

Orona  ideo

XABIER BARRUTIETA

arquitecto

COAM 141202

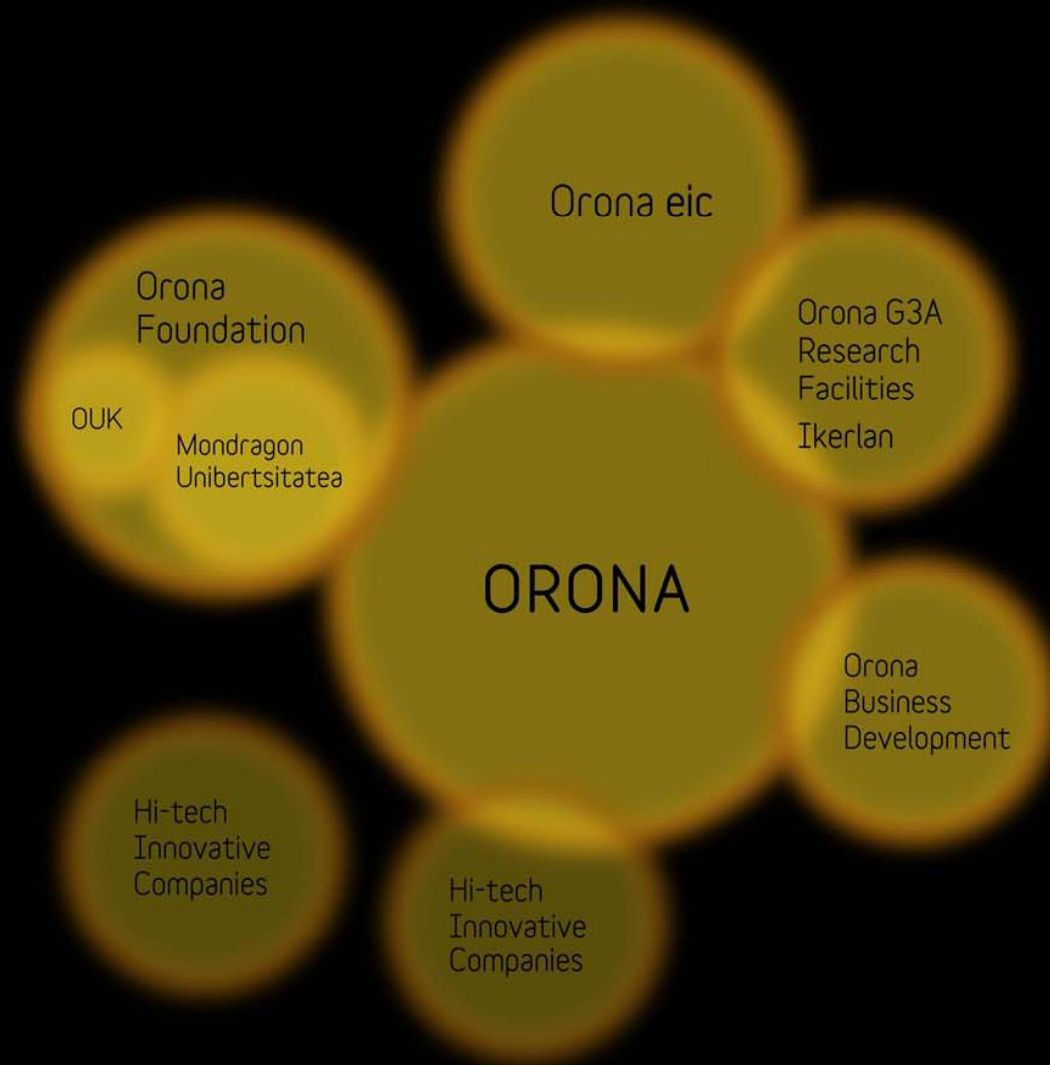


- 01 VISIÓN
- 02 CONTEXTO
- 03 DISEÑO URBANO
- 04 ARQUITECTURA
- 05 ENERGÍA

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hábitat de innovación
empresa + universidades + investigación



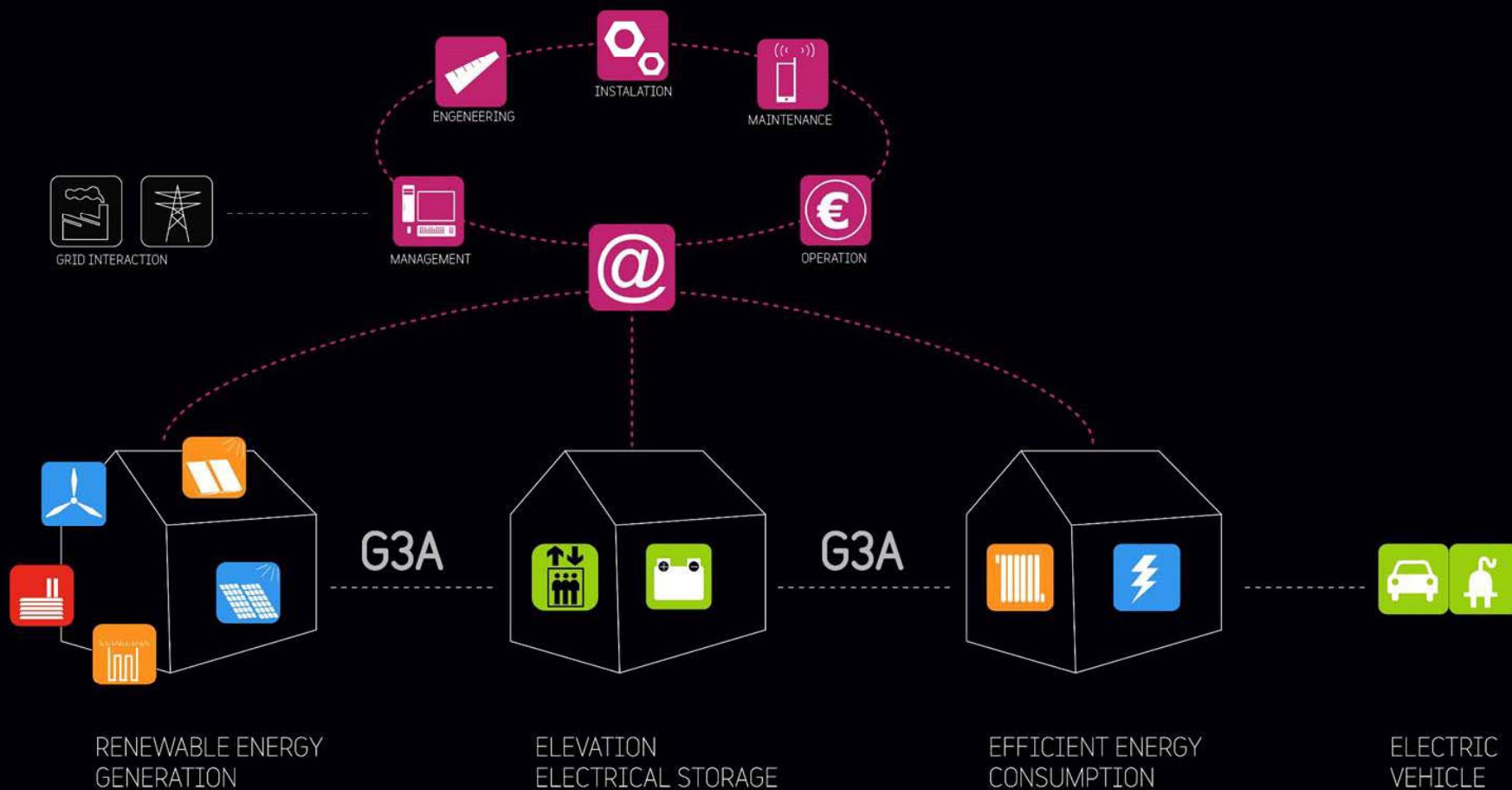


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*un proyecto para la innovación
debe ser innovador en sí mismo*

INTEGRAL ENERGY MANAGEMENT
ENERGY EFFICIENCY

Gestión de la energía en el edificio



ESPACIOS URBANOS PARA LA
INNOVATION



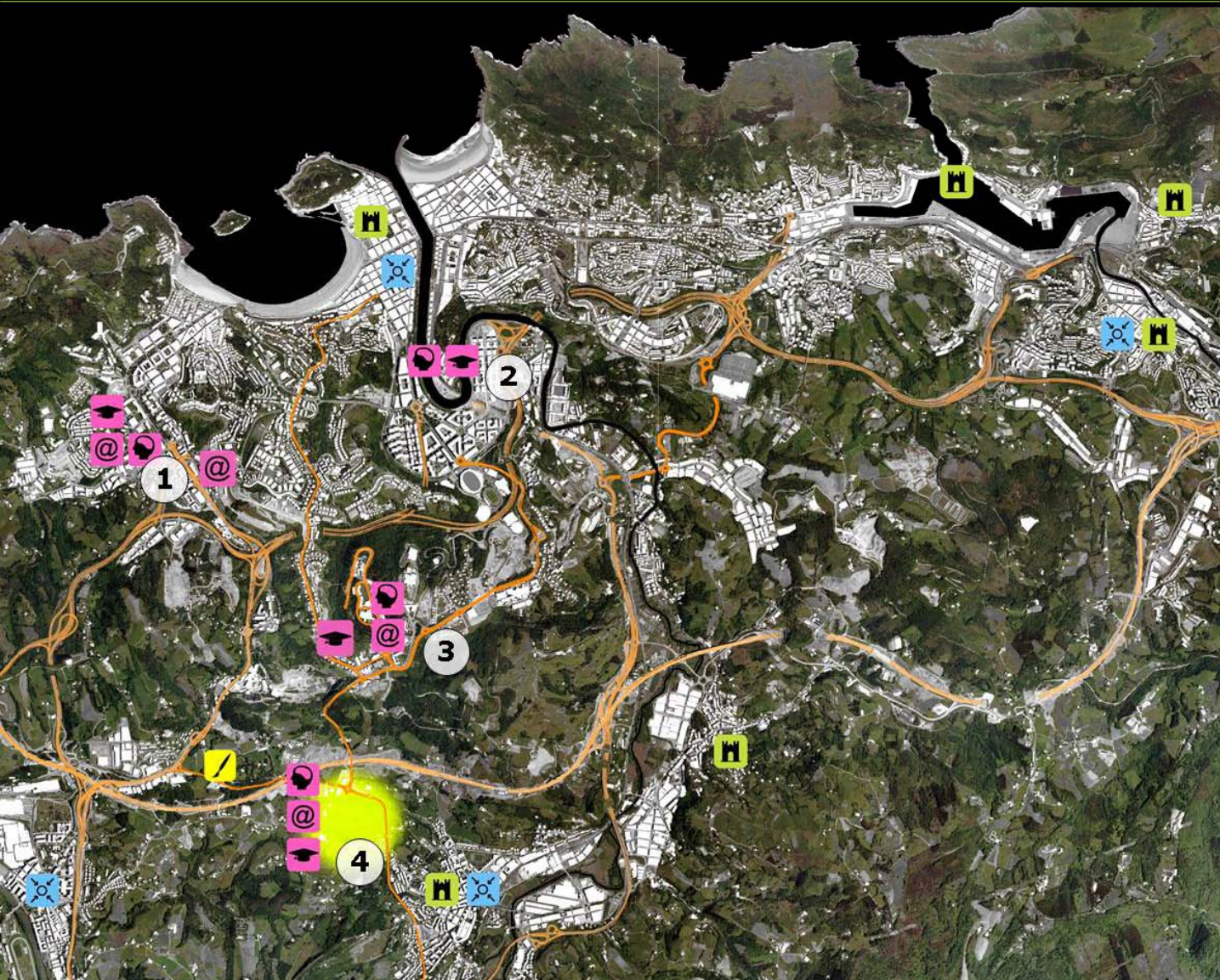
UNIVERSIDADES
CENTRO DE INVESTIGACIÓN



SEDE CORPORATIVA
SENSIBILIDAD MEDIOAMBIENTAL



- 01 VISIÓN
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-  knowledge sharing
 -  ICT and new technologies
 -  education
 -  art and design
 -  historic centres
 -  intense urban spaces
-
- 1** Campus UPV / EHU
Campus Tecnun
IK4
CIC Nanogune
 - 2** Campus Universidad Deusto
 - 3** San Sebastián Technology Park
Tecnalia
CIC Biomagune
Basque Culinary Centre
 - 4** Orona
Mondragon Unibertsitatea
Ikerlan - IK4



