The project is a public facility situated on the new campus of Paris-Saclay. It hosts a mix of activities including indoor and outdoor sports facilities, a restaurant, cafeteria, and various public spaces: a pedestrian square, street terraces, park areas for deliveries, bikes and cars. The building is organized vertically with its different activities superimposed on one another, using the roof as a panoramic playground for football and basketball games. It takes the form of an urban shelf, a vertical public space, accessible to all campus visitors, day or night. It was commissioned by the Public developer of the Campus as an example of urban facility, shared by the different schools and companies of the future campus.

Contextual and aesthetic impact
Paris-Saclay Campus

The project is a public facility situated on the new campus of Paris-Saclay. It hosts a mix of activities including indoor and outdoor sports facilities, a restaurant, cafeteria, and various public spaces: a pedestrian square, street terraces, park areas for deliveries, bikes and cars. The building is organized vertically with its different activities superimposed on one another, using the roof as a panoramic playground for football and basketball games. It takes the form of an urban shelf, a vertical public space, accessible to all campus visitors, day or night. It was commissioned by the Public developer of the Campus as an example of urban facility, shared by the different schools and companies of the future campus.
The building is a shared facility encouraging the encounter of various populations living close to one another but rarely meeting. The restaurant, cafeteria and sports activities are made accessible to students, company employees, teachers and researchers. It aims at creating a meeting point for everyone by mixing activities that are usually separate. The organization of the building means to extend its opening time to the maximum. The different areas are linked by an open staircase that allows independent accesses to every activity. This allows the building to act as a local corner shop, a meeting place providing easy access to anyone living or working in the district day or night.

**SUSPENDED DISCUSSION, LIAM GILLICK, 2008:**

The building is like an urban shelf carrying various activities.

**THE 24 HOUR PROGRAMMING OF THE BUILDING MAKES IT A MEETING POINT FOR THE FUTURE DISTRICT, A PLACE OF REFERENCE COMPARABLE TO A CORNER SHOP:**

**THE 24 HOUR PROGRAMMING MAKES IT A MEETING POINT FOR THE FUTURE DISTRICT, A PLACE OF REFERENCE COMPARABLE TO A CORNER SHOP**

**TIME SLICES SHOWING THE OPENING OF THE TIME BUILDING**

**THE BUILDING IS LIKE AN URBAN SHELF CARRYING VARIOUS ACTIVITIES**

---

**Ethical standards**

**Social inclusion**

**24 Hour programming**

The building is a shared facility encouraging the encounter of various populations living close to one another but rarely meeting. The restaurant, cafeteria and sports activities are made accessible to students, company employees, teachers and researchers. It aims at creating a meeting point for everyone by mixing activities that are usually separate. The organization of the building means to extend its opening time to the maximum. The different areas are linked by an open staircase that allows independent accesses to every activity. This allows the building to act as a local corner shop, a meeting place providing easy access to anyone living or working in the district day or night.
Ethical standards

FUTURE DISTRICT, A PLACE OF REFERENCE COMPARABLE TO A CORNER SHOP

The 24 hour programming of the building makes it a meeting point for the providing easy access to anyone living or working in the district day or night.

The different areas are linked by an open staircase that allows independent accesses, which aims at creating a meeting point for everyone by mixing activities that are usually separ- 

The building is a shared facility, encouraging the encounter of various populations living. 

CARRYING VARIOUS ACTIVITIES

CHARTE CLICHY

LOCAUX TECHNIQUES

RESTAURATION COLLECTIVE

SPORT INDOOR / FITNESS

SPORT OUTDOOR

LOGISTIQUE - MAINTENANCE

RESTAURATION COLLECTIVE / CONSOMMATION

- Horaires de sortie et entrée des poubelles

> 6 h 00 à 15 h 00

et/ou horaires du personnel

- Plages horaires de fonctionnement de la cuisine collective

Regards, vues, échappées visuelles et transparences à travers le bâtiment

VUES ET REGARDS CROISES

CUISINE

KITCHEN

TECHNICAL FACILITIES

LOGISTICS - MAINTENANCE

DELIVERY

COLLECTIVE RESTORATION / STORAGE KITCHEN

INDOOR SPORT / CHANGING ROOM

INDOOR SPORT  / FITNESS CARDIO

MEZZANINE

RESTAURANT

DE FONCTIONNEMENT

LIVRAISONS

RESTAURATION COLLECTIVE / CONSOMMATION

SPORT INDOOR / FITNESS

SPORT OUTDOOR

PROGRAM ORGANIZATION DIAGRAM FLOOR PLANSPROGRAM ORGANIZATION DIAGRAM: SUPERIMPOSING ACTIVITIES:

