

CONSTRUCTION OF A NEW SECONDARY SCHOOL IN VINCENNES (94)

SUSTAINABLE BUILDING – NEW SECONDARY SCHOOL AND BOARDING SCHOOL CONSTRUCTION PROJECTS



4 QUALITY EDUCATION



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PURPOSE

Construction of a new secondary school with 1,050 places for general education in 30 classes.

LOCATION(S)

Vincennes (94)

KEY DATES

Notification of the global public

performance contract: 29/12/2020

Start of work: 05/11/2021

End of work: December 2023

Environmental clean-up and monitoring campaign: 2023-2024

TOTAL PROJECT COST

€52.5 M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€2.7 M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- The construction of the new secondary school, located east of the municipality of Vincennes, should alleviate the crowding in the existing Hector-Berlioz secondary school. This new establishment will have a total capacity of **1,050 places** for general education courses divided into 30 classes (10 classes for each of the years from Year 11 to Year 13).
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint** by aiming to achieve levels E3C1 (school) and E3C2 (housing) of the E+C- benchmark. The project is **adapted to climate change** with a design that guarantees the comfort of the occupants during the summer.
- The project is located on a 3,670 m² plot previously occupied by abandoned industrial buildings. The municipalities of Vincennes and Fontenay-sous-Bois performed **major soil decontamination work** before the start of construction.
- The project complies with the Seine-Normandie Design and Water Management Scheme (SDAGE) for rainwater management with the provision of **specific reservoirs and the reuse** of rainwater to supply the sanitary facilities and irrigate the patio. The site's sealing is limited to 65%.
- The project is part of an approach to promoting **biodiversity**, in conjunction with the neighbourhood: 400 m² of untouched land, 50 m² educational garden, 38% of green roof area, etc.
- In order to **preserve air quality**, all materials used and in contact with the indoor air will have A+ eco-labels. Furthermore, filtration by G4 + F8 filters will be applied to the double flow ventilation to ensure that the building has good indoor air quality when it is in use.
- The programme provides for the use of bio-based materials up to **level 1 of the bio-based label**, i.e. 18 kg/m² SDP.

PROJECT LIFECYCLE

- Work on the building was completed at the end of 2023.
- Remediation work is underway to immediately treat the soil gases. At the end of this work, a permanent 'venting' solution will be put in place during the summer of 2024 to secure the site for the long term.
- At the end of the works, the project's global public performance contract (MPGP) provides for a period of operation/maintenance by the winning consortium for 10 years.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	512	A-3
Number of project beneficiaries	1,050	D-1
CO ₂ emissions avoided by the project	30.34 teqCO ₂ /year	E-4

CATEGORY ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach and contributing to respect for the environment

All secondary schools starting from 2017: energy consumption level required < -40% compared to RT2012 (equivalent level E3C1 of the E+C- label)

- The primary energy consumption of the project (high school and housing) is estimated at 30 kWh/m²/year, i.e. 55% less than the maximum Cep_max consumption calculated by RT2012 (66.7 kWh/m²/year).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	<ul style="list-style-type: none"> • All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, soil pollution, nuisances, health, etc.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • The project is part of an effort to reduce its carbon footprint, with an analysis performed on its complete lifecycle. The bioclimatic needs of the building Bbio are reduced by 30% compared to the Bbio_max of RT2012.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • Rainwater management on the plot (green roofing, recovery tank). The maximum leakage rate of the SDAGE is respected. • The aim of the project is to reduce crowding in the existing Hector-Berlioz secondary school.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • The project provides for 20,000 hours of social integration that will be carried out as part of the global performance contract during the construction and/or operation phase of the contract. • The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	<ul style="list-style-type: none"> • Combating social, educational and territorial inequalities
Responsible regional development	<ul style="list-style-type: none"> • The new school was designed to benefit student learning conditions (acoustic and thermal comfort, capacity of adapted spaces, etc.). It is therefore part of the development of a quality educational offer in the region.
Regional economic development	<ul style="list-style-type: none"> • The construction site and the school's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, lifecycle analysis, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • The municipalities of Vincennes and Fontenay-sous-Bois are also stakeholders in the project (provision of the building site, etc.).



The project website
www.idf-constructiondurable.fr/realisations/liste-des-realisations/lycee-neuf-a-vincennes-507



COMPREHENSIVE RENOVATION AND EXPANSION OF ALBERT CAMUS SECONDARY SCHOOL IN BOIS-COLOMBES (92)

SECONDARY SCHOOL RENOVATION PROJECTS



PURPOSE

Total renovation and extension of the capacity by 400 places.

LOCATION(S)

Bois-Colombes (92)

KEY DATES

Project management competition in 2015-2016

Studies in 2017 to 2019

Start of construction in mid-2021

First phase handover for the start of the 2024 academic year

Second phase handover for All Saints' Day 2025

TOTAL PROJECT COST

€ 65.6M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€6.44M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- The operation consists partly in the renovation of some of the existing buildings as well as the expansion of them. It also provides for the creation of a boarding school and the reconstruction of tied accommodation.
- The operation is performed while keeping students on site, therefore using a **"staggered" operation** and setting up temporary chalets on the adjoining sports field.
- Eventually, the educational structure will bring the total school population to **1,470 students** across 42 classes, which is an **additional 420 places** compared to the theoretical capacity before the work.
- The desired environmental objectives are based on the regional planning tools (green plan, Let's Change the Air plan, etc.) and on the regulations in force.
- The achievement of low-consumption energy objectives** in the restructured buildings (80 kWh/m²/year of primary energy consumption) and in the new building for the extension and the boarding school (50 kWh/m²/year).
- Comprehensive environmental approach** focused on water management, energy, air quality, acoustics and maintenance, make it possible to achieve high standards in terms of **bioclimatic design**.

PROJECT LIFECYCLE

- Work started in mid-2021, with the creation of a temporary secondary school, helping to free up space at the start of the 2021 All Saint's Day holidays and thus allowing the renovation work to begin.
- Acceptance of the work is expected to take place in November 2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	430	A-2
Number of project beneficiaries	1,470	D-1
CO ₂ emissions avoided by the project	168.12 teqCO ₂ /year	E-1

CATEGORY ELIGIBILITY CRITERIA

> All secondary schools starting from 2017: energy consumption level required < -40% compared to RT 2012 (equivalent level E3C1 of the E+C- label).

• **New buildings (extension): primary energy consumption reduced through the use of renewable energy is estimated at 36.8 kWh/m²/year, i.e. 40% lower than the maximum primary energy consumption calculated by RT2012 (61.3 kWh/m²/year).**

Renovated buildings: the primary energy consumption (56.48 kWh/m²/year) is reduced by 70% compared to the initial consumption (181.57 kWh/m²/year).

• **New buildings (extension): primary energy consumption reduced through the use of renewable energy is estimated at 36.8 kWh/m²/year, i.e. 40% lower than the maximum primary energy consumption calculated by RT2012 (61.5 kWh/m²/year).**

Renovated buildings: the primary energy consumption (56.48 kWh/m²/year) is reduced by 70% compared to the initial consumption (181.57 kWh/m²/year).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> Specification defining the environmental requirements. “Minimal nuisance worksite” charter: many objectives for limiting nuisances in the environment, with in particular waste traceability and a minimum recovery requirement of 70% by mass (demolition + construction). Environmental monitoring of each phase by a specialist assistant to the contracting authority.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> Achievement of energy objectives: low consumption in the restructured and new buildings. These objectives are designed to reduce greenhouse gas emissions. Limited flows for plumbing facilities (taps, WC, urinals). Rainwater recovery in a 15 m³ tank which can be used to supply a large part of the sanitary requirements (WC and urinals) and watering for the project and save a volume of drinking water estimated at 1,100 m³/year. Green roofs for the most part, in order to be integrated as much as possible in the heavily revegetated context
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> Rainwater management on the plot (presence of swales, retention basin and infiltration basin). The maximum leakage rate of 2 L/s/ha is complied with. Maintenance of composters already implemented
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> Accessibility for persons with disabilities to all establishments open to the public.
Respect for fundamental rights	<ul style="list-style-type: none"> Combating social, educational and territorial inequalities
Responsible regional development	<ul style="list-style-type: none"> Programmes contributing to provide diversified and quality education in the region An on-site boarding school ensures wide geographical recruitment of students.
Regional economic development	<ul style="list-style-type: none"> Support for employment during construction, support for integration employment and recruitment of reception, maintenance, catering and accommodation staff within the school
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Compliance with the criteria/rules of the region and the public procurement code. Requirements on the choice of construction products and equipment (to save on natural resources, etc.)
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.



COMPREHENSIVE REDEVELOPMENT INCLUDING NEW EXTENSION OF ADOLPHE CHÉRIOUX HIGH SCHOOL IN VITRY-SUR-SEINE (94)

HIGH SCHOOL BUILDING CONSTRUCTION AND RENOVATION • NEW PROJECT



PURPOSE

Comprehensive redevelopment of Adolphe Chérioux High School, including the renovation of existing buildings, the demolition of old or prefabricated buildings and the building of a new extension.

LOCATION(S)

Vitry-sur-Seine (94)

KEY DATES

Notification of project manager: 02/03/2015

Surveys: 2015-2019

Works consultation: 2020-2022

Start of work: April 2022

Opening of temporary buildings to the public: March 2023

Opening of new buildings to the public at start of term 2025

Handover of the renovated teaching building planned for the end of 2026

TOTAL PROJECT COST

€97.5M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€4.1M

QUALITATIVE PRESENTATION OF THE PROJECT

- Before the works, the high school occupied approximately 20,000 m² of usable floor area divided between 8 different buildings. The operation consists of **renovating the high school** due to the advanced state of deterioration of the establishment, its inadequacy for the technical programmes offered, and the scattered distribution of functions within the establishment, and **building an extension** for reception areas and technical programmes, including a horticultural workshop. In addition, several old buildings and the prefabricated GRETA buildings will be demolished. All low-quality extensions that were attached to historic buildings in the 1970s-1980s will be removed. Finally, the main access to the site on Rue Julian Grimaud and the outdoor spaces will be refurbished.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The project is **adapted to climate change** with a design that guarantees the comfort of occupants during summer.
- The **district heating network** will supply the high school for heating and domestic hot water needs. This solution provides an energy source that includes a significant share of renewable energy, and contributes to the **reduction of the building's CO₂ emissions**.
- The landscape project focuses on **maintaining and strengthening the ecological corridors** of the herbaceous layer, listed in the Ile de France Regional Ecological Coherence Plan, identified on the site, notably through maintaining a **17,000-m² vegetated area**.
- The project design respects the **limitation of rainwater discharge** to 1 l/s/ha for ten-year rainfall. Finally, the project allows for **desealing of soil on the plot**.
- The design of the various areas, and in particular horticultural areas, **shall take account of soil pollution identified** by implementing appropriate measures, in particular excavating the soil and replacing it with healthy soil.