ARTE / DISEÑO / PAISAJE



CIENCIA / TECNOLOGÍA



CONEXIÓN URBANA



- 01 VISIÓN
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 Orona  ideo

40.000 m²t

  SAN SEBASTIAN
TECHNOLOGY
PARK

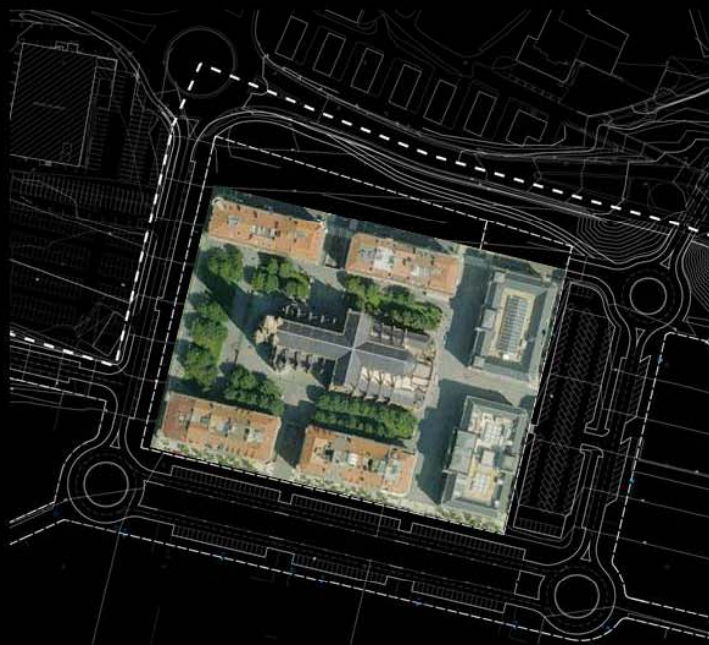
60.000 m²t

 Other Facilities
8.000 m²t





Plaza de la Constitución, Donostia



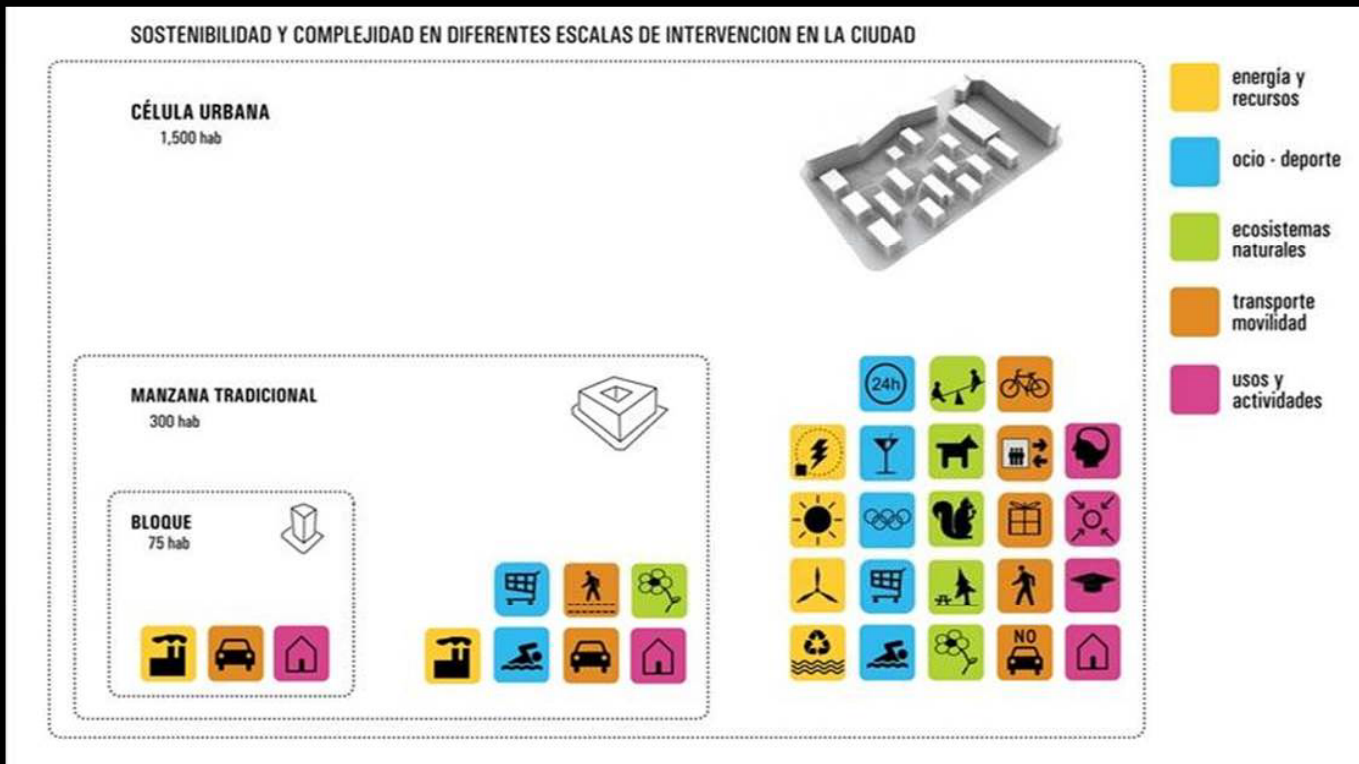
Plaza del Buen Pastor, Donostia



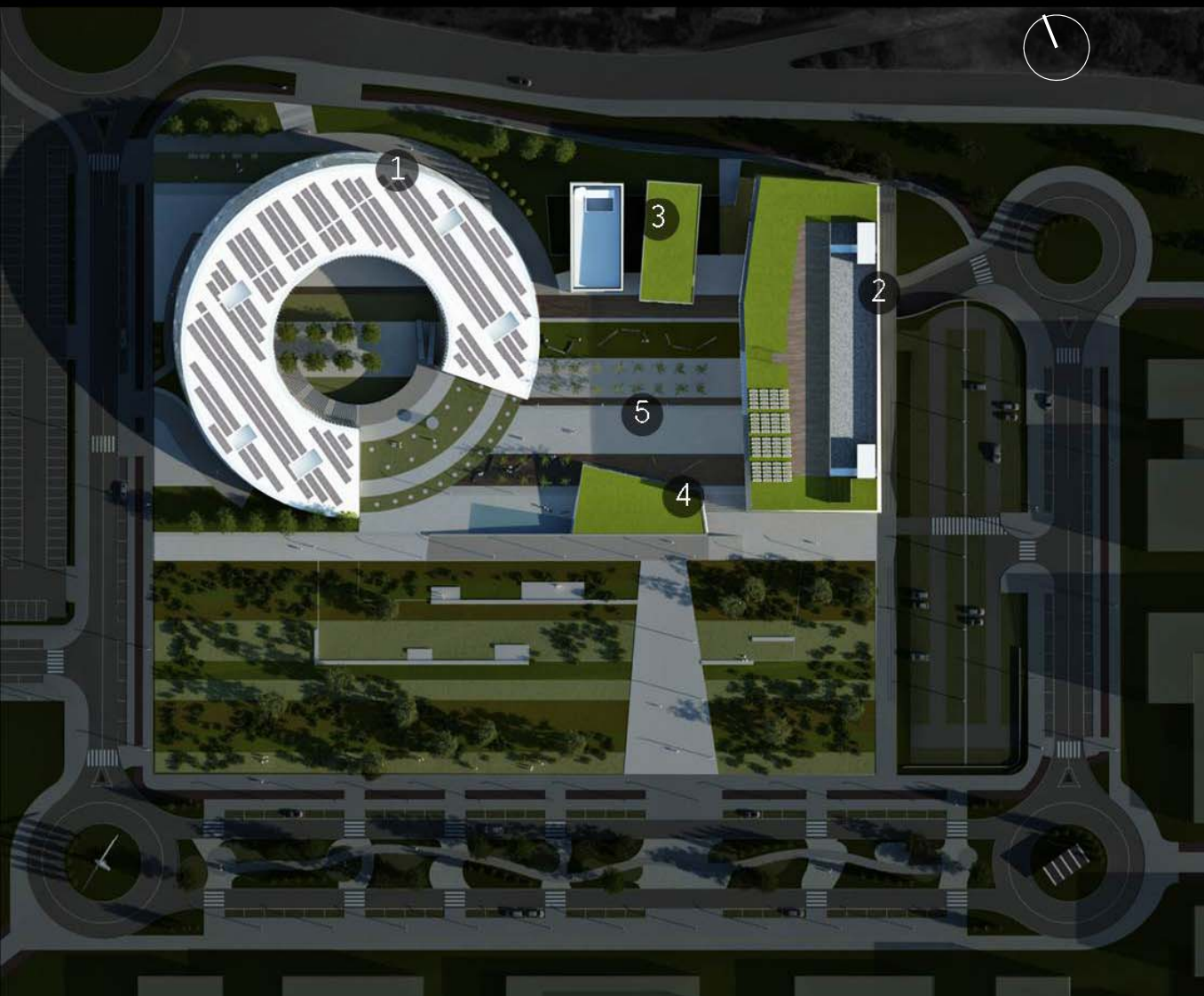
Campus UPV / EHU, Donostia

CARACTERÍSTICAS

1. Tráfico perimetral
2. Densidad y compacidad
3. Mezcla de usos
4. Fusión arquitectura, urbanismo y paisaje
5. Arquitectura y diseño urbano bioclimáticos
6. Movilidad y logística capilar
7. Generación y gestión local de la energía (DH, renovables, ESE)
8. Escala para nuevos desarrollos y rehabilitación urbana
9. Diversidad del paisaje urbano
10. Gestión global del proyecto

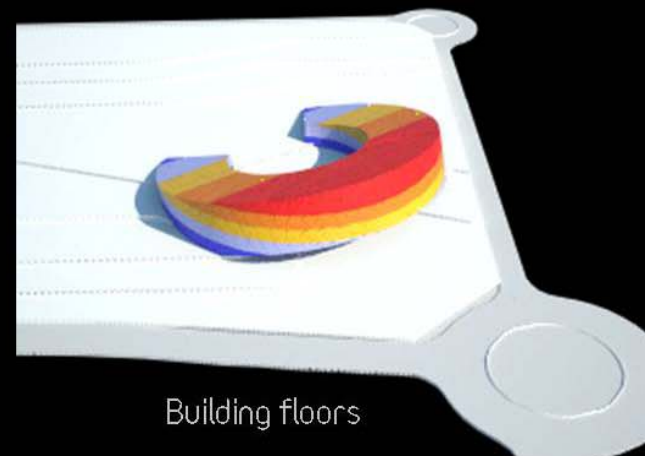
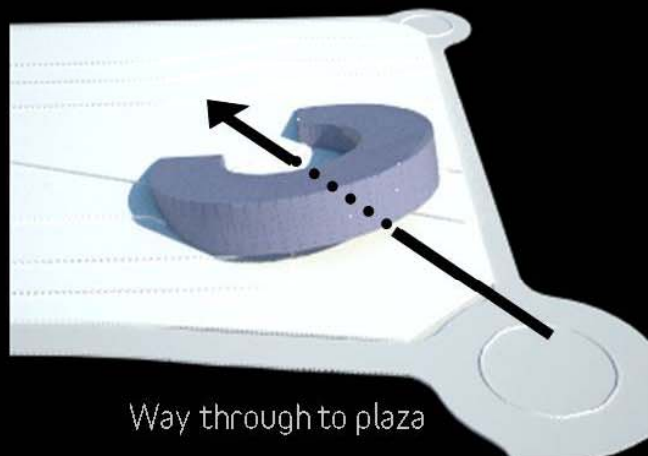
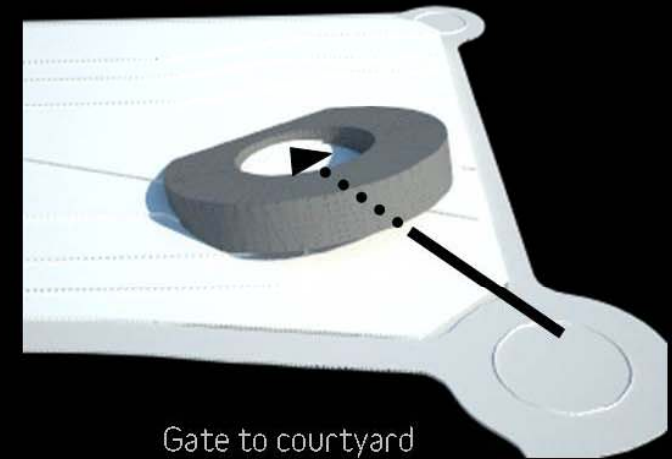
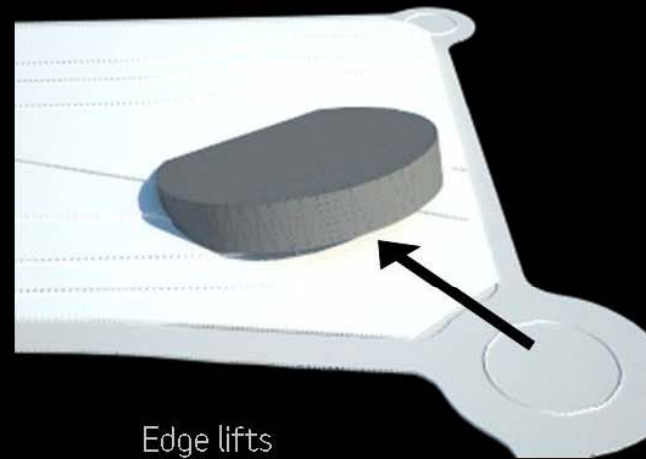
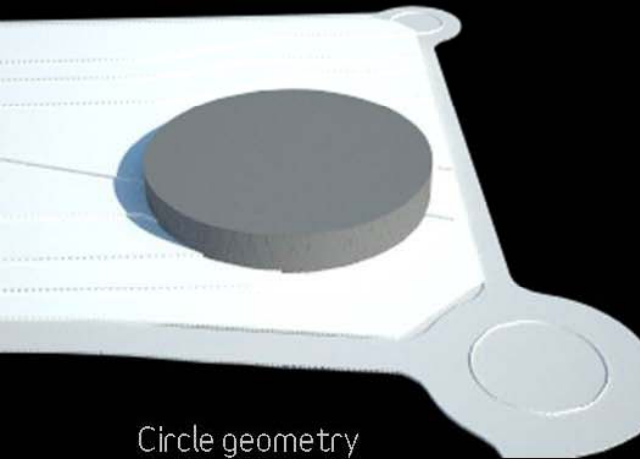


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- 1 Orona Zero
- 2 Orona Fundazioa
- 3 A3 Research
- 4 Orona Gallery
- 5 Orona Ideo Plaza

Concept Design



inspired by the
Orona logo

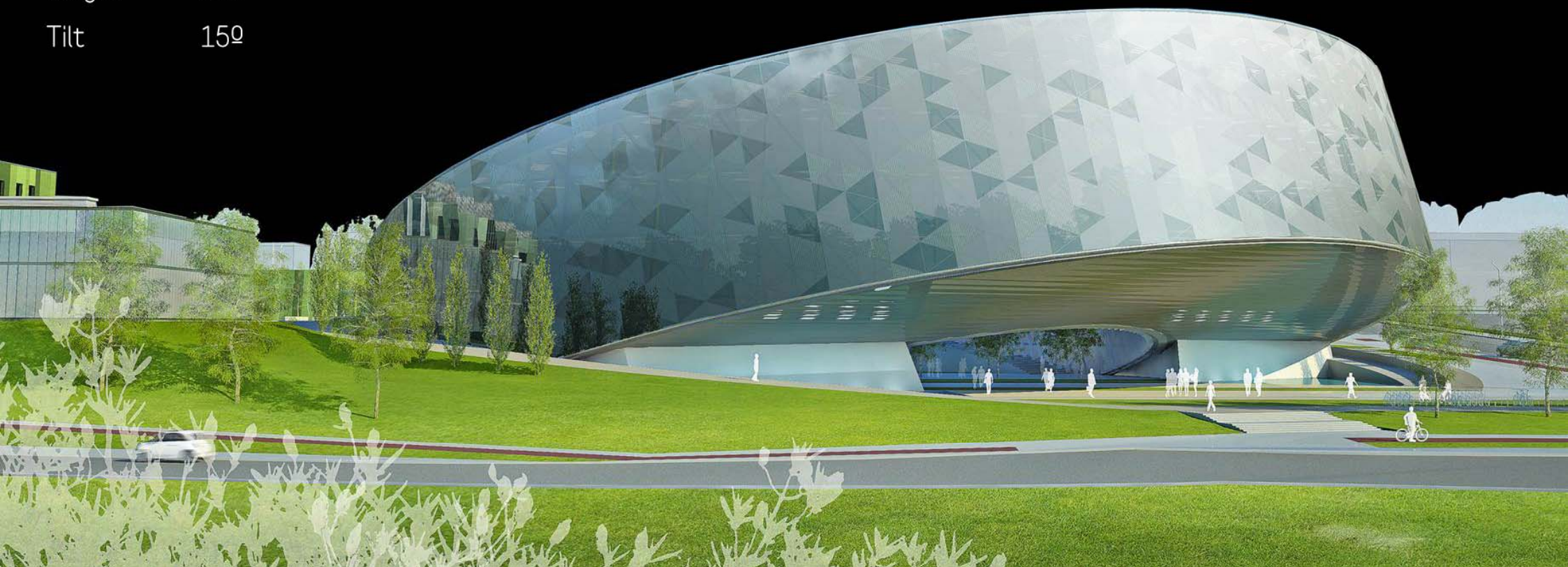
Void Cylinder:

