

Lyontech la Doua Campus

by SARAH LAVAUX / 2017-06-14 17:51:40 / France / 14611 / FR



Address 1 - street : 69266 43 BOULEVARD DU 11 NOVEMBRE - VILLEURBANNE, France

Population : 30 000 hab

Starting year of the project : 2008

Delivery year of the project : 2021



14 ha



185 000 000 €

Proposed by :



Certifications :

ID CARD

Cité campus is a major project for the restructuring and modernization of the University of Lyon. On LyonTech la Doua, it is a vast program of rehabilitation and construction that is committed today with the ambition the emergence of a sustainable eco campus of international renown.

In a spirit of exemplary and innovative eco-design, campus universities want to densify, reinforce, develop and make more readable the entities (and their activities and synergies) constituting the LyonTech-La Doua Campus, in particular by bringing together the teams Research, rationalizing and pooling resources by activity: Chemistry, Physics and nanotechnology, Biology and environment, Engineering, Information science and technology, Mathematics.

Programme

- Public facilities and infrastructure
- Green spaces
- Others

Project progress

- Delivery phase
- Operational phase

Key points

- Quality of life
- Mobility
- Smart city

Approaches used

- Others

Certifications

- Autre

Data reliability

3rd part certified

TERRITORY

Type of territory

Since its construction in 1957 by the architect Jacques Perrin-Fayolle (Grand Prix of Rome in 1950), the Doua campus has grown steadily. It now accommodates 30,000 people, including 25,000 students and extends over a territory of 100 hectares. Located in Villeurbanne, in the heart of the metropolis of Lyon, the LyonTech-la-Doua campus benefits from an exceptional geopathic situation: connected to the city center by 2 tram lines and in the heart of a large continuum of spaces (Golden Head Park, Feyssine Park, Grand Large Park). The LyonTech-La Doua campus now has 22,000 students and 40% of Lyon's scientific potential, with 80 research laboratories, 1,500 researchers and 1,300 doctoral students.

Climate zone

[Cfb] Marine Mild Winter, warm summer, no dry season.

KEY FIGURES

Green areas, roofs included

Green areas, roofs included : 38 000 m²

Public spaces area

Public spaces area : 8 000 m²

Refurbished floor area

Refurbished floor area : 14,00 ha

Green spaces /inhabitant

1.27

Public spaces/inhabitant

0.27

Detail of subsidies

An investment of an exceptional amount of € 343 million, including € 323 million for real estate operations (23 rehabilitation and 9 new buildings), € 20 million for landscape operations and outfitting distributed according to (campus operation and CPER 20152020): - Métropole 42.5 M € - The Region 40 M € - The State 260.5 M € (including 185 M € for the rehabilitation of the estate)

GOVERNANCE

Project holder

Name : University of Lyon

Type :

General description :

Internal steering team at the university, supervising the design and carrying out the work.

Project management

Description :

The actors of the operation

Client: University of Lyon

Finance: State, Ministry of National Education, Higher Education and Research

Lending institutions: European Investment Bank and Caisse des Dépôts et Consignation

Assigning institutions: Claude Bernard Lyon 1 University and INSA Lyon

Grouping: Eiffage Construction Center Est, agent and builder / Reichen and Robert & Associés, Patriarche & Co, HTVS, architectural group / WSP, Berim, Inddigo, Cyprium, technical consulting firms / Eiffage Energie

Project stakeholders

Eiffage Construction

Function : Assistance to the contracting authority

Eiffage Construction has been mandated by the University of Lyon, Claude Bernard Lyon 1 University and INSA Lyon, to design, build, operate and maintain this large-scale rehabilitation operation. The project will shape the future of the LyonTech-la Doua eco-campus scientific districts, notably by enhancing their environmental performance.