PROJECT LIFECYCLE

- **The work started in April 2022** with the installation of the temporary buildings to accommodate the students during the works, which were handed over in early 2023.
- **The first phase of the work** (construction of extensions and new workshops) started in March 2023 and will be delivered in early 2025.
- **The second phase of the work** (renovation of the main teaching building) will start in September 2025 and be completed by the end of 2026.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	670	A-2
Number of project beneficiaries	1,500	D-1
CO ₂ emissions avoided by the project	95.84 teqCO ₂ /year	E-4

CATEGORY ELIGIBILITY CRITERIA

Renovation of buildings according to a sustainable development approach, contributing to respect for the environment

Primary energy consumption reduction level (Cep) of at least 30% ($Cep_{project} \leq Cep_{initial} - 30\%$)

- The average primary energy consumption over the entire high school after the project (renovated buildings and extensions) is estimated at 53.2 kWh/m²/year, i.e. a reduction of 55% compared to the high school's initial consumption (119.72 kWh/m²/year).

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects	<ul style="list-style-type: none"> All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, pollution, public health, low-impact site, composting etc. (see above).
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> The project is part of an effort to reduce the facility's carbon footprint, with a significant reduction in the energy consumption of renovated buildings and extensions. In addition, the project incorporates numerous elements made of bio-based materials. Overall in all new and extended buildings, the volume of wood is 24.01 dm³/m² in gross floor area. Finally, the high school's heating and domestic hot water production will be provided by the city's heat network, which includes a significant proportion of renewable energy and waste combustion. This contributes to the project's significant reduction in CO₂ emissions.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> The project design allows rainwater discharges to the network to be limited to 1L/s/ha for ten-year rainfall: The project therefore provides for the installation of retention and infiltration basins and green roofs. Finally, the project makes it possible to reduce the desealing of soil on the plot. An assessment of the fauna and flora was carried out. The overall ecological stakes are high. Numerous measures have been implemented accordingly: Maintenance and creation of elements of ecological interest (plantations, replacement of trees, meadows, etc.); installation of green roofs; choice of a range of local plants; reinforcement of the herbaceous ecological corridor; implementation of specific adaptations for fauna: gaps under fences, shelters, nest boxes, etc.; adaptation of the construction site and installations, etc. Finally, the project focuses on the heritage enhancement of existing buildings.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> The facility is accessible to persons with disabilities. It complies with fire safety regulations. It should also be noted that the project will create 35,000 hours for social inclusion.
Respect for fundamental rights	<ul style="list-style-type: none"> Combating social, educational and territorial inequalities
Responsible regional development	<ul style="list-style-type: none"> The building has been designed to provide the best possible learning and living environments for students, in terms of acoustic and thermal comfort, lighting, appropriate space capacity, etc. It therefore fits within a plan to develop a high-quality educational offering in the region, particularly in the horticultural professions.
Regional economic development	<ul style="list-style-type: none"> The construction site and the project's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Compliance with the criteria/rules of the region and the public procurement code. Demanding choice of building products and equipment to include bio-sourced materials, resource conservation, reusability, etc.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

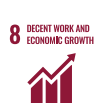


The project website
[www.novembre-architecture.com/
 projet/lycee-adolphe-cherioux-
 a-vitry-sur-seine-94/](http://www.novembre-architecture.com/projet/lycee-adolphe-cherioux-a-vitry-sur-seine-94/)



RESTRUCTURING OF THE VOCATIONAL SECONDARY SCHOOL – SITE WEST OF MONOD SECONDARY SCHOOL IN ENGHIE-LES-BAINS (95)

SECONDARY SCHOOL RENOVATION PROJECTS



PURPOSE

Demolition, reconstruction, extension and restructuring of buildings on the site west of Gustave Monod Secondary School (vocational school).

LOCATION(S)

Enghien-les-Bains (95)

KEY DATES

Project management bidding competition in 2013-2014

Studies in 2015-2017

Start of construction in 2019

Handover in May 2024

TOTAL PROJECT COST

€41.9 M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€3.6 M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- The project provides **for the technical and heritage upgrade** of the building structure and educational spaces of the western site of the secondary school (vocational education):
 - New distribution of educational spaces planned for a site shared by everyone.
 - Brick building renovation.
 - Demolition of the workshops and the north building and construction of the new, larger north building to accommodate the new workshops.
 - Construction of a new building (Building E connecting to the general school) for the documentation and information centre and the faculty lounge.
 - Construction of the building containing the multi-purpose hall.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The project is **adapted to climate change** with a design that guarantees the comfort of the occupants during the winter.
- The project's design **limits rainwater waste** to 1 L/s/ha for a 10-year **rainfall return period**. This is managed on the site by creating green roofs, swales, **retention basins and a rainwater recovery tank**.
- Implementation of systems to significantly **reduce potable water consumption** (-50% for renovated buildings).
- The landscape treatment includes increasing the site's vegetation with plant species that help maintain the existing biodiversity while reducing allergenic risks.
- The **visual and acoustic comfort of the users** was particularly improved through models that optimise natural light and indoor acoustics.

PROJECT LIFECYCLE

- The work started in summer 2019.
- The handovers of the various works were staggered over 2023-2024:
 - All buildings: September 2023.
 - All external works (roads and utilities): November 2023.
 - Green spaces: May 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	245	A-3
Number of project beneficiaries	1,000	D-1
CO ₂ emissions avoided by the project	264.2 teqCO ₂ /year	E-4

CATEGORY ELIGIBILITY CRITERIA

Construction of buildings following a sustainable development approach and contributing to environmental protection

Required energy consumption level: at least 40% lower than the RT 2012 standard.

Renovation of buildings following a sustainable development approach and contributing to environmental protection

Required reduction in primary energy consumption (Cep): at least 30%

($Cep_{project} \leq Cep_{initial} - 30\%$)

- New buildings (workshops, extensions of existing buildings, documentation and information centre and multi-purpose hall): the primary energy consumption is estimated at 42.1 kWh/m²/year, i.e. 52% lower than the maximum primary energy consumption calculated by RT2012 (88.1 kWh/m²/year).
- Renovated buildings: The primary energy consumption is estimated at 61.4 kWh/m²/year, i.e. 74% lower than the initial consumption, calculated to be 237 kWh/m²/year.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	<ul style="list-style-type: none"> • All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, disturbances, health, etc. (see above).
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • The project is part of an effort to reduce the facility's carbon footprint, with a significant reduction in the energy consumption of renovated buildings and extensions.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • Rainwater management on the plot (green roofs, retention and recovery basin) Water waste flow is limited to 1 L/s/ha for a 10-year rainfall return period. • The revegetation on site is increased.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	<ul style="list-style-type: none"> • Combating social, educational and territorial inequalities.
Responsible regional development	<ul style="list-style-type: none"> • The new buildings were designed to benefit student learning and living conditions (acoustic and thermal comfort, capacity of adapted spaces, etc.). It is therefore part of the development of a quality educational offer in the region.
Regional economic development	<ul style="list-style-type: none"> • The construction site and the project's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, resource saving, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.



The project website
www.lyc-polyvalent-monod-enghien.fr/Restructuration_au_jour_le_jour



RESTRUCTURING OF THE CATERING SERVICE AND WORKSHOPS AT THE JULES FERRY LYCÉE IN VERSAILLES (78)

RENOVATION OF SECONDARY SCHOOLS BUILDINGS



PURPOSE

Restructuring of the half-board facility and the vocational training workshops at the Jules Ferry high school.

LOCATION(S)

Versailles (78)

KEY DATES

Preliminary analyses: 2014 -2015

Notification of the Preliminary Declaration (DP) by the project manager: November 2015

Project Manager Notification -Workshops: November 2020

Preliminary Declaration analyses and Workshops: 2020-2022

Works: 2022-2025

TOTAL PROJECT COST

€26.8 M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€5 M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- Building C « Catering » is being completely restructured inside, in order to **improve the flows within** the food preparation areas and the restaurant on the ground floor. The programme also includes the fitting out of **sports areas** within the building (weight training, gymnastics).
- The lower ground floor of the teaching building has been restructured to **accommodate the majority of vocational training courses**. To solve smoke extraction problems, the existing courtyard will be broken up to create a patio on the basement level.
- The **landscaped areas** around and in front of the restaurant building have been redesigned to provide a privileged pathway for users, accompanied by a garden, away from the parking spaces that have been reallocated to the north of the site.
- The project is part of an energy efficiency and environmental footprint reduction approach. The catering building is connected to the city's district heating network, which provides heating and domestic hot water.
- The design of the project to restructure the half-board building complies with the **limitation of rainwater discharge** to 1 litre/sec/ hectare for a 100-year rainfall event: this water is managed by means of an underground retention basin and landscaping.
- As the secondary is located in the immediate vicinity of some of the most outstanding sites in the grounds of the *Château de Versailles* (the *pièce d'eau des Suisses*, the *potager du Roi* and the *Parc Balbi*), the project was designed in collaboration with the *Architecte des Bâtiments de France* to ensure that it **blends in with the site's architecture**.

PROJECT LIFECYCLE

- Work began in 2022 for the workshops and early 2023 for the catering building.
- The workshops were handed over in the spring of 2024.
- The new half-board facility were handing over in April 2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	260	A-3
Number of project beneficiaries	1,700	D-1
CO ₂ emissions avoided by the project	3.75 teqCO ₂ /year	E-4 (only on the catering building)

CATEGORY ELIGIBILITY CRITERIA

- **Renovation:**
• Reduction in primary energy consumption (PEC) of at least 30%.

- For the catering building, primary energy consumption after renovation is estimated at 170.2 kWhep/sq.m/year, i.e. a reduction of 36% compared with initial consumption (265.7 kWhep/sq.m/year).
- As the workshops are not subject to the RT Globale regulation, they have only been assessed on an element-by-element basis.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects	<ul style="list-style-type: none"> • The main environmental aspects of the project were taken into account: energy efficiency, biodiversity for the landscape, water management, low-impact construction site, etc.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • The project is part of a drive to reduce the buildings' carbon footprint, with a significant reduction in the energy consumption of the renovated buildings compared with the existing ones (see above).
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • Management of rainwater at the plot level (retention basins and reducing impervious surfaces around the catering building). Water run-off is limited to 1 litre/sec/hectare for a 10-year rainfall return period. • Biodiversity is being enhanced through a landscape design project that addresses the issues at stake on the site. • The design of the projects is in keeping with the historic value of the sites adjacent to the grounds of the Château de Versailles, thanks to collaborative work with the ABF (French Architectural Authority).
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • The facility is accessible to persons with disabilities. It complies with fire safety regulations. In particular, the work on the workshops resulted in bringing their smoke extraction levels to standard.
Respect for fundamental rights	<ul style="list-style-type: none"> • Combating social, educational and territorial inequalities.
Responsible regional development	<ul style="list-style-type: none"> • The site has been designed to provide the best possible learning and living environments for students in terms of acoustic and thermal comfort, capacity, etc. The project improves the functional organisation of the site.
Regional economic development	<ul style="list-style-type: none"> • The construction site and the project's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Compliance with the criteria/rules of the region and the public procurement code. • Requirements on the choice of construction and equipment materials including bio-based materials, resource saving, reuse, etc.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.



