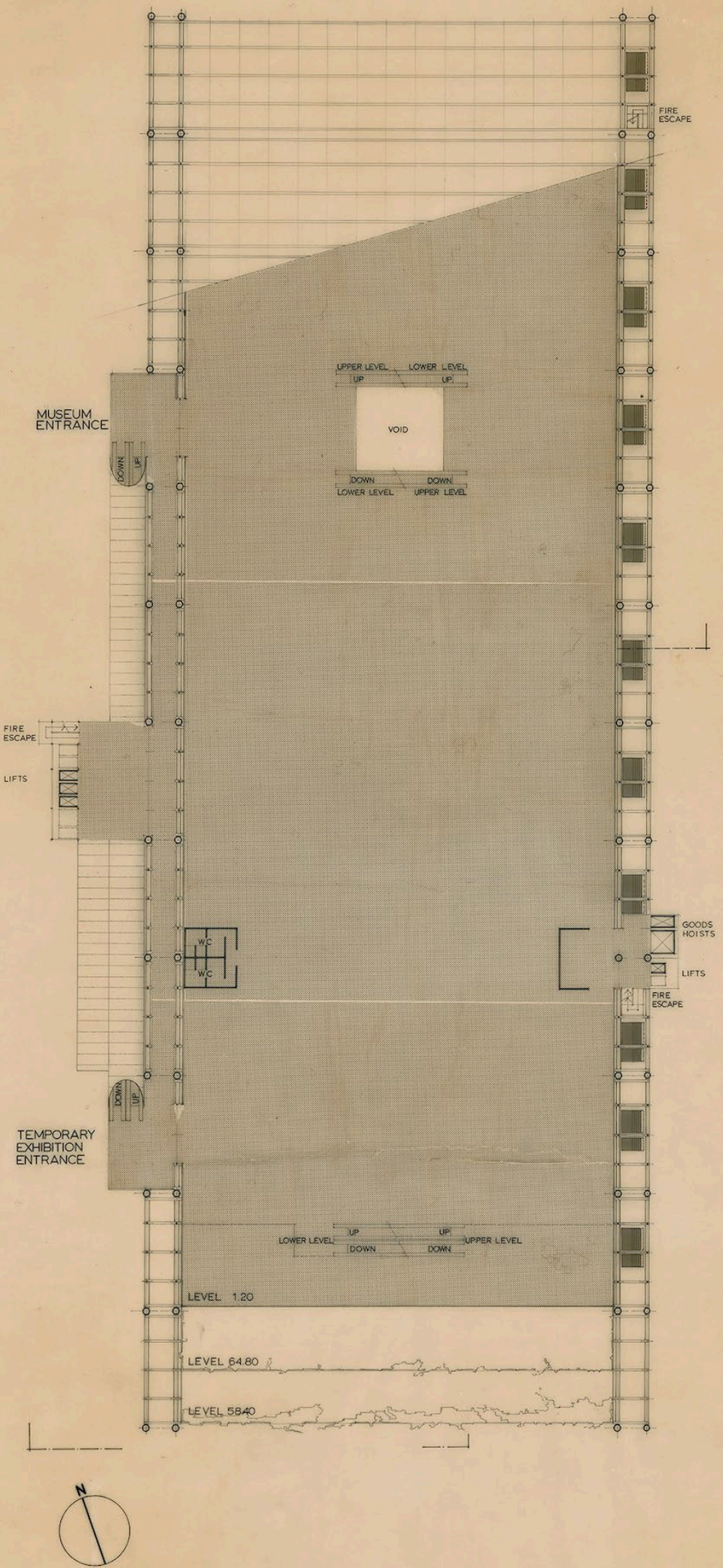
FIRE ESCAPE
MUSEUM ENTRANCE
UPPER LEVEL
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UP
FIRE ESCAPE
LIFTS
WC
WC
GOODS HOISTS
LIFTS
FIRE ESCAPE
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LEVEL 1.20
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Piano, Rogers and Hulten for the museum layout of the Centre Pompidou. From the empty loft to the vernacular village of art

Boris Hamzeian

Keywords:
Piano+Rogers Architects, Pontus Hulten, Centre Pompidou, Museum, Paris

ABSTRACT:

The Centre national d'art et de culture Georges Pompidou was born out of a desire to reduce architecture to a sequence of empty and internally unobstructed platforms: the manifesto of a kind of democratic, creative and constantly evolving space. Renzo Piano, Richard Rogers, Gianfranco Franchini and Ove Arup & Partners offered these platforms to the Parisians with the idea of designing an anti-museum, where the works of art could be arranged according to the free and creative will of the users, but eventually downgraded behind an audio-visual envelope capable to turn the Centre into a new kind of cultural institution oriented on the emission of counterculture information. Resorting to previously unpublished archive records and interviews, this contribution traces for the first time the complex evolution of the first display for the works of arts of the Centre Pompidou in Paris, from Piano+Rogers Architects' dream of suspended diaphragms for the celebration of a continuous space, to Pontus Hulten's vision of making that kind of loft a a mimetic and vernacular device, inspired by the images of the village and its huts and then of the city and its boutiques.