Exterior $\varnothing$ 90m

Interior $\varnothing$ 45m

Height 16m

Tilt 15°

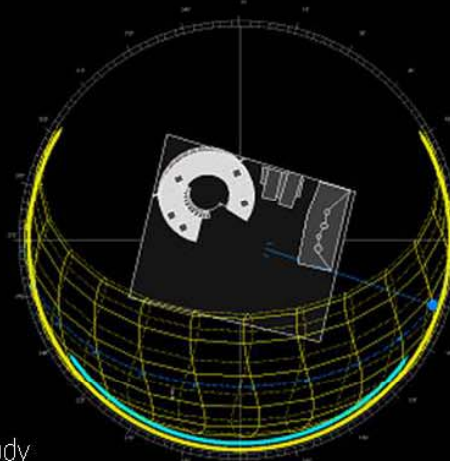


Photovoltaic roofing

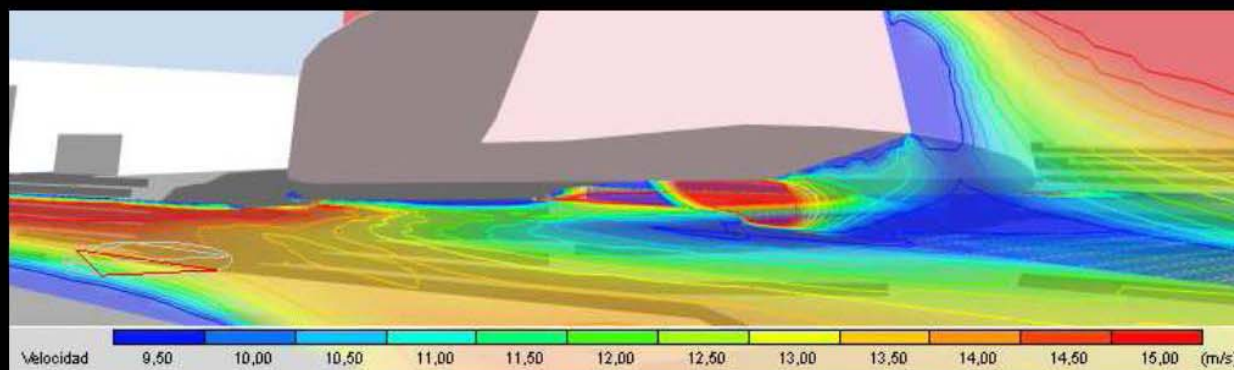


Strategies

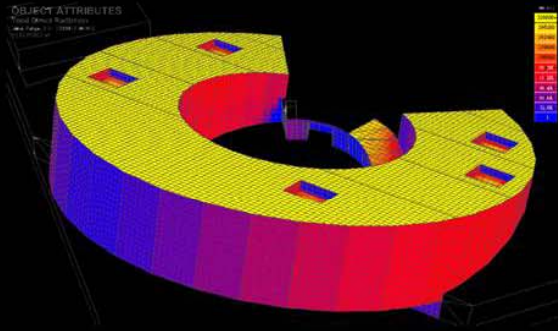
- | | |
|--|--|
|  Orientación óptima |  Aluminado eficiente |
|  Protección/Captación radiación solar |  Cubierta ajardinada |
|  Control del deslumbramiento |  Paneles solares y FV |
|  Ventilación natural cruzada |  Aerogeneradores |
|  Envoltorio de baja conductividad |  Recuperación Aguas |
|  Captación radiación solar |  Drenaje por filtrado |
|  Enfriamiento y calentamiento adiabáticos |  Arbolado hoja caduca |
|  "Free-cooling" nocturno |  Vegetación |
|  Recuperación de calor en ventilación |  Aislamiento acústico |