<http://www.eiffageconstruction.com/home.html>

Construction21 company page :



More info : <https://www.lyontechladoua-operationcampus.fr>

RPA, Patriarche, HTVS

Function : Architecture agency

Architecture agency

www.reichen-robert.fr, <http://www.patriarche.fr/>, <http://www.htvs.fr/>

Construction21 company page :

WSP, Berim

Function : Technical consultancy agency

Technical studies office

<http://www.wsp-pb.com/fr/WSP-France/>, <http://www.berim.fr/>

Construction21 company page :

Indiggo

Function : Other

HQE design office

<http://www.inddigo.com/>

Construction21 company page :

Cyprium

Function : Other

Economist

Construction21 company page :

Quality of life / density

The problem of keeping buildings active during the different phases of construction is a major challenge for the project. Students, teachers, researchers, administrative staff ... all the uses of the different users have been taken into account to limit the nuisance generated by this large-scale project. The technical design of the buildings and the organization of the works are conceived with the first concern to limit as much as possible the inconveniences of the site for the users. The preservation of the comfort of the users is a priority for all the actors involved in this operation, client, contractor and companies. The consortium led by Eiffage Construction will accompany users throughout the project by constantly informing on site developments thanks to a communication system, accessible to all, allowing to anticipate the different impacts on their organization.

Culture and heritage

Fair intervention in response to uses and a renewed heritage

Eiffage and its partners propose to renew the strong heritage, initially conceived by the architect Jacques Perrin-Fayolle, the engineer Jean Prouvé and the plastic artist Denis Morog, by simple and functional concepts. The approach of the design team, led by Reichen and Robert, allows this heritage to retain its identity while equipping it with current performance. The principles and compositions of facades are preserved and reinterpreted. Two major complementary interventions enrich the architectural expression and propose new functionalities: Of the corridors completely cover the facades of buildings housing laboratories using gas in order to meet operating constraints and offer quality of use and flexibility on a daily basis, Extensions with simple and monolithic volumetry support the gables to clear new spaces servants, and limit the impact of the site in occupied site.

Social diversity

The LyonTech-La Doua 2025 strategic project - Innovation territory

A project based on the academic strength of the campus, the implementation of the LyonTech-Doua 2025 strategy will help to boost the economic development of the campus and its southern fringes by relying on the strong capacity Innovation of the site. The strategic project of the campus is a continuation of the University Development Plan, jointly carried out by the Metropole of Lyon and the University of Lyon. The challenge of the project is to enhance the academic excellence and innovation potential of the site internationally, to strengthen the links between the campus and the city, to improve the quality of life of staff and students and Attract the talents and investors of tomorrow. The aim is to develop an economic offer, based on the competences of the site and the innovation players that are installed there. It is divided into 3 axes:

An Innovation Incubator Campus:

To enhance the creation of economic value based on the academic and academic excellence of the campus, An urban campus in the heart of the metropolitan area: to strengthen the link between the campus and the city and to reclaim the public spaces in the continuity of the rehabilitations carried out within the framework of Lyon Cité Campus, A live campus: to improve the daily life of the 30,000 campus users by offering proximity services, by supporting the development of more sustainable mobility and by encouraging conviviality. This project, which is global in scope and multi-partnership, builds a shared vision of the future with added value. The common ambition is to position, by 2025, the LyonTech-La Doua campus as a European reference site for science and technology for a sustainable society

Social inclusion and safety

The comfort and satisfaction of the users throughout the duration of the program is a major concern of the Eiffage Construction Group and its partners. From its conception, the whole program was conceived to reduce to the maximum the nuisances for the users. A pilot unit specializing in work on site has been deployed to ensure the best possible support. This team is entirely dedicated to the well-being of the users thanks to a constant listening. A complete communication system is put in place to allow everyone to inform themselves in real time of the evolution of the site and to project themselves in its new environment. The Maison du Projet is built as a demonstration and experimentation space, a real place for exchanges and encounters. This detailed website is a wealth of information to know everything about the evolution of the campus and to follow in real time the various phases of the site. The users will be closely associated with the project, through information meetings and surveys in particular, and will be able to express themselves voluntarily via the Mediator of the Project House. The development of Eco-Mobility initiatives and the organization of events, meetings and exchanges at the start of the project are all opportunities to take advantage of the new eco-campus and Of its conviviality.

ECONOMIC DEVELOPMENT

Local development

LyonTech-la Doua, the largest campus in the metropolis of Lyon, known for its scientific and academic excellence, is now recognized as one of the 7 major major economic centers on the metropolitan scale. Because it will benefit from tomorrow's major renovations via the campus operation and a plan to develop its attractiveness through the strategic project, it is at a turning point in its history. These two interdependent projects reflect the will of political, academic and economic actors to make the camp a key element of metropolitan attractiveness by combining and complementing research and development activities. Innovation for the economic development of the Lyon Metropolis. Nearly ten start-ups are created every year, directly from the skills and know-how of the researchers at the LyonTech-La Doua campus. Over the past two decades, 200 start-ups have emerged from the various incubation facilities on campus. Among the companies accompanied, figure Amoéba who has just made its IPO.