Il Centre du plateau Beaubourg di Parigi, oggi noto come Centre national d'art et de culture Georges Pompidou, è nato dal desiderio di ridurre l'architettura a una sequenza di piattaforme lisce, vuote e internamente inostruite per assurgere a manifesto di un genere di spazio democratico, creativo e costantemente in evoluzione. Renzo Piano, Richard Rogers, Gianfranco Franchini e Ove Arup & Partners, hanno offerto queste piattaforme ai parigini nell'idea di mettere a punto un'anti museo, dove le opere potessero certamente essere disposte secondo la libera e creativa volontà degli utilizzatori ma in ogni caso declassate dietro un involucro audiovisivo che avrebbe mostrato al mondo un nuovo genere di istituzione culturale orientata sull'emissione di un'informazione popolare e di controcultura. Grazie al ricorso a documenti d'archivio e a una serie di interviste inedite ai protagonisti della sua realizzazione, questo contributo rintraccia per la prima volta l'evoluzione complessa del dispositivo museale originario del Centre Pompidou di Parigi, dal sogno di Piano+Rogers Architects di un gioco di diaframmi sospesi per la celebrazione di uno spazio continuo, alla visione di Pontus Hulten di un dispositivo mimetico e vernacolare, alla scala e alla forma del villaggio e delle sue capanne e poi della città e delle sue boutique.

Opening Picture:

Fig. 04: Renzo Piano, Richard Rogers, Gianfranco Franchini (later Piano+Rogers Architects) and Ove Arup & Partners, Competition design for the Centre Beaubourg (later renamed Centre national d'art et de culture Georges Pompidou), plan, June 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives).

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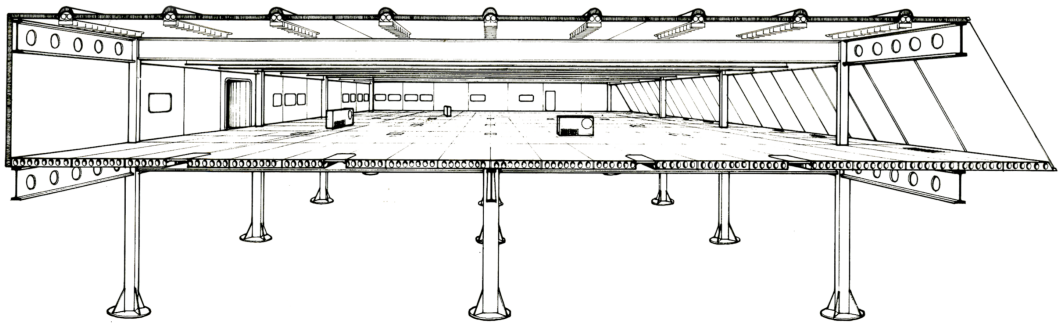
Burrell Art Gallery: the first container for art by Piano+Rogers Architects

The genesis of the work destined to go down in history as the first display for the art collections of the Centre du plateau Beaubourg, today known as Centre national d'art et de culture Georges Pompidou, can be traced back to a few professional experiments that architects Renzo Piano, Susan and Richard Rogers developed between the second half of the 1960s and the spring of 1971, in the context of the establishment of the firm Piano+Rogers Architects. Since the "self-supporting shells" of the Zip-Up series developed by the Rogerses against the background of their first meeting with Piano, the idea of reducing architecture to an unconstructed and intrinsically flexible space became clear. The transfiguration of the building into an adaptable environment was achieved with a self-supporting shell without intermediate supports – this is the case of the Zip-Up House, the Universal Oil Products industrial warehouse or the Sweetheart Plastic offices. In case the surface area was such as to require multi-storey solutions, on the other hand, the Rogerses and Piano resorted to