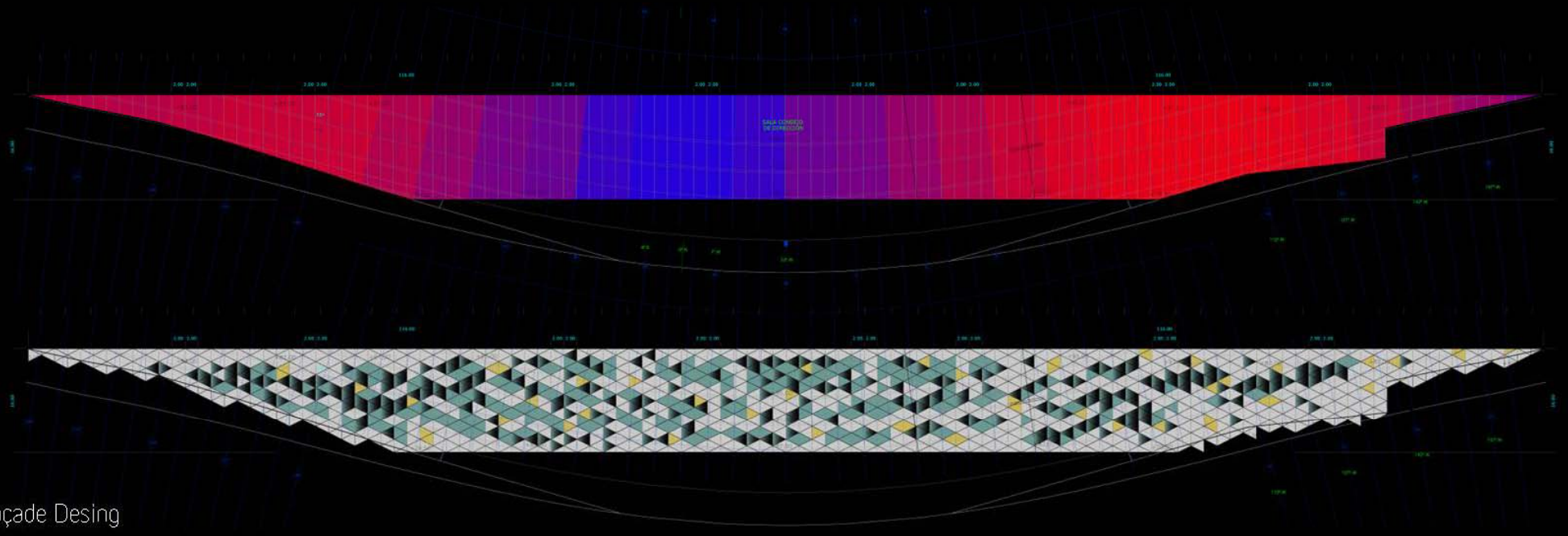
Shadow study



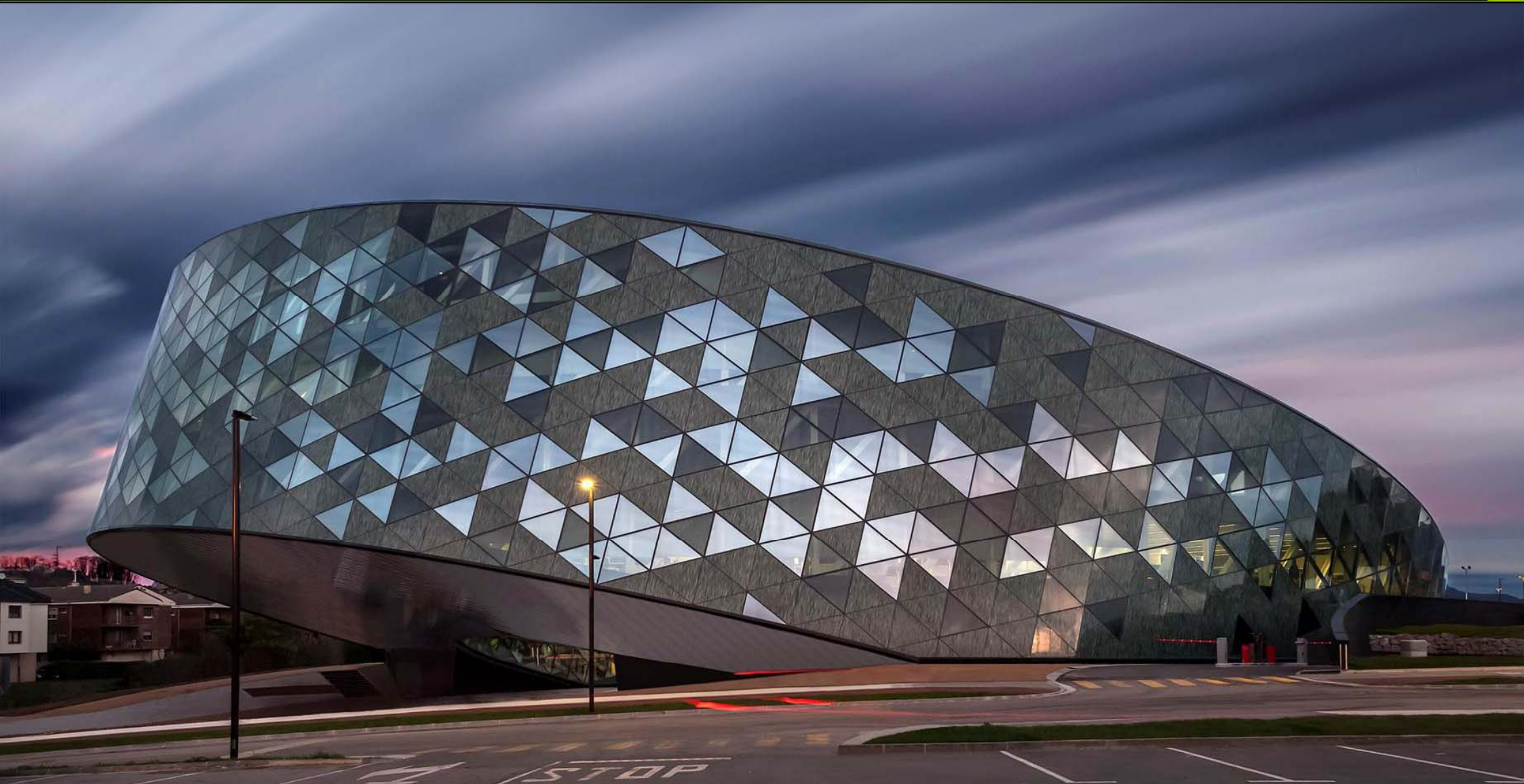
Wind study

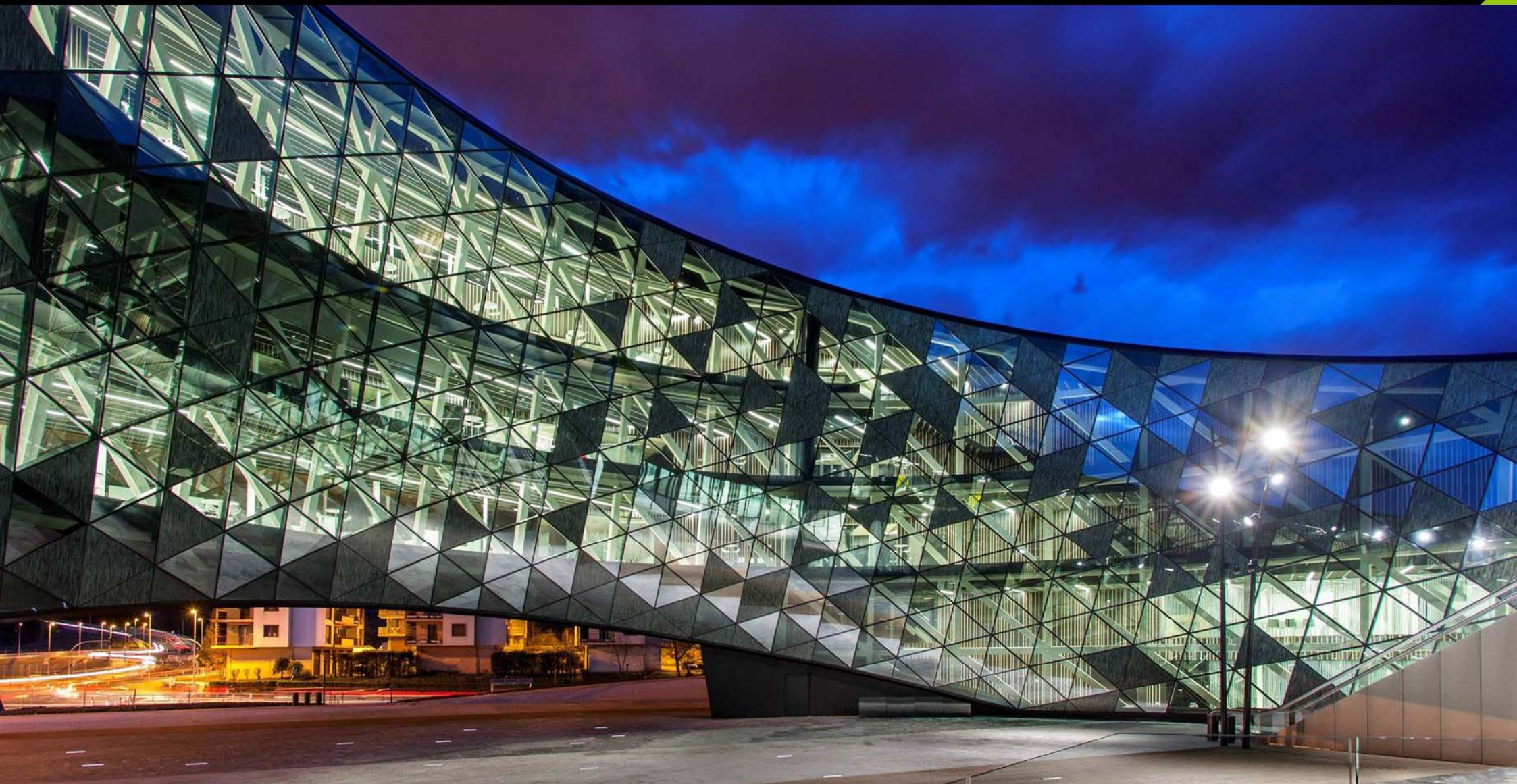


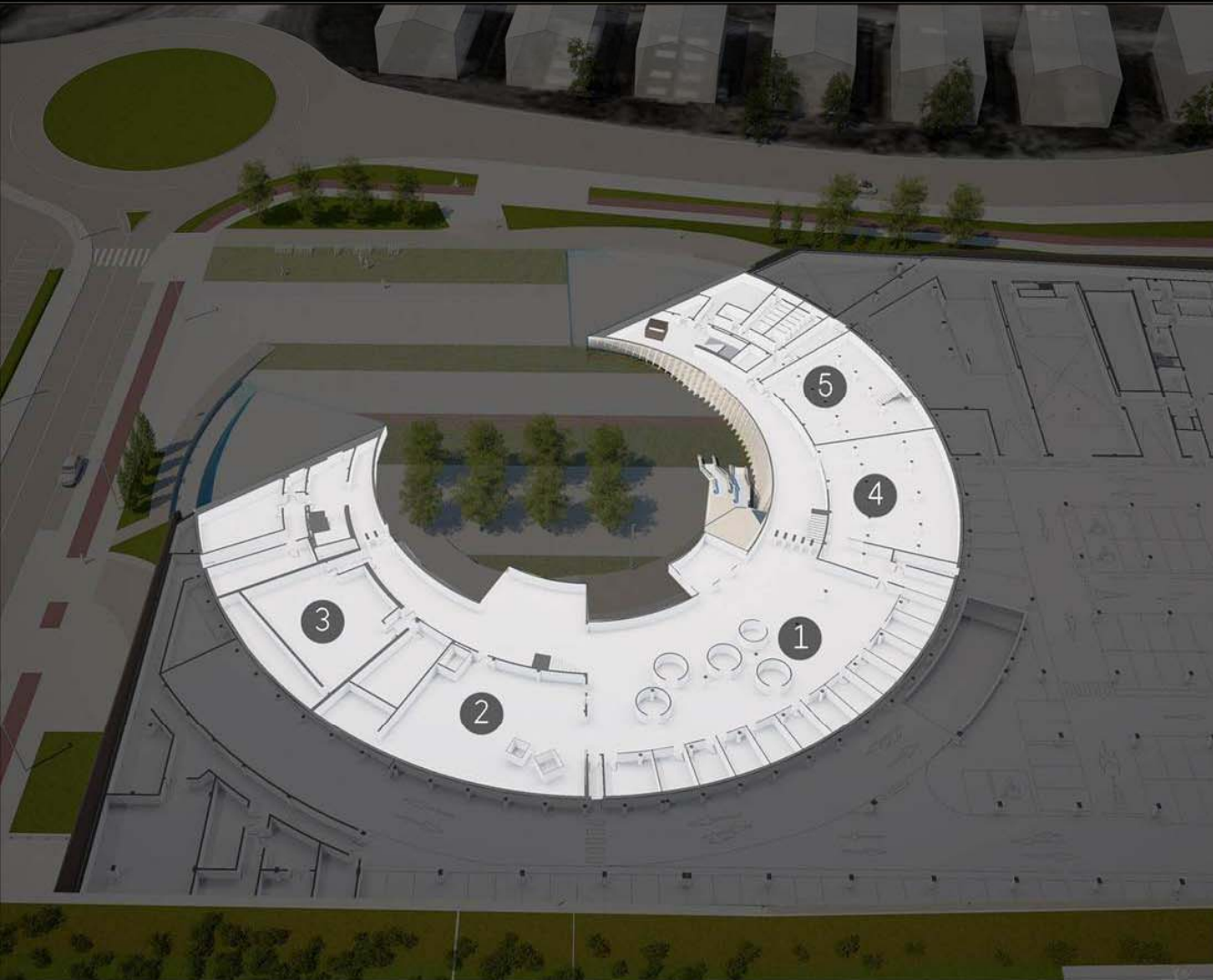
Radiation Analysis Grid



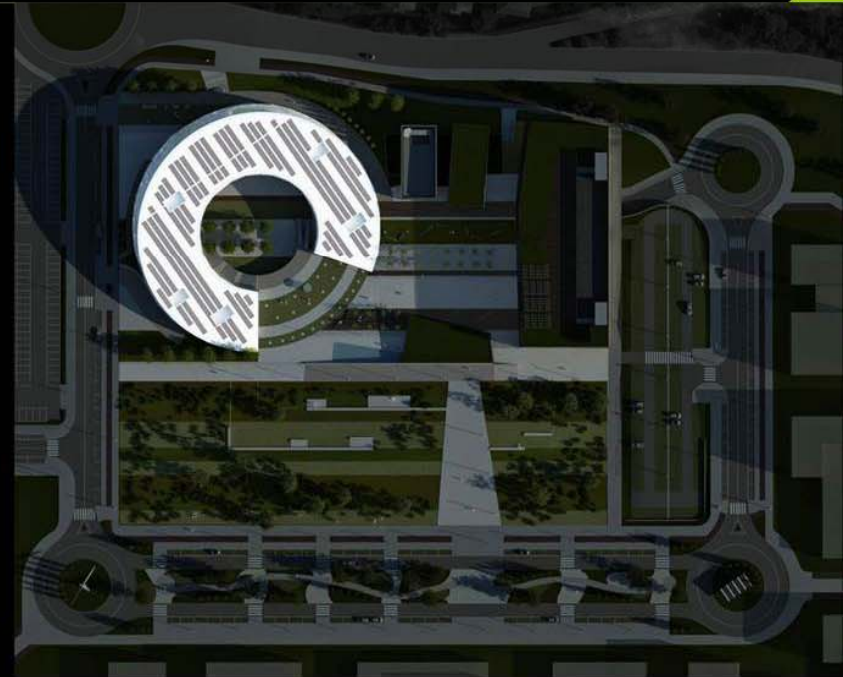




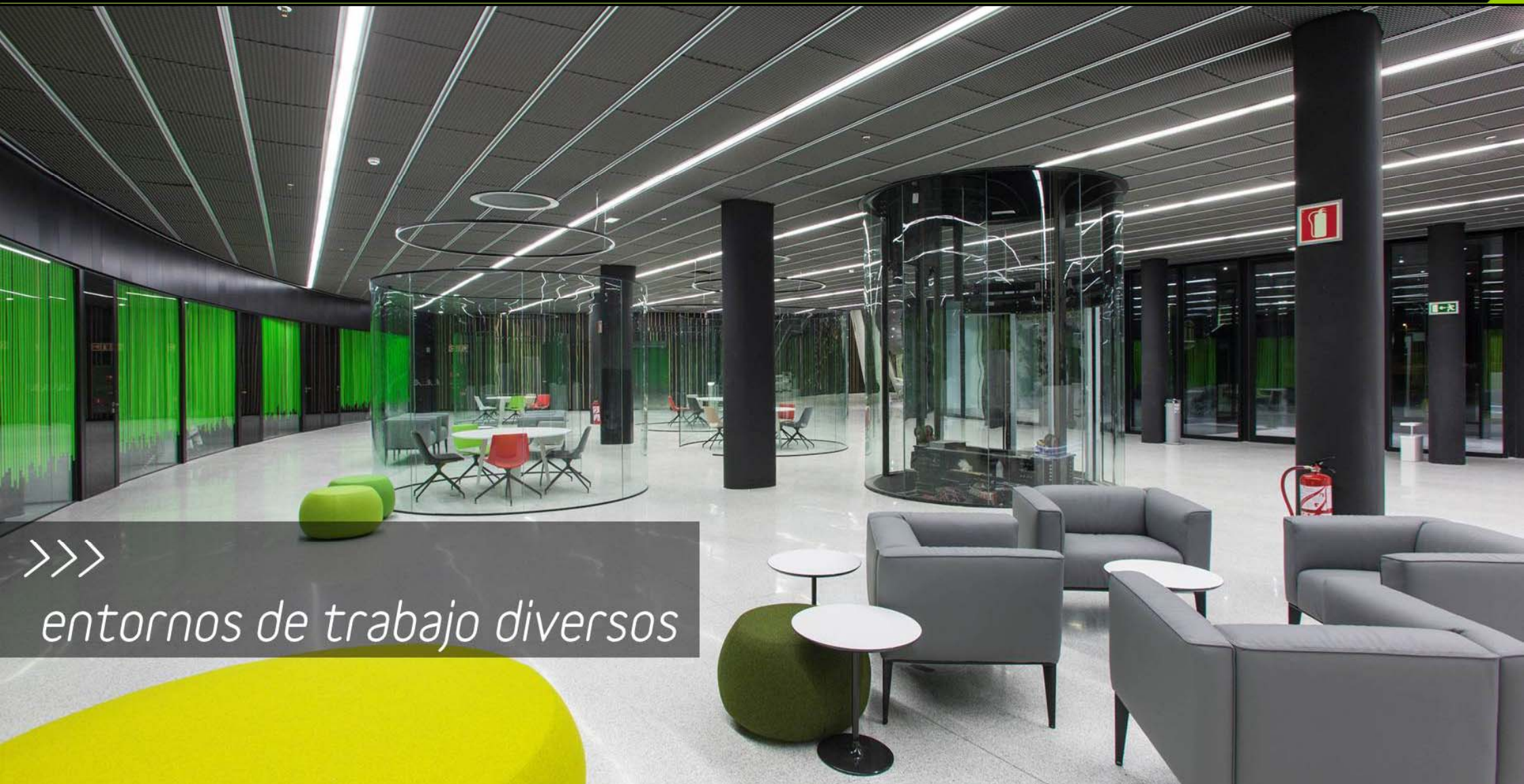




Entrance floor

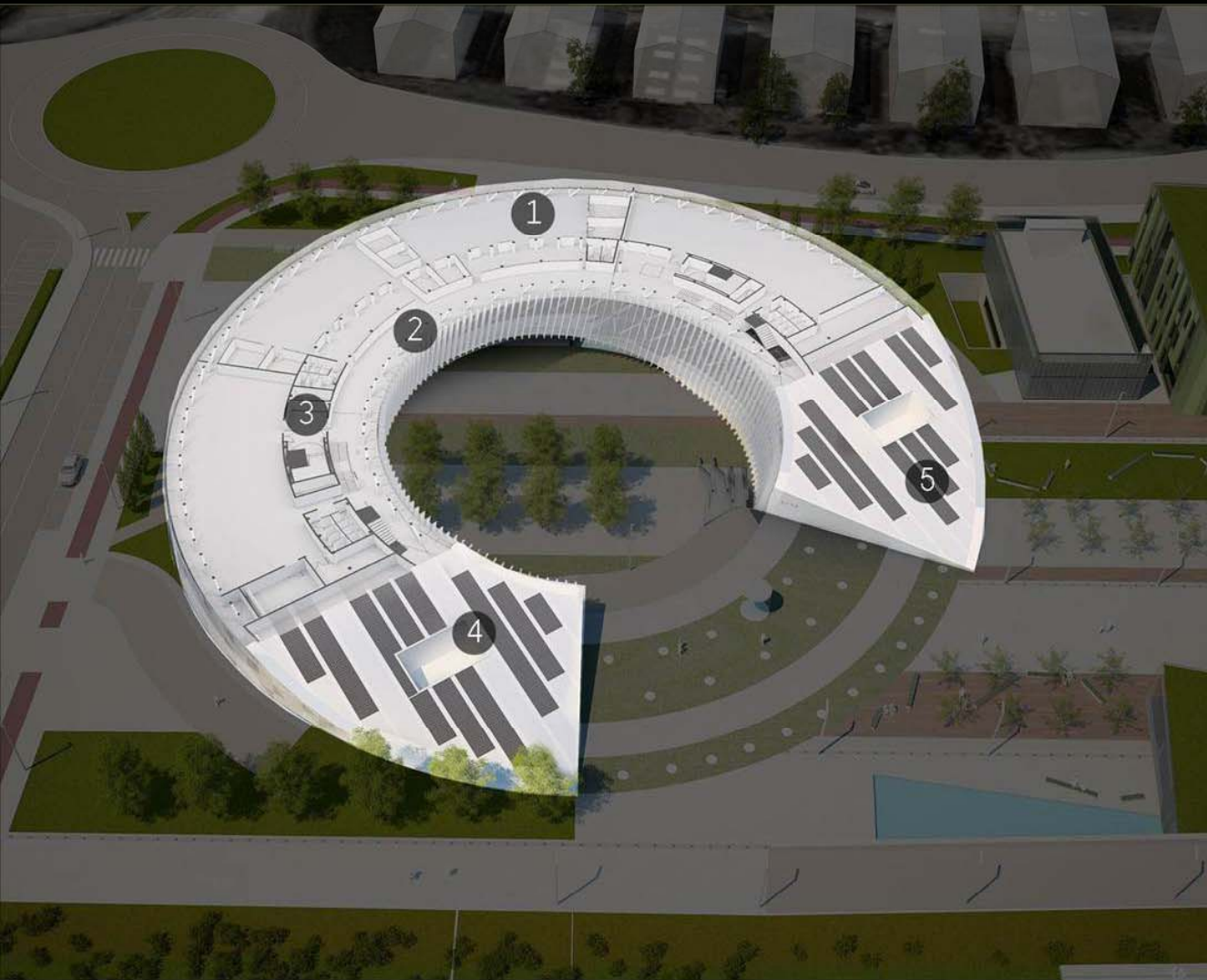


1. Entrance Lobby
2. Orona Showroom
3. Auditorium
4. Contact Centre 24h
5. Labs

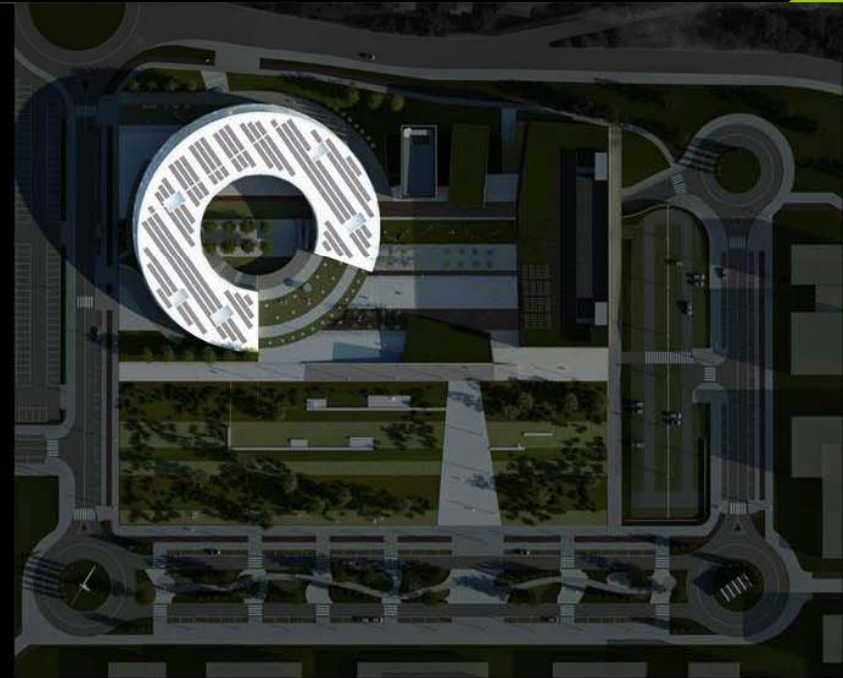


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entornos de trabajo diversos