Functional diversity

Real estate rehabilitation will restructure the organization of the campus by regrouping the various activities by clusters of skills. The scientific teams will refocus on a disciplinary approach through 6 thematic areas: mathematics, physics, chemistry, biology, science and information technology, and engineering. Together

with improved external peripherals and signage, this simplification of traffic will promote synergies. This renovation program will adapt the capacities of reception to the new conditions of scientific exercise and the variable numbers of the different units. The construction of 3 bunkers of products and waste activities, the optimization of technical distributions and the reorganization of the working spaces are all new advantages to sustainably cultivate the scientific excellence of the LyonTech-La Doua campus by anticipating the evolutions Flexible and scalable solutions.

% of public spaces

6

Circular economy

Through the "Fabrique de l'innovation" project, the University of Lyon relies on the potential of its students, mobilizes and strengthens its innovative and entrepreneurial capacities in the service of socio-economic development of the territory. The service offer is built around new co-working centers and residences allowing the maturation and incubation of projects with a level of animation, advice and adapted accompaniment. An offer of access to the scientific and technical platforms of the University will enable innovators to make, test and test their proposals. These new spaces of creativity will be dedicated to learning new ways of acquiring skills and generating ideas; Events and meetings on issues of innovation, entrepreneurship, creativity and design.

TRANSPORT

Mobility strategy

With 2 hectares of developed outdoor space and an ambitious "Eco-Mobility" strand promoting soft mobility, With 2 hectares of developed outdoor space and an ambitious "Eco-Mobility" strand promoting mild travel, the new eco-campus offers ideal conditions for green growth. Its strategic location, connects in less than 15 minutes by public transport to the city center of Lyon and in 15 minutes by foot of the Skyscrapers of Villeurbanne. Thanks to its numerous pedestrian and cycling routes, the campus can be criss-crossed by its 30,000 users.

12 minutes by tram from Part-Dieu 24 minutes by car from Lyon Saint-Exupéry airport 15 minutes walk from the district of Les Gratte-Cie 5 tram stops 5 stations Velo'v The renovation of the Lyon-Tech-La Doua eco-campus is an opportunity to become an exemplary and innovative urban campus on the transport side. To limit and optimize the use of the automobile within the campus, we propose to experiment the innovative solution of sustainable mobility and participative OuiHop. OuiHop is an innovative dynamic carpooling application whose technology and marketing positioning has begun to prove after the first successful tests on the Paris-Saclay campus in Île-de-France.

SOLUTIONS

Description :

Go faster, further, solve the problem of the last mile - just when you need it. The scooters incorporate an intelligent padlock and are accessible with a smartphone application.

- Collaborative transportation

<http://knotcity.com/>



SMART CITY

Smart City strategy

LyonTech-la Doua brings together 40% of Lyon's scientific potential and benefits from numerous advantages. Equipped with institutions of higher education and research of renown, this territory is also strongly connected to the economic world. LyonTech-la Doua's laboratories and technological platforms provide SMEs, industrialists and communities with the skills and know-how of researchers. Equipped with numerous innovation services, the campus is renowned for its ability to transfer technology between research, business and industry on a Metropolitan scale. Here, the plant of tomorrow is safer and cleaner, the urban lighting of the future, new medical prostheses, smart home settings or more environmentally friendly car. The INSA (National Institute of Applied Sciences) and CPE (Electronic Physical Chemistry) were among the very first schools in France to create a robotic degree and bet on this promising sector. CPE has a space dedicated to experimenting with the latest robots. The INSA robotic clubs participate in international cuts. The campus has clearly positioned itself to support the development of the robotics industry by structuring a training offer and by experimenting. It was on campus that the first tests of the first autonomous vehicle Navya were carried out

SOLUTIONS

OUI HOP

Description :

OuiHop' (www.ouihop.com) is a technological start-up that develops a participatory local transport mobile application based on the principle of autostop [i.e. Of dynamic carpooling]. Supported by BPI France and ADEME, winner of the Special Prize at the European EDF Energie Intelligente 2014 competition at Smart Electric Lyon awarded by Mrs Karin Dognin-Sauze Vice-President of Greater Lyon, OuiHop is located at the Telecom ParisTech Entrepreneur incubator.