The project website
www.idf-constructiondurable.fr/information-transversale/actualites/lycee-jules-ferry-a-versailles-demarrage-des-premiers-travaux-852



RESTRUCTURING OF JEAN MOULIN HIGH SCHOOL IN TORCY (77)

SECONDARY SCHOOL RENOVATION PROJECTS • NEW PROJECT



PURPOSE

Comprehensive restructuring of the outdoor spaces and teaching buildings, school services, administration and school canteen at Jean Moulin High School.

LOCATION(S)

Torcy (77)

KEY DATES

Award notification of the project management contract: March 2017

Notification of the works tender: September 2019

Acceptance of work: May 2025

TOTAL PROJECT COST

€48.6M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€10M

QUALITATIVE PRESENTATION OF THE PROJECT

- The project concerns the **restructuring of the three main high school buildings**: building A (teaching, school life and administration), building B (scientific and technical teaching) and building C (canteen). The project also includes the creation of a multi-purpose room, spaces dedicated to sports teaching and school life.
- The **outdoor spaces** are also included, with the aim to unify them, creating an open space between the buildings, simplify the levelling and ensure the accessibility of the main spaces for people with disabilities.
- The work is being carried out on an **occupied site** and therefore must adhere to a precise schedule to ensure the continuation of classes in suitable conditions.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**.
- The project is adapted to climate change with a design that guarantees hygrothermal comfort for the occupants. It makes use of **cooling by natural ventilation**, in particular using vents in roof skylights.
- **Indoor air quality** is ensured by dual-flow ventilation of 21 m³/h/person in the classrooms as well as quality materials (A+ standard, etc.)
- The project significantly improves rainwater management: **site desealing**, creation of open-air rainwater management structures (rain gardens), 35 m³ collection tank to supply part of the bathroom facilities.
- The landscape project aims to **manage the diversity of around one hundred species**. Selected plants promote the presence of birds. Nesting boxes also installed.
- **Three composting areas** planned. Organic waste from the canteen is mixed with products from pruning, mowing and cutting. The resulting compost will be used to treat the soil on site.

PROJECT LIFECYCLE

- The work began in September 2019 and was completed in May 2025, i.e. a total duration of almost 6 years. The project was carried out according to a phasing in 5 stages to enable continuous teaching on the occupied site:
 - Phase 1 (Sept. 2019 - Feb. 2020): Installation of demountable buildings.
 - Phases 2-3 (Sept. 2019 - Sept. 2022): Restructuring of building B (North then South).
 - Phase 4 (Sept. 2022 - August 2024): Restructuring of buildings A and C.
 - Phase 5 (Sept. 2024 - April 2025): Delivery of multi-purpose room and exterior fittings.
- The project was marked by several major challenges:
 - COVID-19 impact: The project was started just before the pandemic, disrupting the schedule and causing problems within associated businesses.
 - Technical constraints: Change in groundwater aquifer impacting earthworks and rainwater management.
 - Programme changes: Late requests from users causing complex adjustments.

IMPACT INDICATORS RELATING TO THE PROJECT		
Indicator	Impact	Methodological note
FTE supported by the project	465	A-3
Number of project beneficiaries	1,106	D-1
CO ₂ emissions avoided by the project	14.59 teqCO ₂ /year	E-4

CATEGORY ELIGIBILITY CRITERIA	
<p>Renovation of buildings according to a sustainable development approach, contributing to respect for the environment</p> <p>Primary energy consumption reduction level (Cep) of at least 30% ($Cep_{project} \leq Cep_{initial} - 30\%$)</p>	<ul style="list-style-type: none"> For the new building (building extension A), the project's primary energy consumption is 40 kWh/m²/year, i.e. saving of 65% compared to the maximum energy consumption RT2012 (114.3 kWh/m²/year). For renovated buildings A, B and C, the project's primary energy consumption, calculated according to the RT reference standard, is 34.8, 40.9 and 95.8 kWh/m²/year respectively, i.e. savings of 48%, 34% and 57% respectively compared to initial primary energy consumptions (67.3, 62.4 and 221.9 kWh/m²/year respectively).

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, harmful substances, health, etc. (see above).
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> The project is part of an effort to reduce the carbon footprint of the facility, with a significant reduction in the energy consumption of new and renovated buildings. The project includes significant proportions of bio-based materials in its design. Heating and domestic hot water are supplied via the district heating network, which is 85% powered by renewable energy (Val Maubuée geothermal power plant).
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> Management of rainwater at the plot level through infiltration zones (swales, draining trenches, parking areas with permeable pavers). Water waste is limited to 2 litres/sec/hectare for a 10-year rainfall period. The desealing ratio of the plot is reduced compared to the initial condition. Biodiversity is being developed through a landscape project aimed at reopening spaces, combating invasive exotic species, etc. Local plants that are low allergenic and require little maintenance will be planted.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	<ul style="list-style-type: none"> Combating social, educational and regional inequalities.
Responsible regional development	<ul style="list-style-type: none"> The site has been designed to provide the best possible learning and living environments for students in terms of acoustic and thermal comfort, capacity, etc. The project will improve the functional organisation of the site, based on a global approach.
Regional economic development	<ul style="list-style-type: none"> The construction site and the project's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Compliance with the criteria/rules of the region and the public procurement code. Strict standards on the choice of construction products and equipment (bio-based materials, resource saving, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.



The project website
<https://www.idf-constructiondurable.fr/realisations/liste-des-realizations/lycee-jean-moulin-a-torcy-291>



CONSTRUCTION OF A REAL ESTATE COMPLEX FOR BIOMEDICAL RESEARCH

CONSTRUCTION NEUVE POUR L'ENSEIGNEMENT SUPÉRIEUR • NEW PROJECT



PURPOSE

Paris Est Créteil University - Construction of a biomedical research building.

LOCATION(S)

UPEC - Henri Mondor campus - Créteil - Val de Marne (94)

KEY DATES

Notification of project management: 1st quarter 2020

End of design surveys (APD/PRO): 3rd quarter 2020

Submission of building permit: 2nd quarter 2020

Notification of works contracts: 2021

Start of Works: December 2022

Groundbreaking: on 17 March 2023

Delivery: 2025

TOTAL PROJECT COST

€19M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

16%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€8.3M

QUALITATIVE PRESENTATION OF THE PROJECT

- The project to build the Biomedical Research Building (BRB) on the Henri Mondor campus in Créteil aims to develop one of the main biomedical research centres in east Paris with national and international scope in response to the major challenges of our century:
 - Research into the effects of pollution on living organisms (in particular in connection with cardiovascular diseases).
 - Development of HIV and HBV vaccines and antivirals.
- The building aims to meet very high environmental quality standards. The energy performance targets aim to make the project the department's first research building with total electricity consumption around ≤ 50 kWh/m²useful floor area/year.
- The project will follow an environmental approach (based on the "Qualité Environnementale des Bâtiments (Environmental Quality of Buildings) - NF BT HQE 2012" standard).
- Reduced energy consumption, including grey energy.
- Optimised service and maintenance management.
- Ventilation of the premises will be provided by double-flow AHUs; fresh air flow rates will be regulated by CO₂ sensors in meeting rooms and other intermittently occupied spaces and by time scheduling on the BMS for other spaces.
- A specific requirement level is desired for the L3/A3 which must have a class C air distribution network.
- Heat production will be provided by a district heating network.
- The assessment of the building's environmental performance is based on reducing its environmental impact throughout its life cycle, based on four contributing factors to its impact:
 - Construction products and equipment (CPE).
 - The construction site (CS).
 - Energy consumption in use phase (EC).
 - Water consumption and discharge in the use phase (WCD).
- There are two "C" levels. In our case, level C1 is targeted.
- The BMS will ensure the supervision, steering and auditing of the technical installations and metering and sub-metering are planned.
- A low-noise construction site approach was implemented.

PROJECT LIFECYCLE

- Work started in December 2023.
- Groundbreaking in March 2023.
- Delivery mid-2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	75	A-1
Number of project beneficiaries	260	D-11
CO ₂ emissions avoided by the project	-	-

CATEGORY ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach, contributing to respect for the environment
Required energy consumption level <-20% compared to RT 2012

- This project has an energy consumption of ≤ 50 kWh/m² usable floor area/year, i.e. savings of -29.6% compared to the Cep max (RT 2012 <-29.6%).

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects	<ul style="list-style-type: none"> • Application of the Region's environmental framework for property development projects in the field of research and higher education (using a dashboard completed at each stage). • The project is based on the «Qualité Environnementale des Bâtiments» (Building Environmental Quality) - NF BT HQE 2012" standard. • Assistance to the contracting authority to develop and monitor the environmental programme from planning up to 1 year after the handover of the building. • Competent project management in a sustainable environment.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • C1 level targeted for the life cycle and reduction of environmental impacts (achieved at the survey stage). • Insulation with high-performance products that prevent thermal bridges and air permeability. • System composed of 2 underground retention basins is planned to manage rainwater, allowing for regulated discharge to the network complying with the regulatory leakage rate of 10 L/s/ha. • The building structure is highly efficient and conducive to bioclimatic operation (limiting energy consumption for heating, cooling, ventilation and lighting as much as possible): <ul style="list-style-type: none"> – Highly compact (parallelepiped shape). – High inertia (high use of concrete material, coupled with insulation from the outside). – Natural ventilation possible (opening of window frames) in common rooms without particular constraints (offices and meeting rooms in particular). – No cooling system in the offices. – Optimum glazing ratio (balance between managing solar heat gain and maximisation of natural light). – High insulation level. – Efficient exterior joinery. – Suitable sun protection: <ul style="list-style-type: none"> • Motorised interior fabric blind on the south facade, with ballast bar. • Exterior canvas awning for east, west and north facades, with runners. • Vertical sunshade panels on the south, east and west facades (according to architectural detail).
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • The plot is landscaped, with green spaces at the front of the building. • Outdoor spaces are designed to actively manage rainwater.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • Compliance with accessibility standards for disabled persons. Inspection office assigned to the operation.
Respect for fundamental rights	<ul style="list-style-type: none"> • Improving research conditions in the field of health.
Responsible regional development	<ul style="list-style-type: none"> • Employment integration included in the consultation documents for construction and companies intellectual service providers.
Regional economic development	<ul style="list-style-type: none"> • The project creates 75 jobs for the construction phase.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • The quality of the building materials met the "Very high-performing" target of the «Qualité environnementale des bâtiments - NF BT HQE 2012» standard. FSC or PEFC certified wood. All coatings in contact with indoor air must have an. • A+ rating for VOC and formaldehyde emissions in indoor air. • All insulation materials will be Aermi certified. • Paints and varnishes must have either the European Ecolabel or the NF Environnement label.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • Logistics and technical service managers were present at all site meetings. The INSERM user manager is present at the monthly meetings with the Project Manager. The company in charge of maintenance has been integrated into the Acceptance Operations.