1_PUBLIC SQUARE, RECEPTION, CAFETERIA

2_DELIVERY, STORAGE, CHANGING ROOMS

3_MEZZANINE TECHNIQUE

4_RESTAURATION COLLECTIVE

5_SPORT INDOOR

6_2x TERRAINS DE SPORT OUTDOOR

7_PARVIS

8 общественно-экономическое и культурное устройство

9_MEURON, COMPLETED IN 2014

10_NAGASHIMA SPA LAND, NAGASHIMA, MIE, JAPAN, DESIGNED BY KAZUO D. \n
Moore, 1899

11_GLOBAL HOLCIM AWARDS 2015

12_STUDY OF THE SUSPENDED CEILINGS

13_STEEL-CONCRETE + CONCRETE SLAB 170 MM

14+ CONCRETE SLAB 220 MM

15_HI-VEF CONCRETE CONSOLE

16_COMPOSITE PILLAR

17_IPE 240

18_CONCRETE BEAM

19_300x1200 MM

20_IN 1969, DEMOLISHED IN 2013

21_GATESHEAD, ENGLAND, DESIGNED BY RODNEY GORDON, BUILT

TRINITY SQUARE CAR PARK: MARGULIES CONSULTING ENGINEERS, 2011

22_CONTINENTAL PLATFORM:

STEEL STRUCTURE CO. LTD

PREFABRICATED OFFICE MADE OF CONTAINER STEEL STRUCTURE,

WEIFANG HENGLIDA

23-www.studiomuoto.com

24_Museum of Agriculture, University of British Columbia (UBC) campus in

Vancouver, Canada, designed by Atelier矶川, 1976

25橄欖

26_yard structure, Nihonk outings consulting engineers, 2011

27_white cycle line

28_red roller coaster

29_STUDY OF A TYPICAL SCAFFOLDING

30_STRUCTURE OF A TYPICAL SCAFFOLDING WHITE CYCLONE WOODEN ROLLER COASTER:

MEURON, COMPLETED IN 2014

31_MUOTO

www.studiomuoto.com

b

32_INDOOR THROUGH THE BUILDING, ALLOWING CROSSING VIEWS FROM FLOOR TO FLOOR.

33_MODELS OF PURPOSE INTERIOR

34_FLEXIBILITY AND MULTI-

35_USE PROPRIETARY SOFTWARE, AFTER LUNCHES AND DINNERS.

36_THE INTERIOR IS TURNED INTO A PROJECTION SPACE

37_IN 1969, DEMOLISHED IN 2013

38_SCENES LIGHTS, RADIATING PANELS, AND SOUND ABSORBING WOOD FIBRE PANELS.

39_STUDY OF THE SUSPENDED CEILINGS

40, INTEGRATING VISIBLE AIR SHAFTS, LINES OF FLUO-

41_PUBLIC CONDENSER

42_CONCRETE CONSOLE

43_CONCRETE CONSOLE

44_REINFORCED CONCRETE

LOW-COST FLEXIBLE UNIVERSITY BUILDING

The building is conceived as a minimal structure that uses rough materials, robust and long lasting techniques, and vertical stacking to superimpose different activities above one another. This design and construction strategy enables a maximal development of architectural and technical means allowing the building to be flexible and adaptable to future needs. Taking the example from many ordinary industrial mechanisms, technical towers, scaffolding, containers, gas towers or bridges, the design of the building attempts to merge economic and aesthetic considerations in such a way that the efficient and long-

45_secure structure transforms in limitation into quality for all staff and students. It means to provide an example of how architecture can associate economic, social and environmental issues.