2nd floor



1. Workspace
2. Ring-corridor
3. Lifts / stairs / storage ...
4. Terrace
5. Photovoltaic roofing

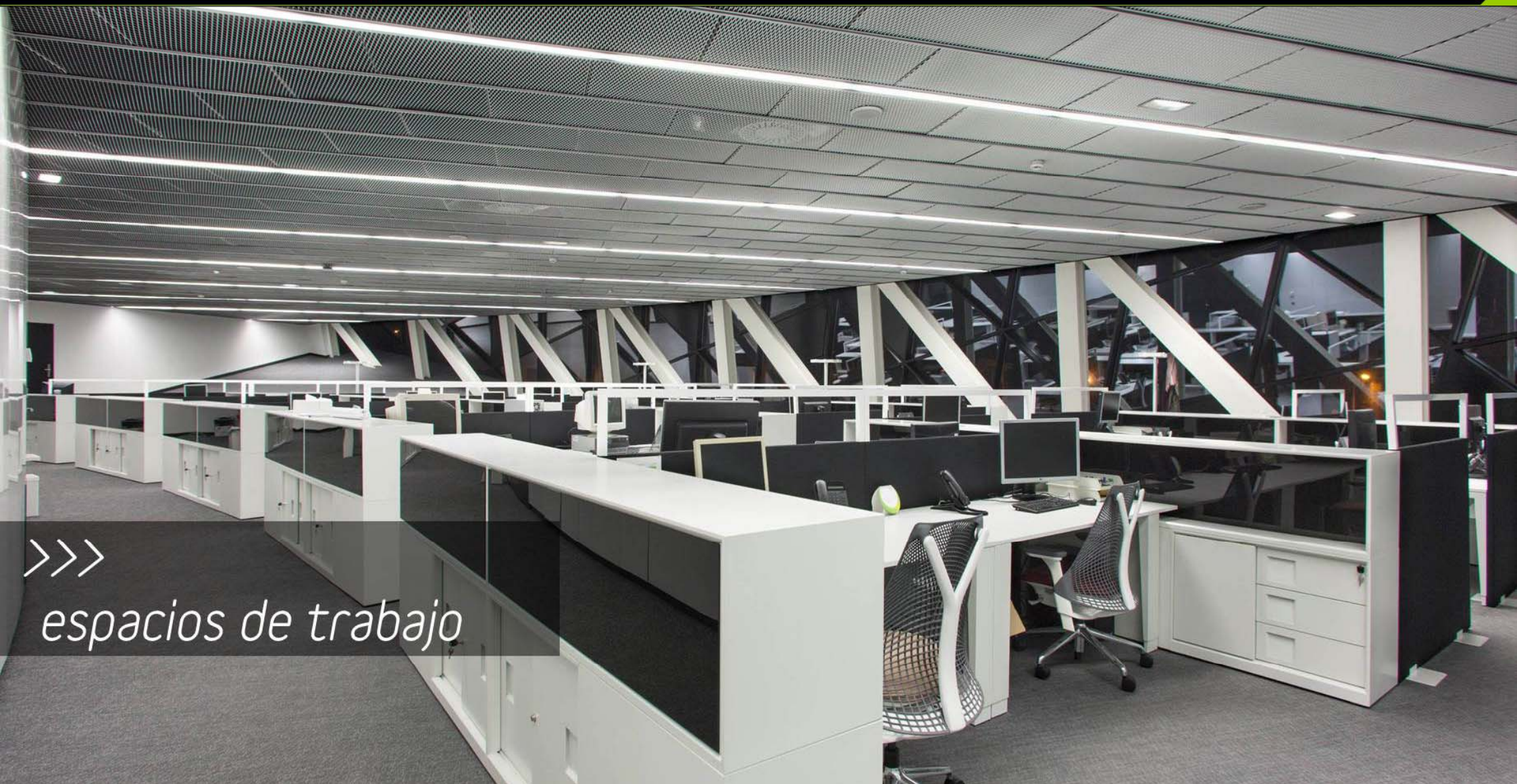


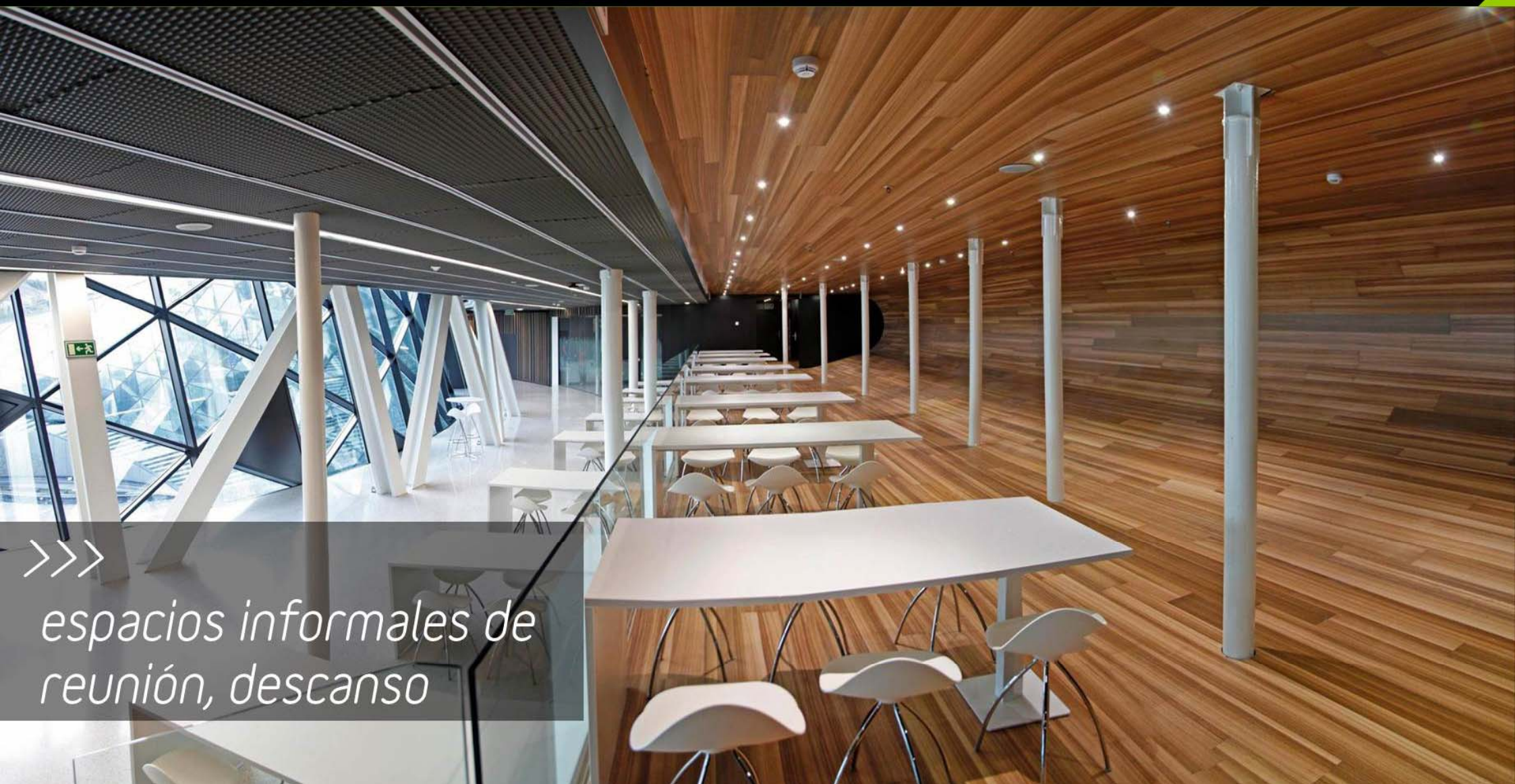
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iluminación natural



espacios de trabajo

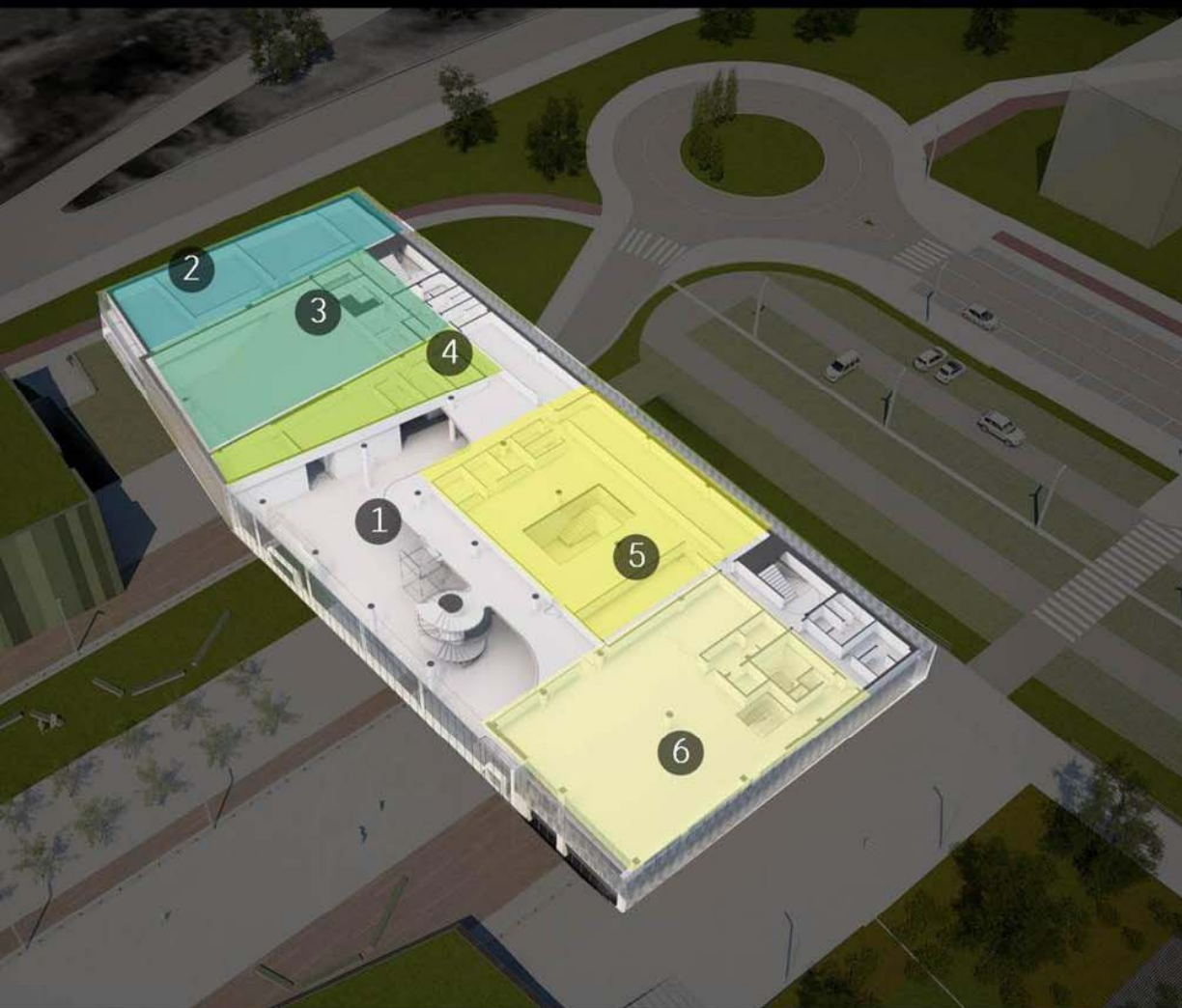




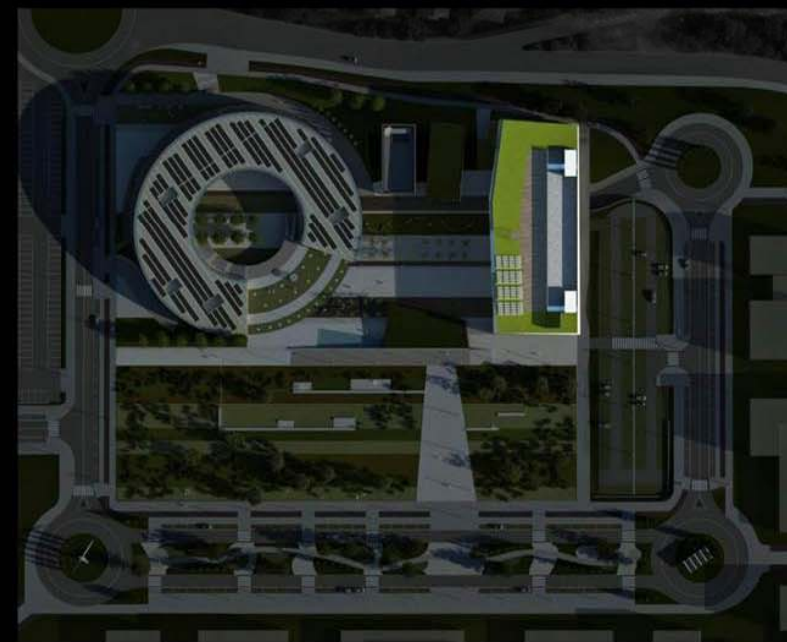
*espacios informales de
reunión, descanso*