The project website
<https://www.u-pec.fr/fr/journaliste/communiques-de-presse/lupec-inaugure-son-nouveau-batiment-de-recherche-biomedicale-a-creteil>



BATIMENT MATHSTIC (PHASE 1)

HIGHER EDUCATION AND RESEARCH CONSTRUCTION PROJECT



PURPOSE

New building.

LOCATION(S)

Villetaneuse (93)

KEY DATES

Start of studies: May 2020

Start of construction work: September 2022

Delivery date: June 2025

TOTAL PROJECT COST

€9,1M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

76,6%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€2,23M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- The construction of a building for the MATHSTIC laboratories is being carried out by the University of Paris 13 on the Villetaneuse campus (93) in order to create a research centre in the fields of mathematics, science and information and communication technology in the north of the Île-de-France region. This involves the grouping of the 3 laboratories LAGA, LIPN and L2TI. It is a flagship project in the development of the university's digital strategy in order to foster mixed research and innovation.
- The jury in charge of selecting the project manager for phase 1 of the project met in November 2019 and selected the VIB Architecture as project manager for the performance of the studies and the oversight of this operation.
- The project owner opted for an ambitious environmental approach with the "Bâtiments Durables Franciliens" initiative (Sustainable Île-de-France Buildings), which offers 4 levels of performance rewarded with medals. For the project, the goal was to reach the Silver level. The "Design" commission made it possible to achieve this level, and the level must be confirmed during the Operation phase.
- The region has also set ambitious environmental goals as part of its "Sustainable Design and Construction" regional guide, which is mandatory for the real estate projects that it finances or executes in the academic field. To date, 28 objectives are applicable to the project, with 8 achieved at the "minimum" level, 10 at the "demanding" level and 7 at the "exemplary" level. That amounts to 25 out of 28 objectives achieved.
- Examples of objectives achieved as part of the project:
 - Introduction of alternative, landscaped rainwater management.
 - Achievement of lighting autonomy $\geq 50\%$ in more than 80% of the premises.
 - Combining natural ventilation with mechanical ventilation, thereby guaranteeing a higher flow rate than required by regulations and improved comfort, particularly during the summer months.

PROJECT LIFECYCLE

- Current status: Part of the technical work packages is currently on hold, pending the resumption of work by a new contractor for the finishing trades.
- Next steps: Handover of the works scheduled for Summer 2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	66	A-1
Number of project beneficiaries	414	D-8
CO ₂ emissions avoided by the project	13.51 teq CO ₂ /year	E-4

CATEGORY ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach, contributing to respect for the environment

All higher education buildings starting from 2017: energy consumption level required < -20% compared to RT 2012 (equivalent level E3C1 of the E+C- label).

- Cep = 58.7 kWh/m²/year, representing a 27.7% improvement compared to the maximum allowed Cep (RT 2012 - 27.7%).
- CO₂ emissions avoided by the project: 13.51 tonnes of CO₂ equivalent per year.
- The project exceeds regulatory requirements, achieving a 30% reduction in energy consumption.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> • Project management assistance for the development and monitoring of the environmental program, from the programming phase through to one year after building delivery. • Design team with expertise in sustainable development. • Environmental program prioritizing a passive design approach to naturally meet building needs. • Commitment to the “Bâtiment Durable Francilien” (BDF) approach, with achievement of the Silver level at the “Realization” stage (BDF commission held on 17/12/2024).
Combating climate change and promoting the Region’s green transition	<ul style="list-style-type: none"> • Optimized through bioclimatic design: the cylindrical shape of the building minimizes the surface area of heat-loss walls relative to the heated volume. • High-performance insulation materials are used to limit thermal bridging and air permeability. • Integrated solar protections on the façades help reduce summer overheating: horizontal overhangs and vertical slats made of solid wood. • Structures made of timber and low-carbon concrete enhance the building’s thermal inertia and durability while reducing greenhouse gas emissions. • Ventilation system exceeds regulatory airflow requirements, with A+ rated materials in contact with indoor air. Natural ventilation is used to release stored heat. • Exemplary Low Energy Building level (BBC) E2/C1, anticipating the future RE2020 regulation. • Primary energy consumption of the project: $Cep_{project} = Cep_{max RT} - 25.7\%$. • Urban heat island effect mitigation through a vegetated interior patio, irrigated using rainwater harvesting. The building includes servers and computing units, with potential for waste heat recovery for heating and domestic hot water (DHW). A ThermoFrigoPump (TFP) solution will be studied to reinject excess heat into the university’s network during summer, avoiding heat dissipation into the air and thus reducing the urban heat island effect. • Cooling provided by adiabatic modules. • Green construction charter to limit nuisances, with an end-of-project assessment. Circular economy approach: a platform was set up to recover and reuse construction waste. • Landscaped rainwater management: the site’s impermeability coefficient is 54%. Excess rainwater will be directed to retention systems, including a 13 m³ landscaped swale and a 58 m³ underground basin.
Contributing to the Region’s sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • Territorial rebalancing of higher education and research offerings in the fields of mathematics and computer science. • Pedestrian-friendly site design, with the possibility to cross the plot and priority given to pedestrian pathways. • Locally sourced materials are prioritized. • Excellent public transport access, with two major connections: the terminus of tramway line 8 and the new “T11 Express Nord” station. Bicycle parking spaces are also planned.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • Accessibility regulations (PMR) have been taken into account. • Safety study has been conducted. • Social inclusion employment: <ul style="list-style-type: none"> – Committed hours: 4,200 hours. – Completed hours: 5,430 hours.
Respect for fundamental rights	<ul style="list-style-type: none"> • Improved working conditions for PhD students and researchers by offering them efficient work spaces and uniting the teams from the 3 labs.
Responsible regional development	<ul style="list-style-type: none"> • Implementation of professional integration jobs in the operational phase.
Regional economic development	<ul style="list-style-type: none"> • 80% of the companies involved in the project are based locally (department where project is located and neighbouring departments). • Creation of a childcare centre and an inter-company restaurant promoting local services.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Requirements on the choice of construction products (reduction in use of natural resources, CO₂ emissions, etc.). • Requirements on the source of materials (limitation of grey energy).
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • All project stakeholders voluntarily committed, alongside the Galilée Institute of the university, to enable teachers to create educational content related to the project, organize site visits with students, and explore environmental issues specific to the building’s construction. • The consultation process led to numerous improvements in the search for high-performance technical solutions and in the evolution of building uses—particularly regarding summer comfort, which will be ensured without air conditioning, using a more environmentally friendly adiabatic air cooling system.



SUBWAY LINE 14

CLEAN TRANSPORTATION / SUBWAY



PURPOSE

Extension to Mairie de Saint-Ouen.

LOCATION(S)

Paris, Clichy, Saint-Ouen-sur-Seine

KEY DATES

Start of work: July 2013

Partial commissioning: 14/12/ 2020

Full commissioning: 28/01/2021

TOTAL PROJECT COST

€1,380M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

13.6%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€1.01M

HISTORY OF PROJECT

du projet par les précédents emprunts verts et responsables de la Région.



QUALITATIVE PRESENTATION OF THE PROJECT

- First link in the Grand Paris Express network.
- Project integrated into a global vision of the development of the territories served.
- Objective of desaturating line 13: traffic studies have shown that the discharge rate of line 13 thanks to the extension of line 14 is more than 23% on the common trunk and more than 19% on the branches, thus improving the travel conditions of public transport users.
- The completion of the Line 14 extension project will result in a transfer of 33,686,400 vehicle.km/year of car or motorized two-wheeler users to public transport.
- Partners involved: joint project owners (RATP and Île-de-France Mobilités) and other funders (State, Société du Grand Paris, City of Paris and Hauts-de-Seine and Seine-Saint-Denis departments).

PROJECT LIFECYCLE

- The project was commissioned on 14/12/2020, except for the Porte de Clichy station, and the overall commissioning was carried out on 28/01/2021.
- It was then the first section of the Grand Paris Express to enter service, foreshadowing the radial axis crossing Paris and eventually linking Saint-Denis Pleyel to Orly airport.
- Even if it was still marked by the health crisis, a satisfaction survey carried out at the end of 2021 showed a significant discharge effect and at the top of the objectives for the busiest sectors of the line 13.
- In addition, users who now use the extended line 14 benefit fully from the time and comfort savings provided by this new link, which contributes to the attractiveness of public transit in Île-de-France.
- The rest of the line's southern and northern extensions will be brought into service in June.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	9,798	A-2
Number of project beneficiaries	176,000	D-4
CO ₂ emissions avoided by the project	7,310 teq CO ₂ /year	E-3

CATEGORY ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion

- **Construction of rail transport infrastructure meeting the following criterion:** trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems.
- Extension line 14 of the metro to Mairie de Saint-Ouen.
- Electrified infrastructure on the ground.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects

- Since 2001, RATP has been committed to continuous progress by controlling and anticipating all aspects that fall within its responsibilities in terms of resource use or impacts on the natural environment and residents. This initiative resulted in the ISO 14001 certification of several metro lines (e.g. 1, 8, 14) and various maintenance workshops.

Combating climate change and promoting the Region's green transition

- Modal shift expected from users of cars or motorized two-wheelers to public transport of véh.km/ an 33,686,400, which will be evaluated in the medium term, after the health crisis.
- Expected reduction in greenhouse gas emissions of 7,310 teq.CO2/year.

Contributing to the Region's sustainable development and the improvement in quality of life

- Overall average time savings for current public transit users estimated at 6 minutes per trip thanks to the extension of line 14.
- The time savings of current car users who will now use line 14 are considered equal to half the gain of former public transit users, or 3 minutes per trip.

Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals

- New stations accessible to People with Reduced Mobility (PRM): paths in the station between the road and platforms accessible by elevators for the main access route; The platforms are in straight alignment to allow level access to trains.
- Integration of the project into the pricing system in force in Île-de-France, set by Île-de-France Mobilités and which includes social pricing financed by the Region to guarantee the poorest people access to mobility and public transport.

Respect for fundamental rights

- Respect for the fundamental rights of the workers who have worked on the site, in particular by ensuring their safety and respecting the legislation for the protection of health.

Responsible regional development

- Positive economic impact by facilitating access to jobs in the sector and for residents living near the stations to facilitate access to jobs and study sites on Île-de-France: the project will ultimately serve 96,100 inhabitants and 72,000 jobs.
- Project that supports the development of developing sectors (ZAC des Docks, ZAC Victor Hugo, etc. in Saint-Ouen; ZAC Morel-Sanzillon, etc. in Clichy; Batignolles sector, ZAC Clichy-Batignolles, etc. in Paris).