46_INNOVATION AND TRANSFERABILITY

47_CAPABLE STRUCTURES

48_THE BUILDING IS INTENDED AS A MINIMAL STRUCTURE THAT USES ROUGH MATERIALS, ROBUST AND

LONG LASTING TECHNIQUES, AND VERTICAL STACKING TO SUPERIMPOSE DIFFERENT ACTIVITIES ABOVE

ONE ANOTHER. THIS DESIGN AND CONSTRUCTION STRATEGY ENABLES A MAXIMAL DEVELOPMENT OF

ARCHITECTURAL AND TECHNICAL MEANS ALLOWING THE BUILDING TO BE FLEXIBLE AND ADAPTABLE TO

FUTURE NEEDS. TAKING THE EXAMPLE FROM MANY ORDINARY INDUSTRIAL MECHANISMS, TECHNICAL

TOWERS, SCAFFOLDING, CONTAINERS, GAS TOWERS OR BRIDGES, THE DESIGN OF THE BUILDING ATTEMPTS TO

MERGE ECONOMIC AND AESTHETIC CONSIDERATIONS IN SUCH A WAY THAT THE EFFICIENT AND LOW-

49_SECURE STRUCTURE TRANSFORMS IN LIMITATION INTO QUALITY FOR ALL STAFF AND STUDENTS. IT MEANS TO PROVIDE AN EXAMPLE OF HOW ARCHITECTURE CAN ASSOCIATE ECONOMIC, SOCIAL AND ENVIRONMENTAL ISSUES.
Flexibility and multi-purpose interiority

Spatial variety

The building provides very different kinds of spaces, ensuring that indoor as well as outdoor areas may be used for very different purposes. Flexibility does not derive from a neutral plan, department of qualities, but from a diversity of spaces, linked to one another. The author spaces break from the usual functional configurations, thanks to a “deep one” and “open angles” in all areas allowing for an open focus of study. The vertical link is not just a functional connection, but a partial space that encourages the interaction between activities. Users can observe the common or interior spaces, spatially floated inside the building to discover the surrounding natural landscape until they reach the surface playgrounds. The expansion of the building through an internal exterior experience to the expansion of moving in a Klein bottle.

THE RESTAURANT ROOM: HIGH FLOORS, MEZZANINE, AND THREE GLAZED FAÇADES LOOKING OUT THE SQUARE AND THE STREETS.

DISTANCE OF THE DISTRIBUTION HALL OF THE RESTAURANT ON THE 1ST FLOOR.

INTERIOR VIEW OF THE DISTRIBUTION HALL ON THE FIRST FLOOR.

THE MIRROR WALL IS SITUATED SO AS TO REFLECT THE SKY AND THE SUNSHADES.

THE “REVERSED SLAB” WINDOW ON THE ROOF.

OTHER WALKING UP AND DOWN FROM THE PUBLIC SQUARE TO THE SPORT AREAS SITUATED INSIDE THE BUILDING.

THE VERTICAL Void: WALKING FROM THE OUTDOOR STAIRCASE CREATES A TRANSVERSAL LANDSCAPE, THAT ALLOWS CROSSING VIEWS FROM FLOOR TO FLOOR.

CIRCULATION: PUBLIC HALS THROUGH THE RESTAURANT. THE MAIN ROOM IS CONCEIVED TO BE TURNED INTO A PROJECTION SPACE, AFTER LUNCHES AND DINS.

THE OPEN SKY ENTRANCE ALLOWS TO REACH THE SPORT AREAS DEPOSITED ON THE ROOF WITHOUT ENTERING THE BUILDING.

STORY OF THE SUSPENDED CONCRETE BEAMS INTEGRATING VISIBLE AIR SHUTTERS, LINES OF FLUX- RESISTANT LIGHTS, PANTING PANELS, AND GLASS-MIRROR-WOOD PANELS.

THE SCENES: AN OPEN AREA FOR QUEST STYLE SELF-GUIDED TOUR IS ACCESSIBLE DIRECTLY FROM THE OPEN ENTRANCE. THE BUILDING CREATES AN ENTRANCE WALL.

THE BUILDING INVERSES THE EXPERIENCE COMPARABLE TO THAT OF A KLEIN BOTTLE.