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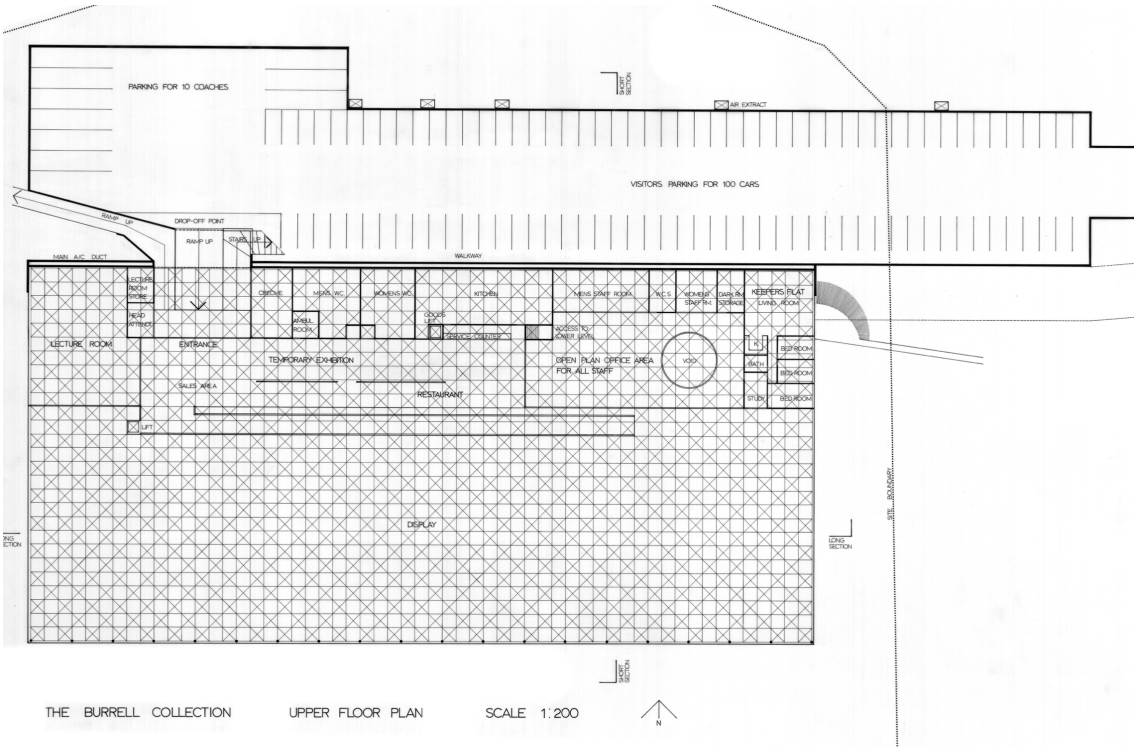

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Fig. 01
Richard+Su Rogers Architects (in collaboration with Hugh Chapman), Zip-Up envelope design for Sweetheart Plastics office extension, interior environment, Gosport, 1969-1970. Copyright Richard+Su Rogers Architects / courtesy Richard Rogers Estates (presso RSHP Archives)

Fig. 02
Piano+Rogers Architects, Competition design for the new siege of the Burrell Gallery, ground floor plan, Glasgow, spring 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives)

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discrete, punctiform frameworks based on the minimisation of vertical supports, as in the case of the colossal truss of the mobile hospital module of the ARAM Association.

In order to evaluate the potential of an architecture reduced to a simple "infrastructure", a "system" or a "grill", the Rogerses and Piano looked at design opportunities with different programmes, ranging from housing to industrial storage and offices. The first opportunity to test the adaptability of this approach to the museum programme can be traced in the spring of 1971 in the context of the competition for the new headquarters of the eclectic art gallery of the Scottish shipowner William Burrell – a project in which the Rogerses and Piano invested themselves personally and whose fine-tuning preceded by just a few weeks that of the project for the competition for the future Centre Pompidou.

Instead of proposing a traditional building organised according to a succession of rooms, as required by the call for competition, the newborn joint office called Piano+Rogers Architects opted for a variant of the Rogerses' shells.[1]

Rejecting a rigid spatial organisation for the works of art – "The aim has been for the Architecture not to straight-jacket the layout and viewing of the exhibits" - Piano+Rogers Architects envisaged an environment open to a "freedom of organisation to succeeding generations" – an idea, this one, that applied to the museum program the "freedom of choice" the Rogerses wanted to offer to the users of their shells.[2] With the idea of putting the organisation of the museum space back in the hands of its users and limiting themselves "to provide a highly sensitive environment for the display and conservation of the collection", Piano+Rogers Architects reiterated the role of the architect outlined since the design for the Fitzroy Shopping Centre in Cambridge (presented to the municipality in the spring of 1971): to offer users a democratic infrastructure in whose free organisation human