Entrance and mezzanine floor



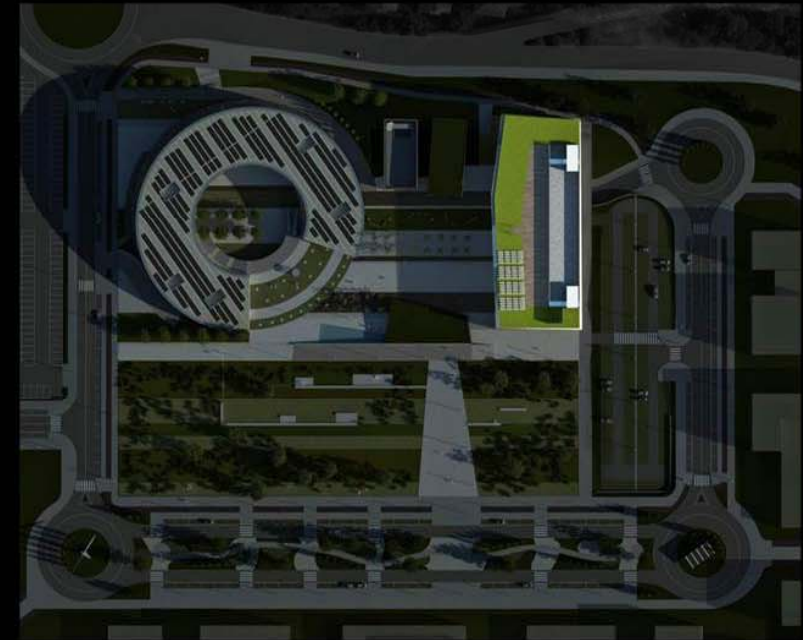
1. Public lobby
2. Social Space
3. Auditorium
4. Orona Fundazioa offices
5. Library
6. Cafeteria - restaurant



*espacios compartidos y
multifuncionales*



2nd floor



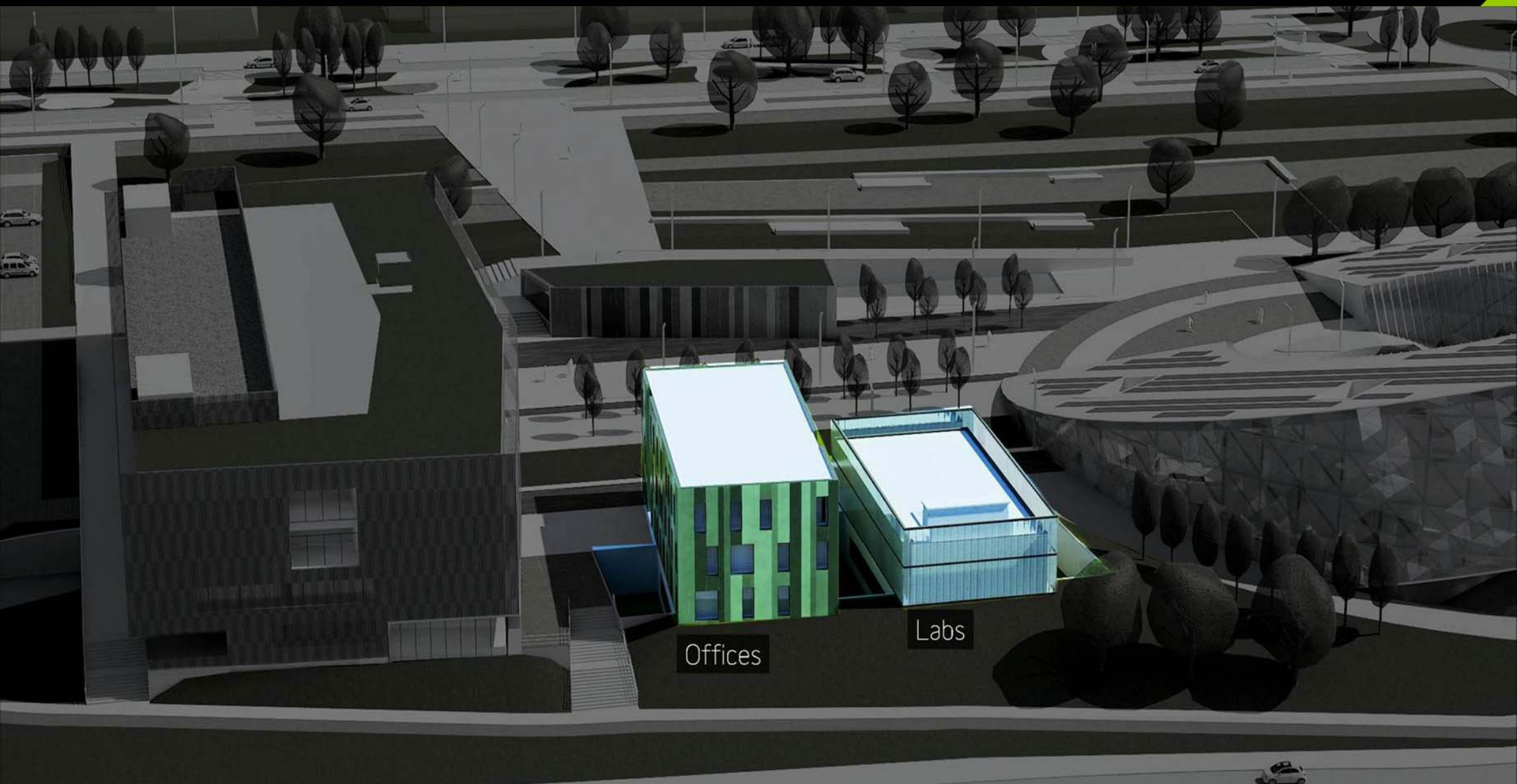
- 1. Atrium
- 2. Corridor
- 3. Classrooms
- 4. Labs