Regional economic development

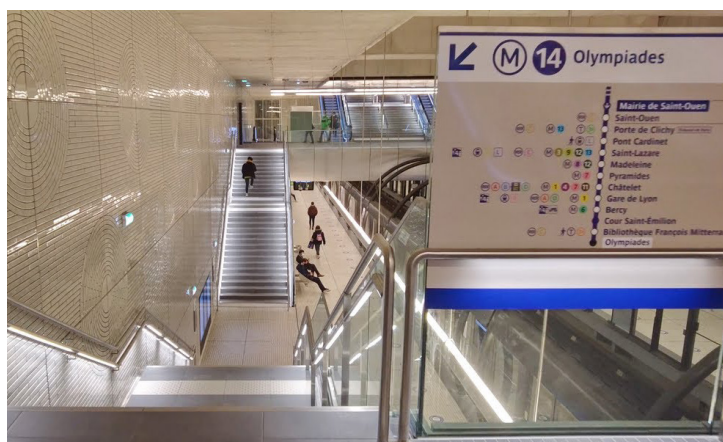
- Estimated creation of 9,798 FTEs on site.

Fair practices, responsible purchasing and responsible supplier relations

- Subsidies from the Region granted to project owners themselves subject to the Public Procurement Code (Visa in financing agreement - Law No. 85-704 amended of 12 July 1985 on public project management and its relationship with private project management).

Promotion of a suitable consultation procedure with internal and external stakeholders

- Public inquiry from January to February 2012, and DUP in October 2012.
- Regular information for local residents implementation on the progress of the stages of the work, holding of public information meetings, signage, and targeted newsletters.
- Proximity agents to make the link between residents, elected officials and construction companies, with permanence in a dedicated room located near the site provided by the proximity agent. He was also reachable on a telephone number «site info».



The project website
www.ratp.fr/plans-lignes/metro/14



The project website
www.iledefrance.fr/toutes-les-actualites/metro-la-ligne-14-prolongee-jusqua-mairie-de-saint-ouen-region-ile-de-france



TRAMWAY LINE 10

CLEAN TRANSPORTATION/ TRAMWAY • NEW PROJECT



PURPOSE

Construction of a new tramway line between Antony and Châtenay-Malabry.

LOCATION(S)

Antony, Châtenay-Malabry, le Plessis-Robinson, Clamart

KEY DATES

Declaration of public utility: 2016
Preparatory work and diversion of networks: 2017-2020
Tramway works: 2019-2022
End of testing: 2023
Commissioning in June 2023

TOTAL PROJECT COST

€351 M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

49%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€14.2 M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- The T10 creates a **new tramway-type link between Antony (Croix de Berny) and Clamart (Jardin Parisien)**. This new line, 6.8 km long, has 13 stations.
- The T10 facilitates the daily mobility of some **175,000 inhabitants and 65,000 employees** in the four municipalities served.
- The T10 provides connections with the RER B, the T6 tram, the Trans-Val-de-Marne bus (TVM)**. Stations and intersections are designed to ensure that the transition from one mode of transport to another is quick and safe.
- Partners involved: the project owners (Île-de-France Mobilités and the Hauts-de-Seine departmental council) and the other co-financiers (State).

PROJECT LIFECYCLE

- The Tram T10 began operating on June 24th, 2023.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	170,000	D-5
CO ₂ emissions avoided by the project	31,237 teqCO ₂	E-3

CATEGORY ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion

- Construction of rail transport infrastructure meeting the following criterion:** trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems.
- Tramway T10: creation of a new tram line between Antony and Clamart.
- Electrified infrastructure on the ground.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> The T10 tramway will run mainly on existing tracks to preserve the environment (natural habitats, fauna and flora). An ecologist ensures an environmental follow-up of the site. The T10 tramway platform is mostly vegetated, and more than 1,000 alignment trees are planted along the route.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> By ensuring a good connection with the RER B, the T6 tramway and the Trans-Val-de-Marne, the T10 tramway creates favourable conditions for a modal shift from the private car to the new tram line. Secure bicycle hoops and parking are accessible, facilitating the TC/bike combination.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> To offset the inevitable impacts: <ul style="list-style-type: none"> Reforestation actions are planned: about 19,000 trees were planted in early 2019 in Seine-et-Marne. A contribution to the Strategic Timber and Forest Fund has been paid to support forest restocking. Forest restoration work is planned on about 9.5 hectares in the forest of Verrières, to create better habitat and reproduction conditions for animal species.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> The T10 tramway multiplies the travel opportunities of Ile-de-France residents, with many possible connections. With its floors and low platforms, the trains are accessible to all.
Respect for fundamental rights	<ul style="list-style-type: none"> The T10 tram meets the mobility needs of users. The T10 tramway respected the fundamental rights of the workers who worked on the site by ensuring their safety and respecting the legislation in force.
Responsible regional development	<ul style="list-style-type: none"> Thanks to its connections with other public transport lines (RER B, Tramway T6, bus), the T10 tramway will promote public transport travel for the assets of the municipalities crossed as well as for workers residing outside this territory.
Regional economic development	<ul style="list-style-type: none"> By 2020, approximately 44,000 residents and 29,900 jobs will be located within 500 meters of a tram station.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> As part of this project, the Region awards grants to the project owners, Île-de-France Mobilités and the Hauts-de-Seine Departmental Council, which are subject to the Marchés Publics Cooperative.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> The preliminary consultation was organised in 2013. The public inquiry took place from October 5, 2015, to November 6, 2015. The project was declared of public utility by the Prefect of Hauts-de-Seine on October 11, 2016. Information tools for residents, residents and traders have been set up to monitor the work: brochures and information brochures, dedicated website.



TRAMWAY LINE 13 EXPRESSION (PHASE 1)

CLEAN TRANSPORTATION/TRAMWAY



PURPOSE

T13 on the Great Western Belt to the North and South.

LOCATION(S)

Saint-Cyr-l'École, Versailles, Bailly, Noisy-le-Roi, l'Étang-la-Ville, Mareil-Marly, Saint-Germain-en-Laye

KEY DATES

Commissioning: July 2022

TOTAL PROJECT COST

€434.8 M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

53.2%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€8.1 M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- Various studies were carried out from 2003 to 2005 on solutions for extending the Grande Ceinture Ouest (GCO) – in service since 2004 – to the RER A in the north (Achères, Poissy, Saint-Germain-en-Laye) and to the RER C and the Transilien N and U lines in the south (Saint-Cyr-l'École, Versailles). These studies have shown a strong interest in reaching the city center of Saint-Germain-en-Laye which is a sought-after pole of activities and where the closest network with the RER A significantly reinforces the attractiveness of the link. The most realistic solution, given the current configuration of the site, is tram-train operation.
- One of the major objectives of the project is therefore to improve the network of public transport by extending the Grande Ceinture Ouest in order to ensure efficient connections with the existing railway lines: the RER A in Saint-Germain-en-Laye and Achères, the RER C and the Transilien U and N lines in Saint-Cyr-l'École, and the Transilien L in Saint-Nom-la-Bretèche and Achères. The Tram 13 express, a fast bypass project, will facilitate travel between business hubs by avoiding transit through Paris.
- The Tram 13 express project consists, in phase 1, of linking Saint-Germain-en-Laye RER to the north, and Saint-Cyr RER to the south (T13th phase 1).
- Partners involved: the project owners (SNCF Réseau, SNCF Voyageurs, SNCF Gares & Connexions, Île-de-France Mobilités, RATP) and other funders (State, Department of Yvelines).

PROJECT LIFECYCLE

- Phase 1 of the T13 between Saint-Cyr and St Germain-en-Laye was inaugurated on July 6, 2022.
- The work has been completed, with the exception of some finishing work, and the tram has been in service since the inauguration.
- A second phase between Saint-Germain-en-Laye and Archères, passing through Poissy, will be launched with a view to bringing the service into service by 2028.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	2,178	A-2
Number of project beneficiaries	21,000	D-5
CO ₂ emissions avoided by the project	1,116 teq CO ₂ /year	E-3

CATEGORY ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems

- T13: extension of the Great Western Belt to the north and south, connecting municipalities
- Electrified infrastructure on the ground.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects	<ul style="list-style-type: none"> In general, the insertion of the platform and stations is the subject of particular attention given the landscape and heritage sensitivity of the sites crossed (forest massif, castles of Versailles and Saint-Germain-en-Laye). approach aimed at avoiding, reducing, and compensating for the impacts of the works, for each m² of forest impacted by the construction of Tram 13 express, 4 m² are subject to reforestation in the Saint-Germain massif. In total, forest compensation covers more than 17 ha. In addition, ecological compensation operations for protected species have been carried out in the Bois de la Duchesse in Bonnelles. L The edge of the forest of Saint-Germain corresponds to the edge of the forest and is a strategic space, which marks the passage from the forest to the city. It plays an essential role in the preservation of biodiversity and the proper functioning of the ecosystem it shelters. Île-de-France Mobilités is working in partnership with the National Forestry Office to carry out so-called «re-flooring» work in this sector. The Maintenance and Storage site for Sailors is subject to a declaration procedure under the Classified Installations for the Protection of the Environment (ICPE). The facilities along the route incorporate cycling facilities that ensure continuity with existing cycle routes as much as possible.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> The project will reduce pollution, with estimated savings of 1,116 t_{eq}CO₂ per year.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> T13 Phase 1 saves time for transit users and provides increased accessibility to and from the study area. For former public transport users who switch to T13, the time saved per user is estimated at 11 minutes. The monetized annual time saving amounts to €24.2 million. The gains related to the modal shift from private cars to public transport are valued at €2.5 million for the first year of operation.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> The project contributes to the opening of neighbourhoods that are located near the T13 Express. In terms of solidarity, the new T13 Express line will be integrated into the pricing in force in Île-de-France, set by Île-de-France Mobilités and which includes social pricing financed by the Region to guarantee the poorest access to mobility and public transport.
Respect for fundamental rights	<ul style="list-style-type: none"> As part of its implementation, the project respects the fundamental rights of workers working on the site, by ensuring their safety and respecting legislation for the protection of health.
Responsible regional development	<ul style="list-style-type: none"> The project will strengthen the attractiveness of the territory in an area where transport infrastructure needs are important. The project will make it possible to connect poles of activity, without going through Paris. The T13 will promote travel by public transport for the assets of the municipalities crossed (nearly 77,000 jobs). It will also allow workers living outside this territory to use public transport thanks to a mesh network with other lines (RER A and C, Transilien lines N, U and L).
Regional economic development	<ul style="list-style-type: none"> Based on current estimates, the project is expected to create 2,178 FTEs on site.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> As part of this project, the Region awards subsidies to the project owners, Île-de-France Mobilités, SNCF Voyageurs, SNCF Réseau, SNCF Gares & Connexions and RATP, which are subject to the Public Procurement Code.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> The preliminary consultation was held in September and October 2008. The public inquiry took place from June to September 2013. The project was declared of public utility by the prefect of Yvelines on February 3, 2014. Information tools for residents, residents and traders have been set up to monitor the work: brochures and information brochures, dedicated website.