<https://www.ouihop.com/wp-content/themes/ouihop/images/ouihop-video.mp4>

RESOURCES

SOLUTIONS

Techniwood

Description :

Facade of typology wall curtain panel wood block.



CO2 Impact : 86,00 tCO2

<http://www.techniwood.fr/fr/>

BIODIVERSITY

Biodiversity and natural areas

LyonTech-la Doua is surrounded by the park of the Tête d'Or, Feyssine park and located near the Miribel Jonage park, in the middle of 500 hectares of green spaces. Structured in islets, connected by wide landscaped spaces, the campus, in itself, presents itself as a peaceful and verdant territory. Numerous relaxation areas (parks, green streams, ...) punctuate the campus. Tomatoes, onion sprouts, potatoes, pumpkin flowers, since 2014 the campus even has a space of 400 m2 shared gardens, managed by students of the association the Doua Vert.

The landscape and functional design of these areas was guided by the desire to develop the biodiversity of each plot, to consider the rainwater management structures as essential components of the landscape, and finally to diversify these plots according to their specificities, linked Geographical location, use, history, etc. The LyonTech project La Doua also integrates the development of 3 plots of landscapes in addition to the green flow already present to offer new spaces for exchanges and relaxation.

ENERGY/CLIMATE

Climate adaptation, resources conservation, GHG emissions

About LyonTech La doua is an extensive rehabilitation and construction program that is now committed to the emergence of a sustainable eco campus of international renown. Carried out by the University of Lyon, the rehabilitation of the scientific districts, launched on 5 February 2016, is the most important operation of the Lyon Cité Campus project. It concerns almost one-third of the total built-up area of the campus, ie 22 buildings and 140,000m² of premises at Université Claude Bernard Lyon 1 and INSA Lyon. The work focuses on improving the energy performance of buildings, with the objective of reducing heating consumption by 40%, improving fire safety and upgrading accessibility to people with disabilities. The project is part of the HQE approach to renovation of tertiary buildings. The creation of experimental and demonstration sites, the development of shared eco-mobility in particular, reinforces the ecocampus approach initiated for several years.

Energy sobriety

The main objective of this operation is to reduce the energy consumption (~40% of heating consumption) of the buildings in question. All the choices made make it possible to guarantee a drastic reduction in consumption. These energy consumptions are linked: Firstly, to the functioning of a "classical" building of the tertiary type: heating of spaces, electrical consumption of office space, lighting, auxiliaries for heating, etc., electrical consumption of servers and their air conditioning system,

On the other hand, the presence of research activities specific to these buildings:

Consumption due to these activities themselves (gas, electricity: fume cupboards, extractors, lasers, cold rooms, etc.)

Consumption induced by these activities: additional heating linked to strong, extractions, additional cold due to certain protocols requiring controlled temperature spaces, etc.

The improvement in energy performance concerns both types of consumption. The project proposes an intervention on the following 3 axes and components:

A high-performance thermal envelope (continuity of insulation from outside + joinery + airtightness)

A clear and strong improvement in the thermal performance of the systems (replacement of pumps by pumps with variable

low rate, thermostatic valve, double ventilation for premises > 20 people ...)

A conduc

BUILDINGS

Buildings

The creation of three landscapes, complementing the existing green spaces, extends this spirit of opening of LyonTech-la Doua to the outside. The buildings will retain their architectural originality while achieving new performances. The façades are renewed while maintaining the original spirit (nature of the coverings, modénature, integrated works of art) while being modernized and made more functional by the addition of extensions and outer corridors.

New noble, robust and functional foundations in structured concrete underline the unity of the whole. The entrance halls are redesigned. They distinguish themselves from the composition built by their large glazed surface and the integration of awnings. Their solid, translucent and backlit modules recall the frescoes of Morog and allow better signage of buildings and identification of the neighborhood. The improvements enrich the potential of the existing one, bringing it a more contemporary aesthetic and already envisaging multiple perspectives of modularization according to needs.

Contest

Building candidate in the category



Grand Prix Ville Durable



Coup de Cœur des Internautes