Facultad de Facultades

2 grados de Ecoingenierías





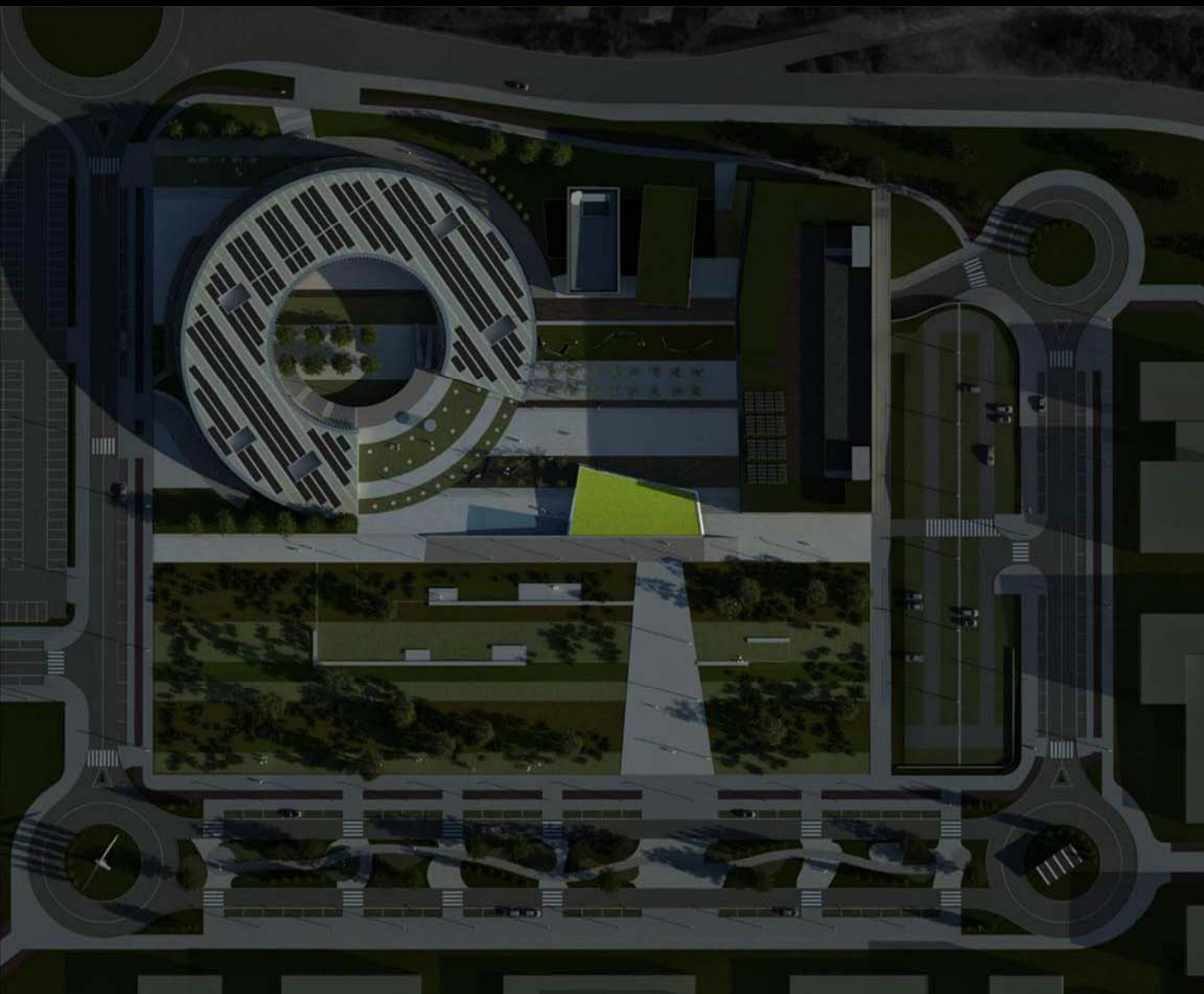




1st floor



- 1. Batteries lab
- 2. Control panel
- 3. Research workspace
- 4. Patios



Orona Gallery

Real-time energy monitoring

Exhibitions

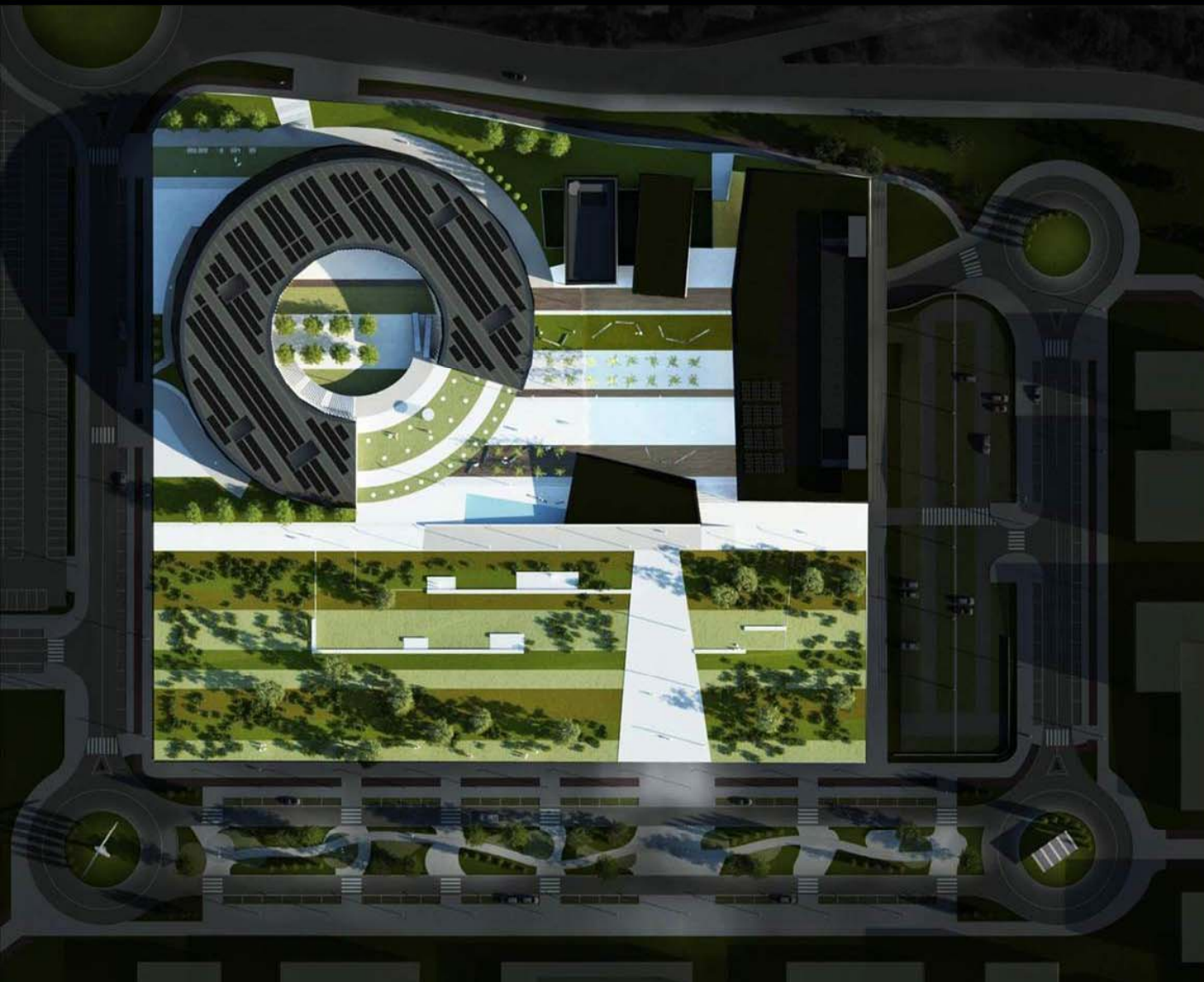
Visit to District Heating facilities

1000 m²





>>>
cubiertas verdes



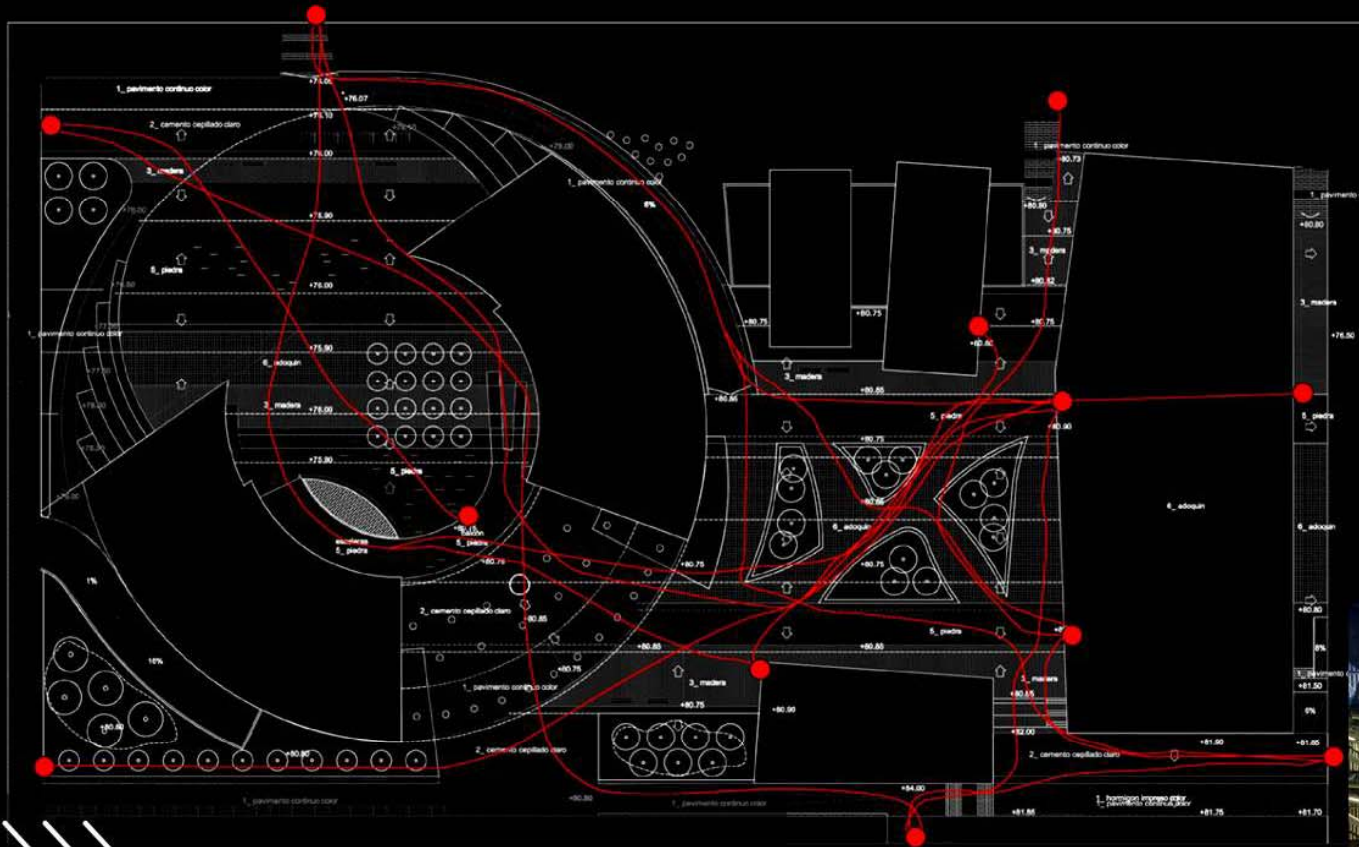
Orona Plaza

Informal meeting spaces

Soft materials

Local natural species





escala microurbana

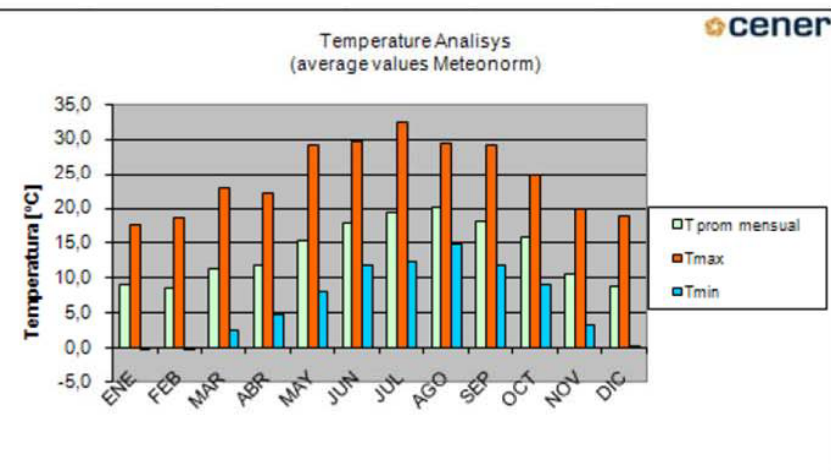


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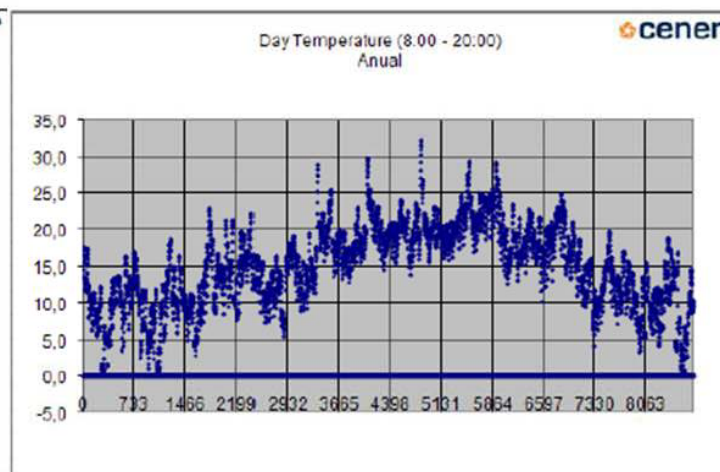
TEMPERATURA

Clima templado

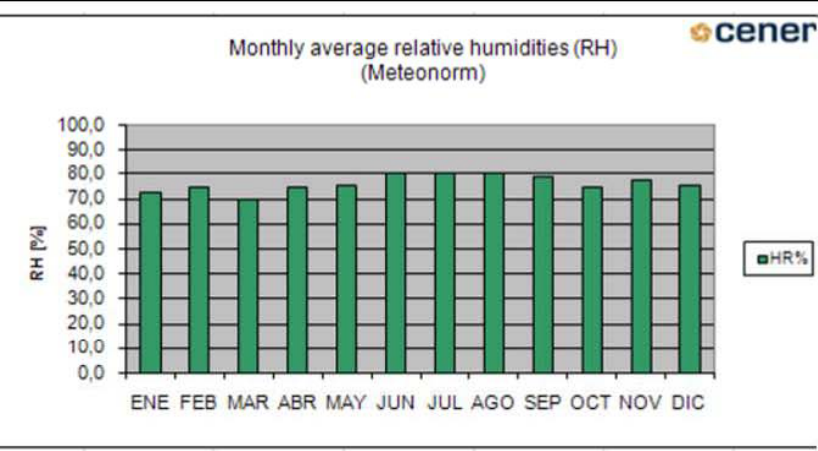
Mayor temporada de calefacción que de refrigeración



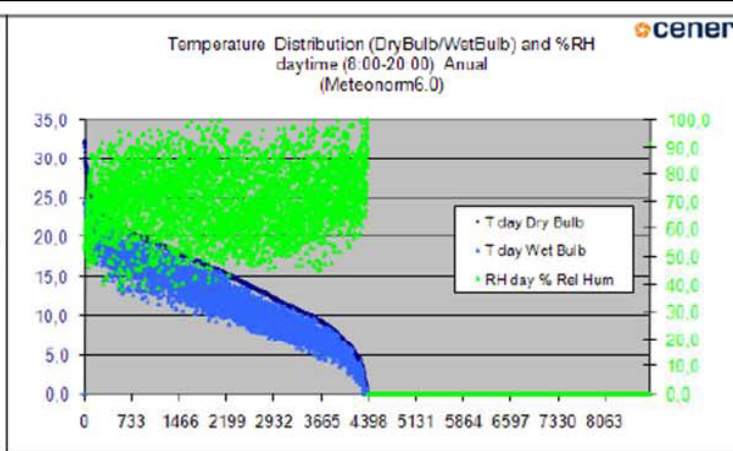
Temperatura: datos por meses



Temperatura: datos por horas



Humedad: datos por meses



Humedad: datos por horas

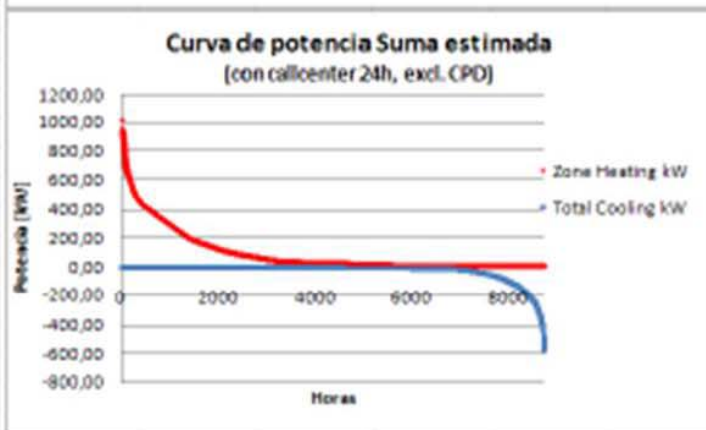
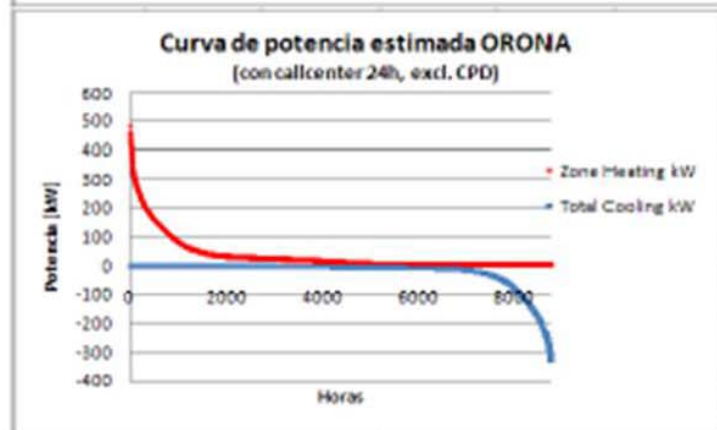
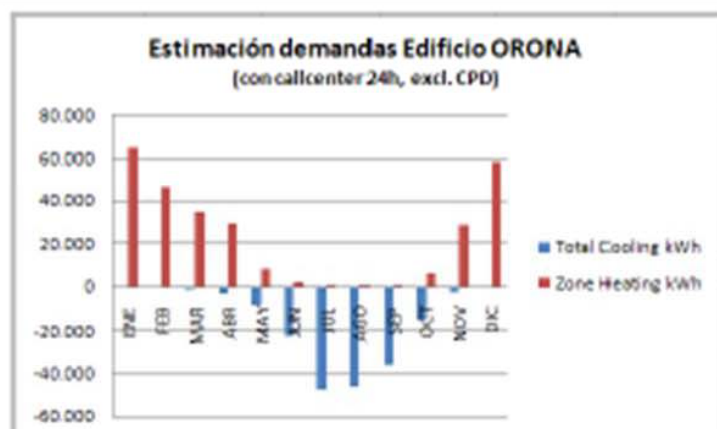
HUMEDAD RELATIVA

Alta humedad relativa durante todo el año

Poca potencia para enfriamiento evaporativo

ORONA ZERO

TOTAL





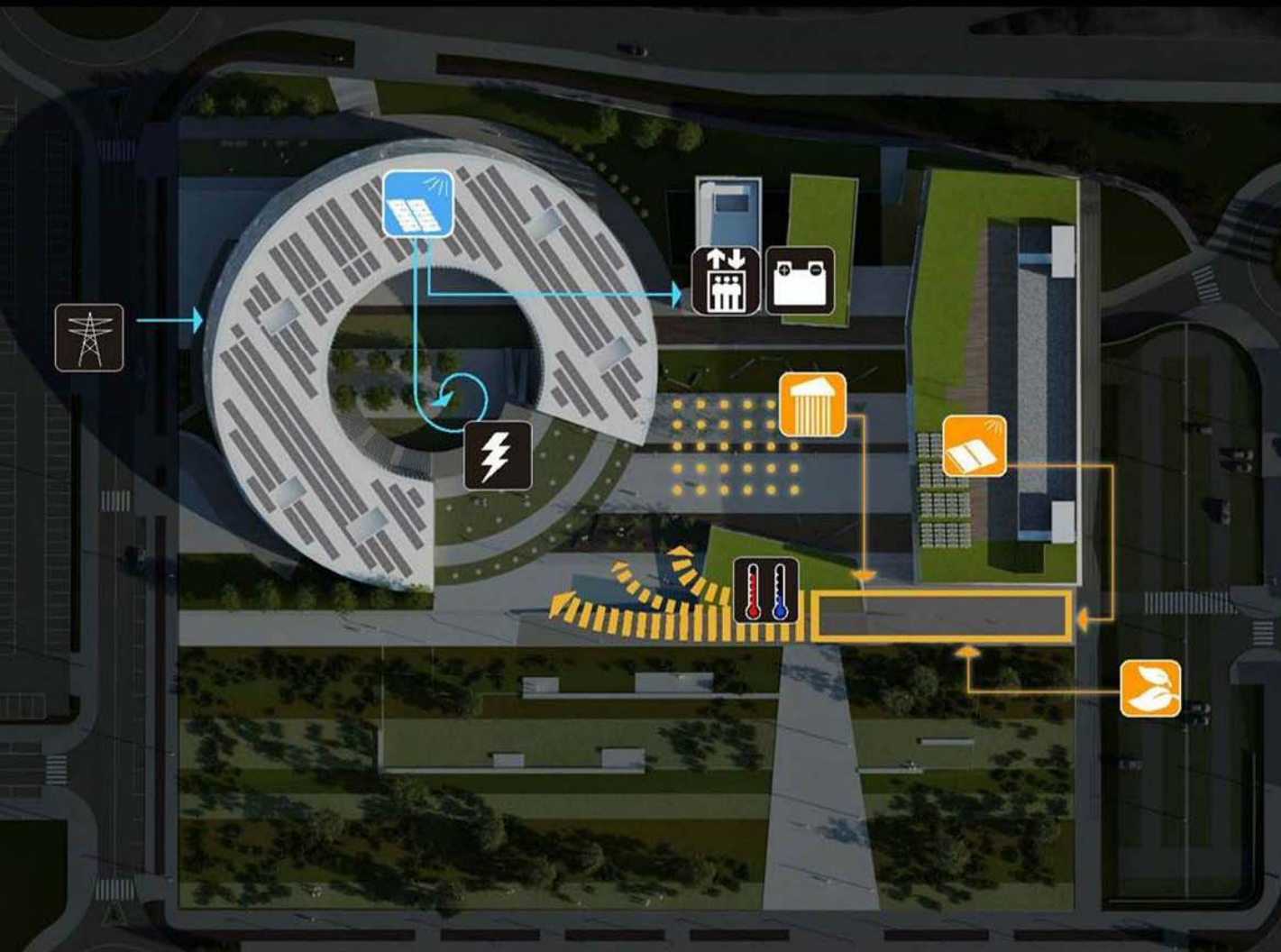


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Campus de Energía Casi Nula

>>> EECN

- 1. mínima demanda de energía*
- 2. 100% consumo de energías renovables*
- 3. producción local de energía*