The project website
www.tram13-express.fr/



TZEN 5

LOW-CARBON TRANSPORT - RELEVANT EXAMPLE OF THE DEVELOPMENT OF EXCLUSIVE BUS LANES AND ROAD IMPROVEMENTS SCHEME • NEW PROJECT



PURPOSE

New bus line between Paris and Choisy-le-Roi.

LOCATION(S)

Paris, Ivry-sur-Seine, Vitry-sur-Seine, Choisy-le-Roi

KEY DATES

Commencement of work: 2023

TOTAL PROJECT COST

€117M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

49 %

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€8.8M

QUALITATIVE PRESENTATION OF THE PROJECT

- The TZEN 5 project consists of **creating a public transport infrastructure on a dedicated right-of-way between the Paris 13th arrondissement and Choisy-le-Roi in Val-de-Marne via the municipalities of Ivry-sur-Seine and Vitry-sur-Seine.**
- This infrastructure will extend over approximately 9.5 km and will serve 19 stations in 33 minutes.
- When it is commissioned, the TZEN 5 will use infrastructure built by the developers of four planned development zones for nearly half of its route.
- **This project will provide connections with the RER C, metro lines 14 and 15, tram lines T3 and T9 and major bus lines such as the Trans-Val-de-Marne (TVM).**
- By facilitating access to major amenities (schools, cultural venues, etc.) and current or developing economic hubs and by improving accessibility for the multiple housing developments under construction, this project will help to boost this area and drive its development.
- For TZen 5, Île-de-France Mobilités has opted for fully electric 24-metre buses that are 100% accessible to people with reduced mobility. Île-de-France Mobilités will cover the purchase of all buses.
- Partners involved: Île-de-France Mobilités (contracting authority) and other financiers (State and Val-de-Marne Department).

PROJECT LIFECYCLE

- Preparatory work including network diversion has been underway since the beginning of 2023.
- Infrastructure work on the line is expected to start in early 2026.
- Work is scheduled to be completed in 2027.
- Delivery of electric bi-articulated buses is likely to be delayed due to the manufacturer going bankrupt at the end of 2025.
- Commissioning is planned for the late 2027/early 2028.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	51,000	D-6
CO ₂ emissions avoided by the project	-	-

CATEGORY ELIGIBILITY CRITERIA

Construction of public rail transport infrastructure	<ul style="list-style-type: none"> • Construction of low-carbon road transport infrastructure for public passenger transport. • Creation of a new bus line between the 13th arrondissement of Paris and the municipality of Choisy-le-Roi. The TZen 5 buses will be fully electric 24-metre articulated vehicles. • Infrastructure enabling low-carbon road transport.
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JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> • Consideration of ecological issues (noise, air, water, and biodiversity with, for example, the replacement of impacted trees).
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • Project promoting the continuity of soft mobility and freeing itself from road congestion constraints responsible for major service irregularity problems, to offer a real alternative to car use. • This project is linked to the Réseau Vélo Île-de-France (VIF - Île-de-France cycle network) which aims to implement continuous, safe and comfortable bicycle paths along the route. • Given the project's urban context and its implementation largely on existing roads, the TZen 5 project will not take up any green spaces. • Absence of wetlands in the project scope. • The buses acquired by Ile-de-France Mobilités will be electric.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • The TZen 5 routes runs through a dense and very mixed urban environment. The project is an opportunity to renew ageing plant structures, restore an urban language on a more human scale, reconstruct green fringes and enhance views. The project is also one of several ambitious urban landscaping projects, such as mixed development zones (ZAC) with the creation of landscaped swales and tree plantings along roadways, in particular. • Development of comfortable public spaces, which support soft mobility and pedestrians: continuous pedestrian and cycling routes.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • This project thus promotes connectivity in the region and is fully invested in efforts to combat inequalities between regions. Île-de-France Mobilités has elected to equip the line with 24-metre buses, which will have full disabled access.
Respect for fundamental rights	<ul style="list-style-type: none"> • By promoting intermodal transport and improved regional connectivity, this project promotes freedom of movement.
Responsible regional development	<ul style="list-style-type: none"> • Increasing the attractiveness of this area promotes its economic development. • Reinforcing and developing intermodality with transport lines
Regional economic development	<ul style="list-style-type: none"> • The project is a catalyst for the development of the area by improving connectivity and increasing the attractiveness of all the municipalities covered by the project. • More jobs created by the project.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Regional grants issued to contracting authorities, which are governed by the French Public Procurement Code.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • Prior consultation from 21 May 2015 to 30 June 2015 inclusive • Public survey from 30 May to 30 June 2016. • Declaration of public interest on 16 December 2016. • Numerous exchanges with local stakeholders as part of project operations, which helped with project development (route, stations, RMS, etc.).



NEXTEO

CATEGORY LOW-CARBON TRANSPORT/RAIL CONNECTIONS

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE

PURPOSE

NEXTEO

LOCATION(S)

Île-de-France/RER B and D lines

KEY DATES

Commencement of substation preparation work: Early 2020**Signing of the project financing protocol:** 12 October 2023**Launch of the industrial tender (development of the project's computer software):** 17 November 2023

TOTAL PROJECT COST

€1,202M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

54 %

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€61.7M

QUALITATIVE PRESENTATION OF THE PROJECT

- NEXTEO is a traffic signalling and control tool to automate part of driving the train by assisting the driver with braking and acceleration.
- The process improves infrastructure and train performance while increasing equipped lines by 3 to 4 punctuality points.
- The automation of traffic in the tunnel thanks to NEXTEO will allow traffic to flow more smoothly, increase the number of trains per hour and thus improve service of the north Francilien network.

PROJECT LIFECYCLE

- Early 2020: commencement of substation preparation work.
- 12 October 2023: signing of the project financing protocol.
- 17 November 2023: launch of the industrial tender (development of the project's computer software).

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	1,650,000	D-4
CO ₂ emissions avoided by the project	-	-

CATEGORY ELIGIBILITY CRITERIA

Construction of transport infrastructure

Construction of infrastructure

- Construction of rail transport infrastructure, meeting the criterion: on-board control-command and signalling and ground control-command and signalling subsystems.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects	<ul style="list-style-type: none"> The aim is to improve RER B and D traffic.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> The aim is to improve RER B and D traffic.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> The aim is to improve RER B and D traffic.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> The aim is to improve RER B and D traffic.
Respect for fundamental rights	<ul style="list-style-type: none"> No data available
Responsible regional development	<ul style="list-style-type: none"> The aim is to promote low-carbon mobility
Regional economic development	<ul style="list-style-type: none"> The aim is to improve RER B and D traffic.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> No data available
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> No data available



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The project website
www.iledefrance-mobilites.fr/actualites/nexteo-amelioration-ponctualite-rer-e-et-d



CYCLE NETWORKS AND ÎLE-DE-FRANCE CYCLE NETWORK (VIF NETWORK)

CYCLE NETWORKS • NEW PROJECT



PURPOSE

Cycle networks and Île-de-France cycle network.

LOCATION(S)

Île-de-France

KEY DATES

Start of the cycle plan: deliberation no. CR 2017-77 of 18 May

Start of the VIF network: deliberation no. CP 2020-272 of 27 May 2020

Commissioning: staggered since 2017

TOTAL PROJECT COST

Estimated at €850M (VIF)

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

60% (VIF)

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€22.6M

QUALITATIVE PRESENTATION OF THE PROJECT

- VIF is the creation of a high-service regional cycle network that aims to become the “backbone” of the French cycle networks
- VIF is a network of bike lanes that will allow users to cross the Île-de-France by bicycle in complete safety. 11 routes, i.e. 750 km of bike paths, are planned for 2030 with the first deliveries of routes planned for the late 2025.
- The objectives of the VIF network:
 - Comfort
 - Safety
 - Continuity
 - Readability
 - Efficiency
 - Capacity
- The bicycle is an alternative to car use. Typically, 400,000 cyclists use it to commute to work. Given that most daily commutes take place over short distances, cycling offers huge potential for development.

PROJECT LIFECYCLE

- Inauguration of the VIF demonstrator in 2024
- Launch of VIF phase 2 in 2025
- Around twenty route committee meetings per year since 2020 for VIF
- 280 km in service as of 30/05/2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	127	D-10
CO ₂ emissions avoided by the project	-	-

CATEGORY ELIGIBILITY CRITERIA

Construction of transport infrastructure

Construction of infrastructure for cycling

- Bike lane financing.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> No data available.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> The aim is to promote soft, carbon-neutral mobility
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> No data available.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> No data available.
Respect for fundamental rights	<ul style="list-style-type: none"> No data available.
Responsible regional development	<ul style="list-style-type: none"> The aim is to promote soft, carbon-neutral mobility
Regional economic development	<ul style="list-style-type: none"> No data available.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> No data available.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> No data available.



EXPANSION OF THE HEATING NETWORK IN VILLENEUVE SAINT-GEORGES SCVG

RENEWABLE ENERGY PRODUCTION AND DISTRIBUTION • NEW PROJECT

7 AFFORDABLE AND
CLEAN ENERGY



8 DECENT WORK AND
ECONOMIC GROWTH



10 REDUCED
INEQUALITIES



11 SUSTAINABLE CITIES
AND COMMUNITIES



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



PURPOSE

The extension of the geothermal network from Villeneuve Saint-Georges to the municipality of Valenton.

LOCATION(S)

Villeneuve Saint-Georges, Valenton (92)

KEY DATES

First commissioning in 2024

TOTAL PROJECT COST

€18.61M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

6.85%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€0.9M

QUALITATIVE PRESENTATION OF THE PROJECT

- The project concerns the **6 km extension of the geothermal network from Villeneuve Saint-Georges toward the City of Valenton** and the **increase in geothermal flow through the installation of a heat pump (PAC)**.
- The PAC will be installed in a second phase in 2024 after the end of cogeneration.
- Heat delivery across the entire network is expected to total 80 GWh in the long term with 79% produced from renewable energy, **supplying 6,100 housing-unit equivalents, including 5,000 in Villeneuve-Saint-Georges**.
- In the long term, the project **will avoid 13,100 tonnes of CO₂ per year over 20 years**.

PROJECT LIFECYCLE

- The provisional work is planned from January 2020 to the end of 2022.
- The heat pump is planned to be installed in 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	6,100	D-7
CO ₂ emissions avoided by the project	13,100 teq CO ₂ /year	E-5

REGIONAL ELIGIBILITY CRITERIA

Heat/cooling production from geothermal energy

- Project to create a heat network using geothermal energy powered by more than 65% renewable energy. The choice of energy production also respects the ENR'Choix approach (privileges a local renewable and recovery energy source rather than a relocatable renewable and recovery energy source).

