODULATION - FLEXIBILITY



“Educational & Sustainable Campus” in Madrid



“Educational Campus”: Architectural design to “teach” lessons in:
Spatial harmony
Human relation
Sensitiveness towards Nature
Consideration of local culture and tradition
Sustainable values





University of Salamanca
New Campus in Villamayor

MASTER PLAN – Basic guidelines

Villamayor Campus





“Educational Campus” – University of La Laguna - 2009



“Educational Campus” – University of A Coruña – Master Plan 2009 – EHEA Pavilions



Towards the “Educational Campus”

“The curriculum embedded in any building instructs as fully and powerfully as any course taught in it .”

Ref: David Orr

“The Nature of Design”, 2002

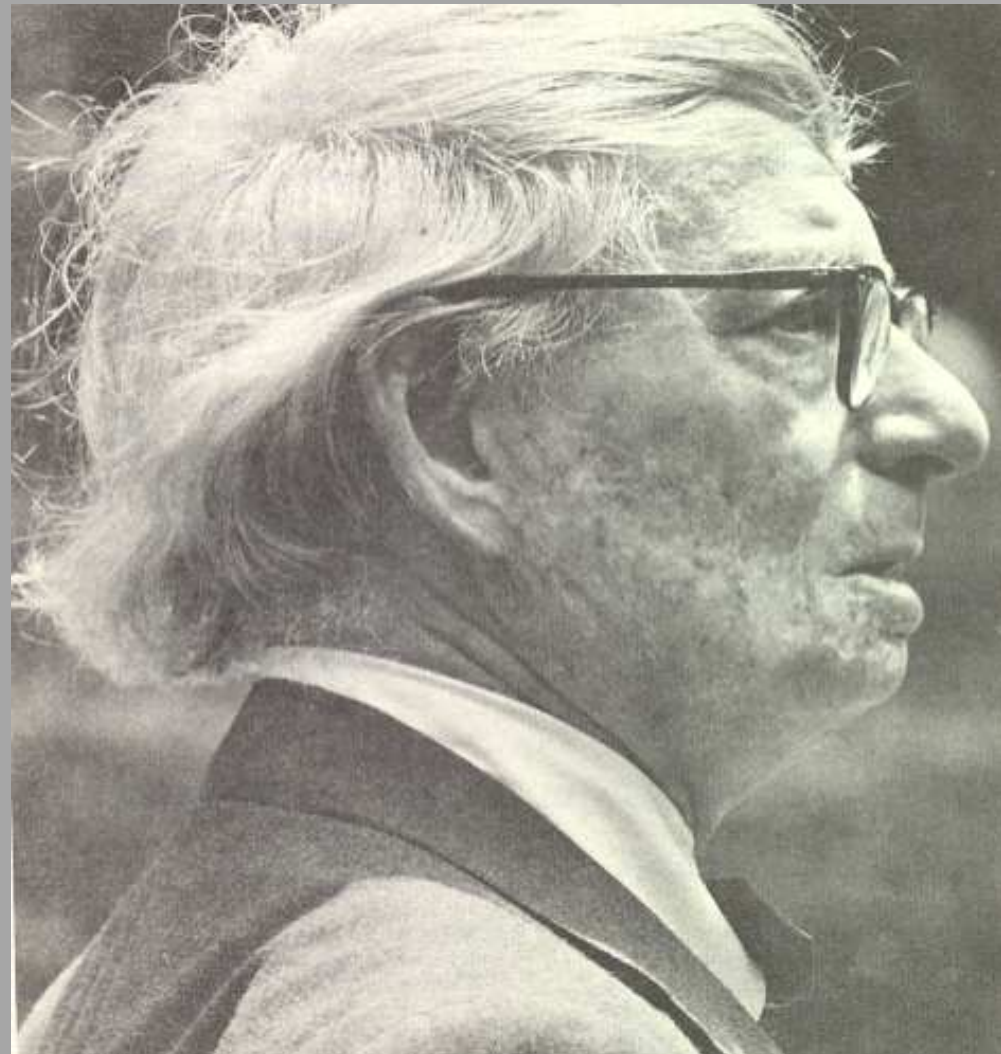
Professor Environmental Sciences, Oberlin College, Ohio.

LOUIS I. KAHN 1901-1974

“Schools began with a man under a tree who did not know he was a teacher, sharing his realization with a few others who did not know they were students.

The students aspired that their sons also listen to such a man. Spaces were erected and the first schools began”.

(L. Kahn)



A predetermined number of students will all learn the same thing at the same time from the same person in the same way in the same place for several hours each day”.



“Any group of students can learn different things at different times from different persons in different ways in different places during different periods of time”.



***“Make no little plans,
they have no magic to stir men’s blood and
probably themselves will not be realized.***

***Make big plans, aim high in hope and work...
Let your watchword be order and your beacon
beauty”***

***(Daniel Burnham, explaining the
Chicago Urban Plan, 1909)***

Pablo Campos, PhD Architect – www.utoplan.com

“Higher Education Spaces and Places: for Learning, Innovation and Knowledge Exchange”

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