CALOR Y FRIO DE DISTRITO

Potencia
instalada

Bomba geotérmica

30ud x 120ml

200 - 150 kW

Solar térmica

129 m²

90 kW

Biomasa

2 x 600 kW

Maquina de absorción

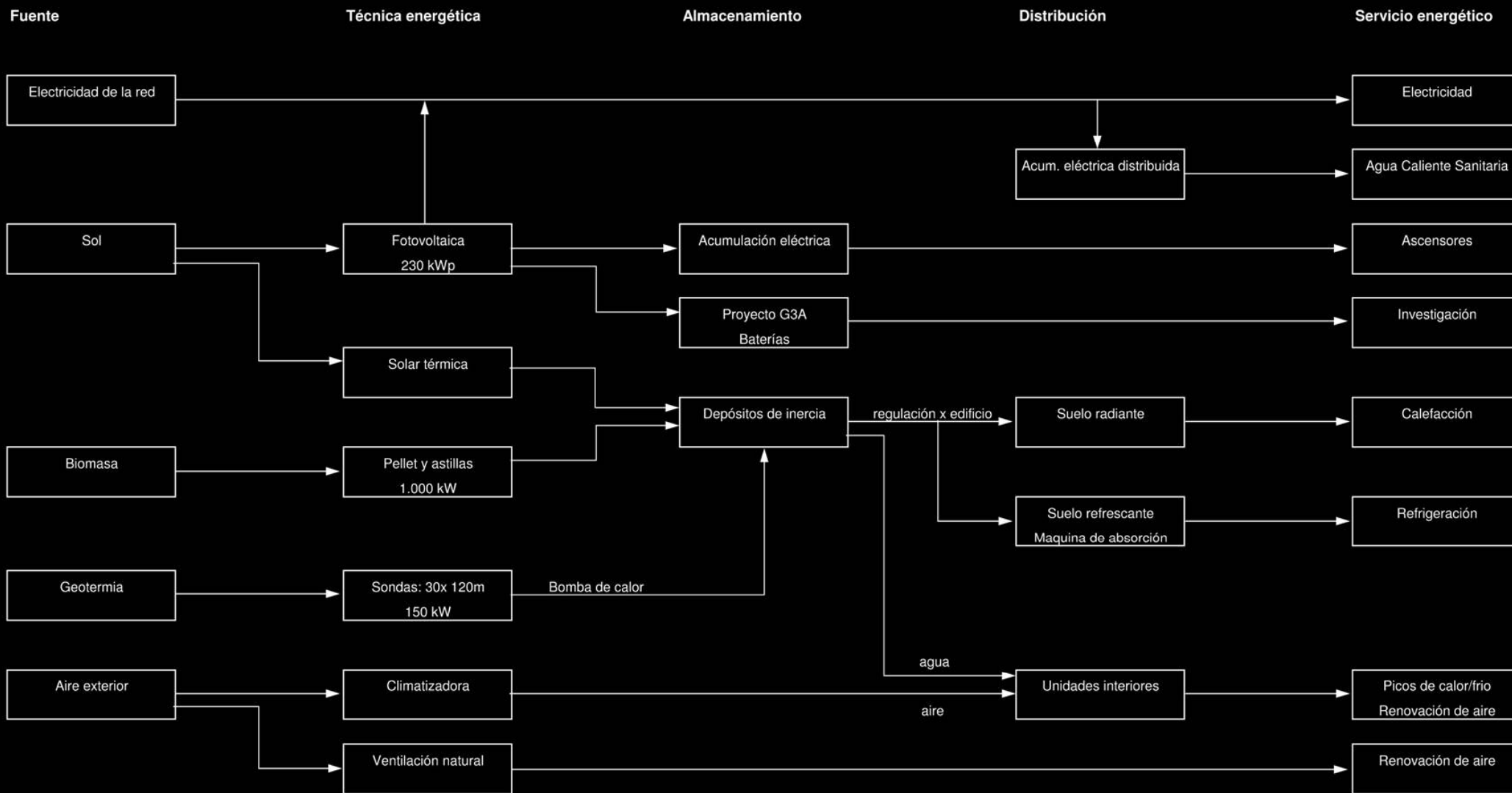
170 kW

ELECTRICIDAD

Placas fotovoltaicas

230 kWp

Orona IDeO energía



BREEAM® ES

Estándar en Construcción Sostenible
www.breem.es
www.breem.com

Certificado Provisional BC-02-0911-001/CP

Edición del Certificado: 01

Orona Zero
c/ Jauregui, s/n
20120 - Galarreta (Hernani)

ha sido evaluado según Orona S. Coop

por: LKS Ingeniería S.Coop
Nombre de la Organización Autorizada:

Andrew Ferdinando
Asesor Licenciado BREEAM ES

16-B-ES-005/COM(1)2
Código Licencia BREEAM ES

BREEAM ES Comercial 2010 V. Beta Oficinas

Resultado: 70,28%

Clasificación: Excelente

Categoría	0	10	20	30	40	50	60	70	80	90	100
Gestión											
Salud y Bienestar											
Energía											
Transporte											
Agua											
Materiales											
Residuos											
Uso del Suelo y Ecología											
Contaminación											
Innovación											





25 de octubre de 2013

Carlos Calvo Ocaso, Director General
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LEED Gold



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1er punto extraordinario de
BREEAM ES
ENE 8 ascensores

GRUPO DE
APLICACIONES
AVANZADAS EN
ALMACENAMIENTO ELECTRICO



12 sistemas de elevación



regenerative lift (back to the grid)



regenerative lift (with Energy Storage System)



Towards A-Class lift. Continuous R+D



ZEL (Zero Energy Lift)

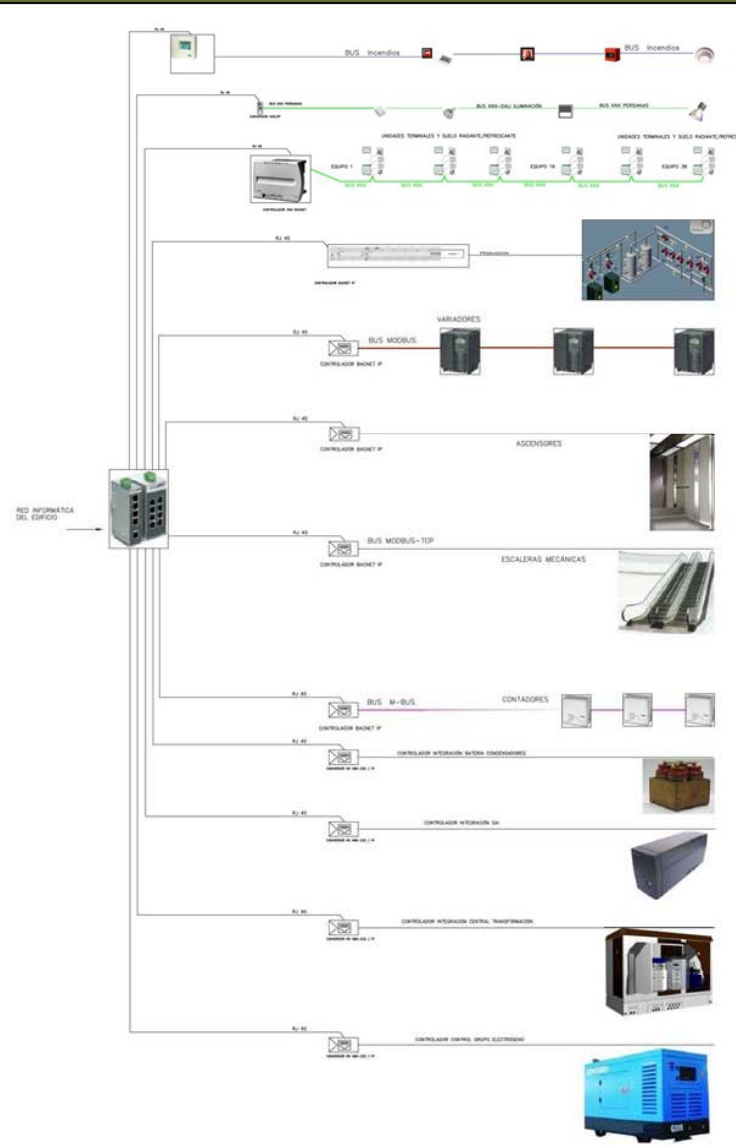


Towards ZEB (Public areas)



ZEB (Zero Energy Building)

RED INFORMÁTICA
DEL EDIFICIO



Incendios

Iluminación

Persianas

Suelo Radiante

Climatización

Generación de energía

Ventanas

Ascensores

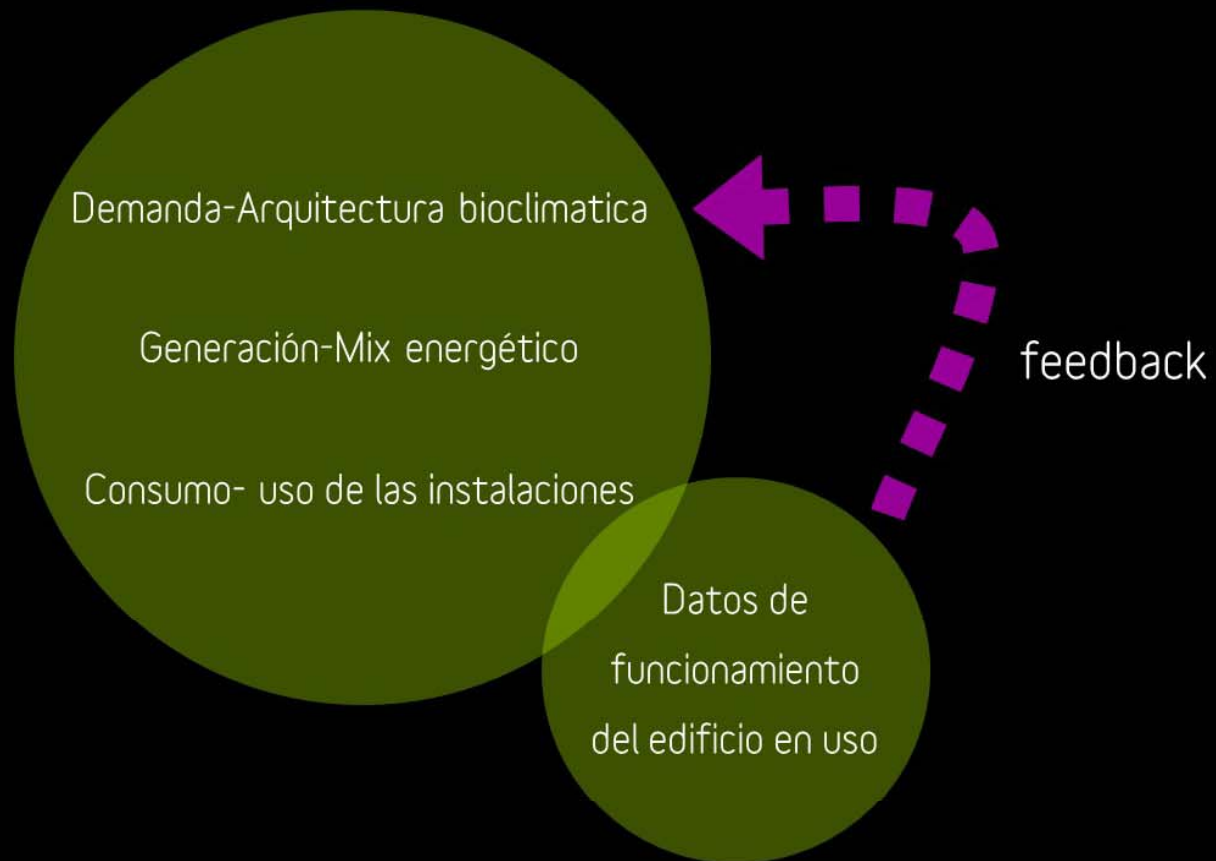
Escaleras mecánicas

Contadores

Batería de condensadores

Central de Transformación

Grupo electrógeno



VALOR AÑADIDO EN DISEÑO
Y GESTIÓN DE EDIFICIOS



ecoeficiencia + diseño eficaz

Perceptions may provide the missing link between the physical office environment and health, wellbeing and productivity outcomes.

The financial or organisational metrics above are concerned with measuring objective indicators of health, wellbeing and productivity. What they can miss are important underlying attitudes about the workplace that can be harder to quantify but can have significant impacts on human performance. To tap into attitudes requires a different kind of measure: the self-perception survey.

In many ways, perceptions may provide the missing link between the physical office environment (discussed below) and health, wellbeing and productivity outcomes. How workers feel about the office is vital yet underutilised information by many employers. This is true even though the costs of administering a survey are low and the value potential, (in terms of knowledge, engagement, etc.) very high.

Even if organisations do undertake surveys, they very often do not ask questions on wellbeing and instead focus on whether workers are physically comfortable and able to get work done. So the results may reveal that an office is physically comfortable and functional, but that does not mean it is optimal.

In the same way that workers can be physically present in an office but not 'well', an office can be physically adequate without promoting wellbeing, or inspiration. And yet as suggested in Part 1, studies increasingly infer that it is this latter component that is a driving force behind increased productivity.

Effective perception studies test a range of self-reported attitudes to gain insight into health, wellbeing and productivity in the workplace. The answers that workers provide can contain a wealth of information for improving office performance. Asking employees about their preferences and opinions – and responding to them – will also go a long way toward establishing trust and a sense of engagement. As the market becomes more occupier-focused, establishing worker preferences and incorporating them into office design and operation will become an increasingly important business strategy.

There is a brief introduction to some of the existing employee perception tools in the marketplace in Appendix I, but most have a particular specialist focus. We recommend that any survey should ask questions about health, wellbeing and productivity (i.e. all three) and probe their relationship with features of the office itself, and the amenities available. This should also be a crucial element of any Post-Occupancy Evaluation.

Guidance on the practicalities of carrying out a perception survey, and a pool of questions that could be used to put one together, can be found in Appendix II.

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arquitectura saludable



Health, Wellbeing & Productivity in Offices

The next chapter for green building

Orona  ideo

XABIER BARRUTIETA

arquitecto

COAM 141202