“DEEP PLAN” AND GLAZED ANGLES IN ALL ROOMS ALLOWING FAR AND OPEN VIEWS OUTSIDE. THE BUILDING INVOLVES AN INTRICATE RELATION BETWEEN INDOOR AND OUTDOOR SPACES. THE OUTDOOR STAIRCASE SITUATED INSIDE THE BUILDING CREATES A VERTICAL TRAP.

THE MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF BRITISH COLUMBIA (UBC) CAMPUS IN VANCOUVER, CANADA, DESIGNED BY ARTHUR ERICKSON, 1976.

THE VERTICAL VOID: WALKING FROM THE OUTDOOR STAIRCASE CREATES A TRANSVERSAL LANDSCAPE, THAT ALLOWS CROSSING VIEWS FROM FLOOR TO FLOOR.

INTERIOR VIEW OF THE DISTRIBUTION HALL ON THE FIRST FLOOR.

THE MIRROR WALL IS SITUATED SO AS TO REFLECT THE SKY AND THE HOUR.

THE “REVERSED SLAB” WINDOW ON THE ROOF.

OTHER WALKING UP AND DOWN FROM THE PUBLIC SQUARE TO THE SPORT AREAS SITUATED INSIDE THE BUILDING.

THE VERTICAL Void: WALKING FROM THE OUTDOOR STAIRCASE CREATES A TRANSVERSAL LANDSCAPE, THAT ALLOWS CROSSING VIEWS FROM FLOOR TO FLOOR.

CIRCULATION: PUBLIC HALS THROUGH THE RESTAURANT. THE MAIN ROOM IS CONCEIVED TO BE TURNED INTO A PROJECTION SPACE, AFTER LUNCHES AND DINS.

THE OPEN SKY ENTRANCE ALLOWS TO REACH THE SPORT AREAS DEPOSITED ON THE ROOF WITHOUT ENTERING THE BUILDING.

STORY OF THE SUSPENDED CONCRETE BEAMS INTEGRATING VISIBLE AIR SHUTTERS, LINES OF FLUX- RESISTANT LIGHTS, PANTING PANELS, AND GLASS-MIRROR-WOOD PANELS.

THE SCENES: AN OPEN AREA FOR QUEST STYLE SELF-GUIDED TOUR IS ACCESSIBLE DIRECTLY FROM THE OPEN ENTRANCE. THE BUILDING CREATES AN ENTRANCE WALL.

THE BUILDING INVERSES THE EXPERIENCE COMPARABLE TO THAT OF A KLEIN BOTTLE.

“DEEP PLAN” AND GLAZED ANGLES IN ALL ROOMS ALLOWING FAR AND OPEN VIEWS OUTSIDE. THE BUILDING INVOLVES AN INTRICATE RELATION BETWEEN INDOOR AND OUTDOOR SPACES. THE OUTDOOR STAIRCASE SITUATED INSIDE THE BUILDING CREATES A VERTICAL TRAP.

THE MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF BRITISH COLUMBIA (UBC) CAMPUS IN VANCOUVER, CANADA, DESIGNED BY ARTHUR ERICKSON, 1976.
Resource and environmental performance

Minimum insulation, natural ventilation

Technology is used minimally to provide a place that will last in time, without need for complicated maintenance. A specific insulation technique called “reversed slab” allows the building to reach high levels of thermal performance (French BBC certification), while having the structure visible, devoid of cladding. The insulation strategy consists in isolating only heated areas, when usual insulation schemes tend to wrap the entire buildings, including circulation cores and technical spaces. The objective here is to use less insulation material.

Using sliding doors on the facade offers natural ventilation during the summer while large textile-shades provide sun protection. The compact and vertical configuration of the building allows a minimal footprint.

**Resource and environmental performance**

**Minimum insulation, natural ventilation**

**Low-cost flexible university building**

**Public condenser**

The structure involves intricate relation between indoor and outdoor spaces. The outdoor staircase situated inside the building creates a spatial experience comparable to that of a Klein bottle. The generous opening of the south façade allows for natural ventilation of sport and restaurant rooms. The restaurant benefits from a panoramic views towards the agricultural landscapes of the Saclay plateau.