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> The design of the network is optimised as a whole, with particular attention paid to the temperature regime consistent with the buildings to be heated.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> This project enables the substitution of fossil fuels which emit high levels of greenhouse gases for natural gas and oil for district heating production.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> The project draws on a local, renewable and stable resource. It improves air quality by replacing gas and oil heating systems with a particle-free geothermal solution.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> Geothermal energy helps to protect households from fluctuations in fossil fuel prices.
Respect for fundamental rights	<ul style="list-style-type: none"> Promotes access to renewable energy, supporting the standard of living of households to improve their living conditions constantly.
Responsible regional development	<ul style="list-style-type: none"> Project helping to strengthen the amount of renewable energies used in Ile-de-France and geothermal energy in particular, which is an Ile-de-France speciality; the region being the leading European region in terms of geothermal installations.
Regional economic development	<ul style="list-style-type: none"> The project will create local jobs during the works phase in the area. The project reduces dependence on fossil fuels and strengthens the region's energy independence.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Application of the public procurement code by the project's representative. Drilling of the sub-soil conducted within the regulatory framework for mining issued by the DRIEAT.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> Organisation of subscribers' committees throughout the year by the mixed syndicate for heat production and distribution for Villeneuve Saint-Georges.



DRILLING OF A DEEP GEOTHERMAL DOUBLET IN AUBERVILLIERS

RENEWABLE ENERGY PRODUCTION AND DISTRIBUTION • NEW PROJECT

7 AFFORDABLE AND CLEAN ENERGY



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



PURPOSE

Drilling a geothermal doublet to supply the SMIREC heat network in the municipality of Aubervilliers.

LOCATION(S)

Saint-Denis, Aubervilliers (93)

KEY DATES

Geothermal doublet drilled in August 2023

TOTAL PROJECT COST

€31.87M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

12.55%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€0.9M

QUALITATIVE PRESENTATION OF THE PROJECT

- The project consists of drilling a **geothermal doublet in the Dogger** at the Fort de l'Est site in Saint-Denis and extending the SMIREC heat network to Aubervilliers over 9.1 km. **Heat pumps will be added at the production well outlet at the production plant.** In the long term, the facility **will produce 35 GWh/year of renewable heat.**
- The network plans to supply at least **7,500 housing-unit equivalents** with more than 60% renewable energy.
- In the long term, **the project will save 7,500 tonnes of CO₂ per year**, equivalent to the annual emissions of 3,000 vehicles.

PROJECT LIFECYCLE

- Extension of the heating network to Aubervilliers: 2020-2023.
- Drilling and installation of geothermal infrastructure: 2022-2025.
- Construction of the geothermal power plant: 2024-2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	7,500	D-7
CO ₂ emissions avoided by the project	7,500 teq CO ₂ /year	E-5

REGIONAL ELIGIBILITY CRITERIA

Heat/cooling production from geothermal energy

- Project to create a heat network using geothermal energy, powered by over 65% energy from a renewable source. The choice of energy production also respects the ENR'Choix approach (privileges a local renewable and recovery energy source rather than a relocatable renewable and recovery energy source).

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> The design of the network is optimised as a whole, with particular attention paid to the temperature regime consistent with the buildings to be heated. In addition, precautions have been taken to avoid any pollution of other groundwater and surface water sources at the time of geothermal drilling and the deployment of the heat network.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> This project enables the substitution of fossil fuels which emit high levels of greenhouse gases for natural gas and oil for district heating production. It is estimated that the deep geothermal plant will avoid the emission of more than 7,500 tonnes of CO₂ per year compared to a conventional gas-powered network.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> The project draws on a local, renewable, continuous and stable resource. It improves air quality by replacing gas and oil heating systems with a particle-free geothermal solution.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> More than half of the geothermal heat produced will supply social housing, directly combating the energy poverty of households. Geothermal energy helps to protect households from fluctuations in fossil fuel prices.
Respect for fundamental rights	<ul style="list-style-type: none"> Promotes access to renewable energy, supporting the standard of living of households to improve their living conditions constantly.
Responsible regional development	<ul style="list-style-type: none"> Project helping to strengthen the amount of renewable energies used in Ile-de-France and geothermal energy in particular, which is an Ile-de-France speciality; the region being the leading European region in terms of geothermal installations.
Regional economic development	<ul style="list-style-type: none"> The project reduces dependence on fossil fuels and strengthens the region's energy independence.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Application of the public procurement code by the project's representative. Drilling of the sub-soil conducted within the regulatory framework for mining issued by the DRIEAT.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> Organisation of subscribers committees throughout the year by Plaine Commune Energie and SMIREC.



H2 CRÉTEIL

RENEWABLE ENERGY PRODUCTION AND DISTRIBUTION • NEW PROJECT

7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



PURPOSE

Construction of a renewable hydrogen production plant and distribution substation.

LOCATION(S)

Créteil

KEY DATES

-

TOTAL PROJECT COST

€7.58M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

15%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€0.9M

QUALITATIVE PRESENTATION OF THE PROJECT

- Suez and the local energy syndicate Sipperec have initiated an innovative project **to convert household waste into hydrogen to power buses and waste collection** vehicles. This project, located in Créteil (Val-de-Marne), led to the creation of a joint venture called "H2 Créteil". The aim of this company is to integrate an electrolyser into a waste-to-energy unit (WTE) to produce hydrogen.
- The **future hydrogen production and distribution substation** will use electricity produced from the combustion of household waste from the 19 municipalities in the Val-de-Marne Municipal Waste Treatment Association (SMITDUVM) to produce renewable hydrogen by water electrolysis.

PROJECT LIFECYCLE

- Start of work in spring 2024.
- Works: between 2024 and 2026.
- Commissioning: 2026.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	93,500	D-6
CO ₂ emissions avoided by the project	1,300 tCO ₂ avoided/year	E-4

REGIONAL ELIGIBILITY CRITERIA

Manufacture of equipment for hydrogen production and storage

Combating climate change and promotion of the region's ecological transition

- Expected CO₂ reduction target allowed by the project (by thermal transport)
- Use of renewable electricity

The project contributes to the manufacture of equipment for hydrogen production and storage.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> The installations shall comply with the following standards: ISO 22734-1:2008, ISO/TR 15916:2004 and ISO 15399.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> Production and distribution of renewable hydrogen as a substitute for fossil fuels, enabling a significant reduction in CO₂ emissions.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> Production and distribution of renewable hydrogen for hydrogen-powered mobility uses as a substitute for combustion vehicles, enabling improvements in air quality.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> Hydrogen electrolysis production and distribution substations are subject to the authorisation regime, which requires the preparation of an authorisation application file, including an impact study and a risk study.
Respect for fundamental rights	<ul style="list-style-type: none"> Access to sustainable, local and low-carbon energy.
Responsible regional development	<ul style="list-style-type: none"> Local energy production.
Regional economic development	<ul style="list-style-type: none"> The project provides for the creation of local jobs during the works phase in the region and for the operation of the substation. Contribution to the development of a new economic sector, focusing on local production of "green" hydrogen and zero-emission mobility. Development of a new economic model for local hydrogen production from local recovery energy (via the Créteil EUV).
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Application of the public procurement contract code by the project's representative. Hydrogen production by electrolysis and distribution substations are covered by the regulations on classified installations (ICPE) and on Installations, Structures, Works and Activities (IOTA). These two regulations enforce procedures prior to the construction and operation of installations and subsequent monitoring during their operation.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> Hydrogen electrolysis production and distribution substations are subject to the authorisation regime, which requires the preparation of an authorisation application file, including an impact study and a risk study. This file is the subject of an instruction by the administration and a public inquiry before the prefect issues an operating authorisation decree which includes requirements specific to the installation.



EXTENSION OF THE GÉORUEIL HEATING NETWORK

RENEWABLE ENERGY PRODUCTION AND DISTRIBUTION • NEW PROJECT

7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



PURPOSE

Drilling of a geothermal doublet and extension of the geothermal heat network in Rueil-Malmaison.

LOCATION(S)

Rueil-Malmaison (92)

KEY DATES

Geothermal energy network inaugurated in November 2023

TOTAL PROJECT COST

€51.96M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

3.85%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€1.1M

QUALITATIVE PRESENTATION OF THE PROJECT

- The project involves **drilling a geothermal doublet in the Dogger at a depth of 1,500 metres in order to green up the existing heat network**, previously powered 100% by fossil fuels in the municipality of Rueil-Malmaison. The installed capacity of the geothermal power plant is 12 MW.
- The project also provides for the **extension of the network over 18.5 km** and interconnection with the SITRU CRISTAL ECO CHALEUR network (waste heat) located in the municipalities of Carrières, Chatou, Houilles and Montesson (78). In total, the network will be deployed over 26 km.
- The network will supply 130 GWh of heat 68% from a renewable source to **9,500 housing-unit equivalents**. The project is part of the development of the Arsenal mixed development zone (ZAC) and aims to supply heat to new buildings as well as several existing buildings in the direct vicinity.
- Replacing gas with geothermal energy will allow network users to benefit from stable heat prices over time by significantly reducing dependence on fossil fuels and price fluctuation.
- The target rate for renewable and recovery energy (EnR&R) injected into the heating network is 68%.
- This project enables both the recovery of energy from the local region and a regional energy network through the interconnection of two heat networks allowing the pooling of available renewable and recovery resources.
- In the long run, the project will save 21,000 tonnes of CO₂ per year, equivalent to the annual emissions of 11,600 vehicles.

PROJECT LIFECYCLE

- July 2020: validation of the choice of geothermal energy to green up the existing heat network in the municipality of Rueil-Malmaison (92).
- Creation of ENR GéoReuil (owned by ENGIE Solutions and the City of Rueil-Malmaison).
- November 2023: geothermal energy inaugurated.
- 2022-2025: development of the heat network.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	-	-
Number of project beneficiaries	9,500	D-7
CO ₂ emissions avoided by the project	21,000 teq CO ₂ /year	E-5

REGIONAL ELIGIBILITY CRITERIA

Heat/cooling production from geothermal energy

- Project to create a heat network using geothermal energy, powered by more than 65% renewable energy. The choice of energy production also respects the ENR'Choix approach (privileges a local renewable and recovery energy source rather than a relocatable renewable and recovery energy source).

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> • The design of the network is optimised as a whole, with particular attention paid to the temperature regime consistent with the buildings to be heated. • In addition, precautions have been taken to avoid any pollution of other groundwater and surface water sources at the time of geothermal drilling and the deployment of the heat network. • During the entire work phase, special measures are implemented to reduce the noise from the loud operations of the drilling rig (pumps, winch, drilling mast) and thus limit the impact on the environment and neighbours.
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • This project enables the substitution of fossil fuels which emit high levels of greenhouse gases for natural gas and oil for district heating production. It is estimated that the deep geothermal installation will avoid the emission of more than 25,000 tonnes of CO2 per year compared to a conventional gas-powered network.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • The project draws on a local, renewable and stable resource. • It improves air quality by replacing gas and oil heating systems with a particle-free geothermal solution.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • More than half of the geothermal heat produced will supply social housing, directly combating energy poverty of households. • Geothermal energy helps to protect households from fluctuations in fossil fuel prices.
Respect for fundamental rights	<ul style="list-style-type: none"> • Promotes access to renewable energy, supporting the standard of living of households to improve their living conditions constantly.
Responsible regional development	<ul style="list-style-type: none"> • Project helping to strengthen the amount of renewable energies used in Île-de-France and geothermal energy in particular, which is an Île-de-France speciality; the region being the leading European region in terms of geothermal installations.
Regional economic development	<ul style="list-style-type: none"> • The project will create local jobs during the works phase in the area. • The project reduces dependence on fossil fuels and strengthens the region's energy independence.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Application of the public procurement code by the project's representative. • Drilling of the sub-soil conducted within the regulatory framework for mining issued by the DRIEAT.
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • Organisation of public meetings by district in the City of Rueil-Malmaison to update residents on the project. • Organisation of subscribers committees throughout the year by GéoReuil.