**The main axes of sustainability are the relation to the local context, the original energy saving strategies, rainwater saving, the visual comfort of the structure, the social inclusion of the users of the campus, and the visual comfort provided by the combination of the glazed façades and the condenser.**

**Klein bottle concept:** The building involves an intricate relation between indoor and outdoor spaces. The outdoor staircase situated inside the building creates a spatial experience comparable to that of a Klein bottle.

**The main axes of sustainability are the relation to the local context, the original energy saving strategies, rainwater saving, the visual comfort of the structure, the social inclusion of the users of the campus, and the visual comfort provided by the combination of the glazed façades and the condenser.**

**The exterior staircase provides the specific spatial experience of being outside while being inside the building.**

**The genie concept of the south façade allows for natural ventilation of sport and restaurant rooms.**

**The restaurant benefits from a panoramic views towards the agricultural landscapes of the Saclay plateau.**

**The generous opening of the south façade allows for natural ventilation of sport and restaurant rooms.**

**The “reversed slab” is an insulation technique that brings the insulation material above the concrete floor. It allows to keep the concrete slab and structure visible from the outside.**

**Radiator heating system:** This low energy technique allows to heat people without to heat the entire air environment.

**The exterior staircase provides the specific spatial experience of being outside while being inside the building.**

**The genie concept of the south façade allows for natural ventilation of sport and restaurant rooms.**

**The restaurant benefits from a panoramic views towards the agricultural landscapes of the Saclay plateau.**

**The generous opening of the south façade allows for natural ventilation of sport and restaurant rooms.**

**The “reversed slab” is an insulation technique that brings the insulation material above the concrete floor. It allows to keep the concrete slab and structure visible from the outside.**

**Radiator heating system:** This low energy technique allows to heat people without to heat the entire air environment.
The specific detailing of the project is conceived to allow an extensive range of materials, mostly derived from industrial construction techniques. All beams and concrete sections are prefabricated from standard moulds. Columns and walls are cast on site. The building’s rigidity structure aids the prefabrication process and reduces the length of time construction. Some interior areas, such as the relaxation during on top of the ground floor cafeteria, provide empty spaces that could be turned into interior spaces for new activities, such as exhibitions or shared offices. The detailing, involving rough materials and robust techniques, is meant to encourage the possible transformation of the building.

Detailing and material efficiency
More space, less materials

The project is publicly funded and in response to the low construction budget, detailing has been kept to a minimum. This economical approach has allowed for the inclusion of a generous public square in the construction price, ensuring a planted pedestrian connection with the existing academic buildings next to the site. All materials have been chosen for their economic and long-lasting qualities. The building is under construction since October 2014, and its opening is due to December 2015. The pictures below show the range of materials used for outdoor and indoor spaces, as well as views of the actual construction stage of the building.

LOW-COST FLEXIBLE UNIVERSITY BUILDING
PUBLIC CONDENSER

Examples of concrete floor with quartz finishing (Arch. K. Kerez), wood-en floor in dance room (Arch. Juan Carlos Sancho Osinaga) and rubber floor in cardio-training room.

Examples of suspended ceilings in wooden fibre (Arch. J. Celzing), fluorescent lights and visible steel air shafts.

Examples of outdoor lighting for the fluorescent lights integrated in the green areas of the public square.

Examples of aluminium cladding and window frames and cladding (Arch. OMA) and concrete slab (Arch. K. Kerez).

Example of metal stairs (Arch. Ibois et Vitart) and lights embedded in concrete walls.

Examples of exterior sun shades and rolling industrial doors. Examples of outdoor sports grounds in painted concrete.
Economic viability and compatibility

Low cost building

The project is publicly funded and in response to the low construction budget, detailing has been kept to a minimum. The economical approach has allowed for the inclusion of a generous public square in the construction plan, ensuring a planted pedestrian connection with the existing academic buildings next to the site. All materials have been chosen for their economic and long-lasting qualities. The building is under construction since October 2014, and its opening is due in December 2015. The pictures below show the range of materials used for outdoor and indoor spaces, as well as views of the actual construction stage of the building.