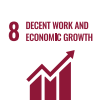


The project website
www.rezomee.fr/rueil-energie/



EXTENSION WORKS AT NADAR HIGH SCHOOL IN DRAVEIL (91)

SECONDARY SCHOOL BUILDING RENOVATION



PURPOSE

Capacity extension of 600 places in Nadar high school.

LOCATION(S)

Draveil (91)

KEY DATES

Contract published in December 2021

Construction work started in July 2022

Completion of the works scheduled for the end of 2025

TOTAL PROJECT COST

€32.21M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€3.2M

QUALITATIVE PRESENTATION OF THE PROJECT

- The objective of the proposed operation is to transform the school into a comprehensive high school by expanding its capacity by 600 places, in response to the strong demographic growth in the 'North Essonne' area.
- To accommodate this increase in student numbers, the project includes the creation of nearly 3,000 m² of usable space.** The construction of new teaching areas and the expansion of existing facilities (such as the library/media center, administrative offices, student life areas, and the cafeteria) will support the development of general and technological education tracks. Ultimately, the school will be able to accommodate **1,310 students and 140 apprentices.**
- The project also includes the **renovation of existing buildings.**
- The **project is part of an energy efficiency and environmental footprint reduction approach, aiming in particular to meet the E3C1 level of the French E+C- standard for the extension.** It is also designed to adapt to climate change, with a layout that ensures summer comfort for occupants.
- The investigations carried out as part of the pollution assessment did not reveal any significant soil contamination issues at the location of the planned extensions.
- The landscaping plan gives pride of place to green spaces: the current square courtyard will be transformed into a tree-lined lawn area, green terraces will be created, and a 20 m² educational garden will be added, among other features.
- To preserve indoor air quality, all materials used and in contact with indoor air will be labeled A+. The premises will be ventilated using dual-flow air handling units.

PROJECT LIFECYCLE

- The project began with Phase 1, which included the demolition and restructuring of the existing cafeteria, workshops and covered walkway.
- Phase 2 started at the end of 2023, focusing on the construction of the new extension.
- Final delivery is scheduled for the end of 2025.**

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	255	A-3
Number of project beneficiaries	1,740	D-1
CO ₂ emissions avoided by the project	10.7 teqCO ₂ /year	E-4

REGIONAL ELIGIBILITY CRITERIA

Improvement of the quality of existing infrastructure and equipment intended for secondary education.

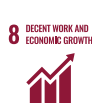
- The primary energy consumption (taking into account renewable energy production) is estimated at **48.7 kWh/m²/year**, which is **32% lower** than the maximum primary energy consumption allowed under the RT2012 regulation (**71.7 kWh/m²/year**).
- Renovated buildings:** The renovation work does not reach the threshold required to trigger compliance with the overall RT regulation. Therefore, this part of the project is **not subject to eligibility criteria.**

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION	
Environmental management and eco-design of projects	<ul style="list-style-type: none"> All environmental aspects of the project have been taken into account, including bioclimatic design, biodiversity, water management, soil pollution, nuisances, and health considerations (see above).
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> The project is part of a carbon footprint reduction approach, with the new building achieving the E3C1 level of the French E+C- standard. It emphasizes the use of bio-based materials: 33.1 kg/m² of gross floor area (GFA) of bio-based materials will be used in the new construction.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> Rainwater management is handled at the plot level, through features such as green roofs and a rainwater harvesting tank. The project complies with the maximum runoff rate set by the SDAGE (Water Development and Management Master Plan). The overall impermeable surface area of the site will be reduced compared to its initial state. Biodiversity is enhanced through the greening of the current square courtyard, the creation of 2,400 m² of green roofs, and the installation of a 20 m² educational garden.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> The facility is accessible to persons with disabilities and complies with fire safety regulations.
Respect for fundamental rights	<ul style="list-style-type: none"> Combating social, educational, and territorial inequalities.
Responsible regional development	<ul style="list-style-type: none"> The project was designed to promote optimal learning conditions for students (acoustic and thermal comfort, appropriately sized spaces, etc.). It is therefore part of the development of a high-quality educational offering in the area.
Regional economic development	<ul style="list-style-type: none"> The construction and operation of the project generate jobs, including a substantial proportion of local employment.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> Compliance with the Region's criteria/rules and the Public Procurement Code. Requirements regarding the selection of construction products and equipment (bio-based materials, resource efficiency, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> This project is part of the Forecasting Program for High Schools, which is developed in consultation between the regional education authority and the Region. Before the project is approved, the school's board of directors (under the authority of the principal) and the mayor of the municipality are officially informed by letter of the Region's intention to initiate studies for a potential intervention. This marks the beginning of a period of dialogue with the school community to refine needs and define the main directions of the program.



OVERALL RESTRUCTURING OF THE NICOLAS-JOSEPH CUGNOT LYCÉE IN NEUILLY-SUR-MARNE (93)

RENOVATION AND EXPANSION OF SECONDARY SCHOOLS



PURPOSE

Restructuring of the Nicolas-Joseph Cugnot High school and increase of its capacity by 400 students.

LOCATION(S)

Neuilly-sur-Marne (93)

KEY DATES

Notification of the project management contract: 12/06/2017

Analysis: 2017-2021

Start of housing and high school works: June 2022

Final handover scheduled for spring 2026

TOTAL PROJECT COST

€51.6 M

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2024 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

€3.7M

HISTORY OF PROJECT

Financing by the Region's previous green and sustainable bonds.



QUALITATIVE PRESENTATION OF THE PROJECT

- The Nicolas-Joseph Cugnot high school is a multi-purpose school training students for careers in the automobile industry. The renovation of the school is required to meet the need to accommodate the area's increasing population growth. As such, the project is designed to steer **the school towards greater versatility**, with the construction of a general education centre and an increase in capacity of 400 students.
- The project involves restructuring and extending general educational building A, demolishing the existing accommodation units, and rebuilding them from scratch, as well as demolishing the site's modular buildings and restructuring the outside areas (forecourt, car park and green spaces). No changes will be made to building B, which houses the workshops.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon foot print**. The project is adapted to climate change with a design that guarantees the comfort of the occupants during the summer.
- The design of the project will limit stormwater discharge into the network by **reducing the extent of impervious surfaces** on the site, compared with existing conditions : the project includes landscaped swales, green roofs, and evergreen car parks. Part of the rainwater will also be recovered.
- Investigations carried out as part of a pollution diagnosis to heavy metals and sulphated soils in the project areas. The management plan put in place has ensured that the project is **compatible with the condition of the environment**.
- In order to **preserve air quality**, all materials used and in contact with the indoor air will have A+ eco labels. All insulation materials will be certified.
- Several locations have been set aside to facilitate waste management and sorting. In particular, an **outdoor composting** area has been planned, near to where kitchen waste is stored.

PROJECT LIFECYCLE

- Work began mid-2021.
- The **new housing units** were handed over in June 2022 and the move from the old units (which will be demolished) has been completed.
- The **extension of Building A** was handed over in May 2024.
- The 3rd phase (restructuring of the remaining Building A) is ongoing, and will be handed over during spring 2026.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTE supported by the project	329	A-2
Number of project beneficiaries	1,200	D-1
CO ₂ emissions avoided by the project	16.91 teqCO ₂ /year	E-4

CATEGORY ELIGIBILITY CRITERIA

Increasing educational capacity through the construction or extension of infrastructure for public secondary and higher education

Improved the quality of existing infrastructure and equipment for public secondary education and higher education

- The aim of this project is to improve the multi-purpose potential of the site, and in particular to restructure and extend the general education building to replace dilapidated buildings, some of which are modular. The project will contribute to improving the quality of existing infrastructure and facilities for secondary education.

JUSTIFICATION OF PROJECT ELIGIBILITY FOR EACH CRITERION

Environmental management and eco-design of projects	<ul style="list-style-type: none"> • All environmental aspects of the project were taken into account: bioclimatic design, biodiversity, use of bio-based materials, air quality, water management, composting, occupant comfort, etc. (see above)
Combating climate change and promoting the Region's green transition	<ul style="list-style-type: none"> • The project is part of a drive to reduce the facility's carbon footprint, with an assessment of CO₂ emissions after the works have been completed. In particular, the project provides for an individual solar production on the roof for the domestic hot water, which will reduce the CO₂ impact related to energy use. • A significant amount of wood is used in the wood/aluminium joinery, the waterproof decking on some terraces, wood cladding and other interior joinery (skirting boards, door units, etc.) • The high thermal inertia of the building ensures summer comfort for the occupants. In the event of very hot weather, the equipment in place will allow night-time mechanical ventilation for free-cooling at daytime flow rates. The building also features solar protection on all façades and mobile protection for the windows.
Contributing to the Region's sustainable development and the improvement in quality of life	<ul style="list-style-type: none"> • Despite low permeability levels on the site and a groundwater level close to the ground surface, the project includes an ambitious rainwater management programme with a reduction in site impermeability, green roofs, infiltration swales and rainwater recovery. • The landscaping of green spaces and planted terraces is specified in a landscaping guide. The species on offer are selected from hardy plants that take into account the natural conditions of the site, so that the maintenance and water requirements are considerably reduced.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	<ul style="list-style-type: none"> • The facility is accessible to people with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	<ul style="list-style-type: none"> • Combating social, educational and territorial inequalities.
Responsible regional development	<ul style="list-style-type: none"> • The design of the new secondary school has been thought out to promote a good learning environment for the students, to include acoustic and thermal confort, appropriate space capacity, etc. It is therefore part of the development of a quality educational offer in the region.
Regional economic development	<ul style="list-style-type: none"> • The construction and operation of the new secondary school will create jobs, a substantial proportion of which will be local.
Fair practices, responsible purchasing and responsible supplier relations	<ul style="list-style-type: none"> • Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, lifecycle analysis, etc.)
Promotion of a suitable consultation procedure with internal and external stakeholders	<ul style="list-style-type: none"> • This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the Region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by an official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.



The project website
www.idf-constructiondurable.fr/realisations/liste-des-realizations/lycee-cugnot-a-neuilly-sur-marne-328