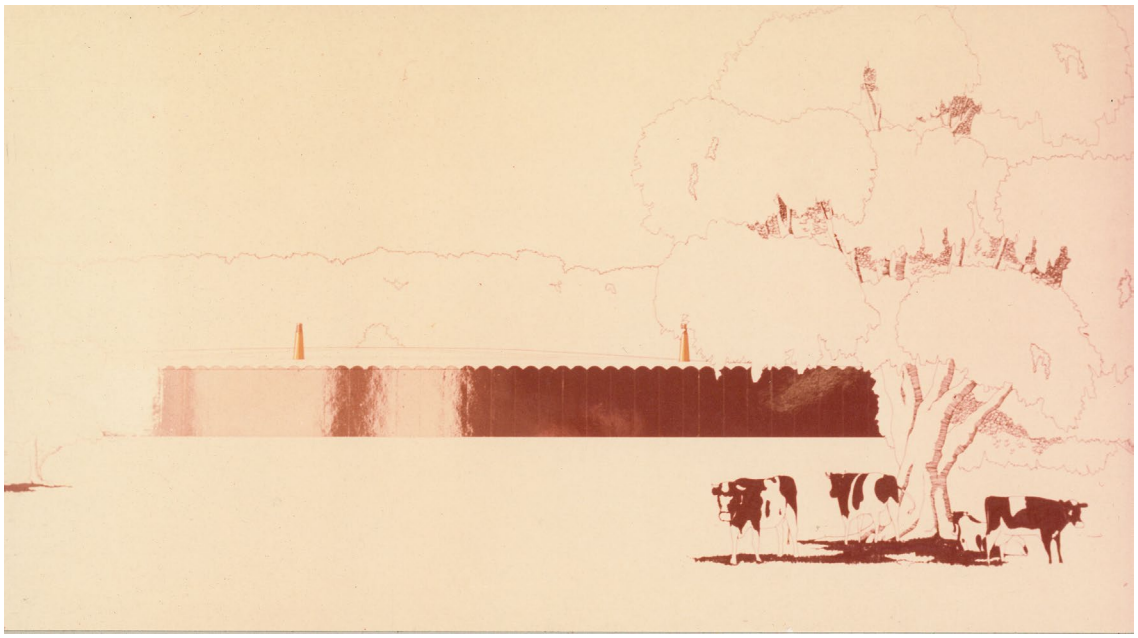

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Fig. 03
Piano+Rogers Architects, Competition design for the new siege of the Burrell Gallery, view of the Okalux reflective enclosure against the backdrop of Pollok Park, Glasgow, spring 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives)

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beings could emancipate.[3]

In the project for the Burrell Gallery, the "highly sensitive environment" took the form of a low container with an industrial appearance obtained by combining a spatial metal portal structure based on the Mero system with a translucent envelope with original luminous effects, designed to cover both the perimeter enclosure and the roof. The result took the shape of a "total light box", a luminous lantern that fitted in with the translucent envelopes of Pierre Chareau and Bernard Bijvoet's Maison de Verre, Philip Johnson's Glass House, and the translucent enclosures that former Rogerses colleague Norman Foster was designing in 1971 for Fred Olsen and IBM, and became a highly technological device at the service of the works of art. "The museum is a total light box, which offers sophisticated controls of degree, quality and character of light, according to the requirements of individual exhibits," accounts the competition report by Piano+Rogers Architects. The use of a special panel produced by the German company Okalux and consisting of a membrane of microscopic tubes inserted in two glass panels further coated with a mirror-like external finish established a special relationship with the works of art, making the gallery a box to screen and conceal the collection during the day, and to display it at night, creating special correspondences with the park surrounding the site. "The mirror-glass walls and roof reflect the trees and sky during the day, whilst during the night the Museum will become translucent, bathing the surrounding trees in light".[4]

Centre Pompidou: an air-conditioned loft of x cubic metres for contemporary art

The idea of an empty, unbuilt space, which in the Burrell Gallery project was still interrupted by a scenographic mechanical circulation system connecting the exhibition space to a mezzanine, was reworked in the competition project for the Centre du plateau Beaubourg, a centre dedicated to culture and contemporary art that Prime Minister and later French President Georges Pompidou intended to build in order to revitalise contemporary French architecture and offer a place to house the historical collection of the Musée national d'art moderne, the newly-born Centre national d'art contemporain-CNAC and Centre de creation industrielle-CCI and, finally, the future Bibliothèque publique d'information-BPI (the first information library addressed to public reading in France), and the Institut de recherche et coordination acustique/musique-IRCAM.

Conceived on the initiative of engineer Ted Happold of the Structures 3 division of the London-based engineering firm Ove Arup & Partners, the winning project in the Paris competition was developed by Richard Rogers and Piano, together with the Genoese architect Gianfranco Franchini, a former external collaborator first of Piano and then of the Italian-English team, and John Young, a collaborator and then partner of Richard+Su Rogers Architects and Piano+Rogers Architects. The as yet unresolved idea in the Burrell Gallery to use a perimeter structure to free up the interiors in Paris was

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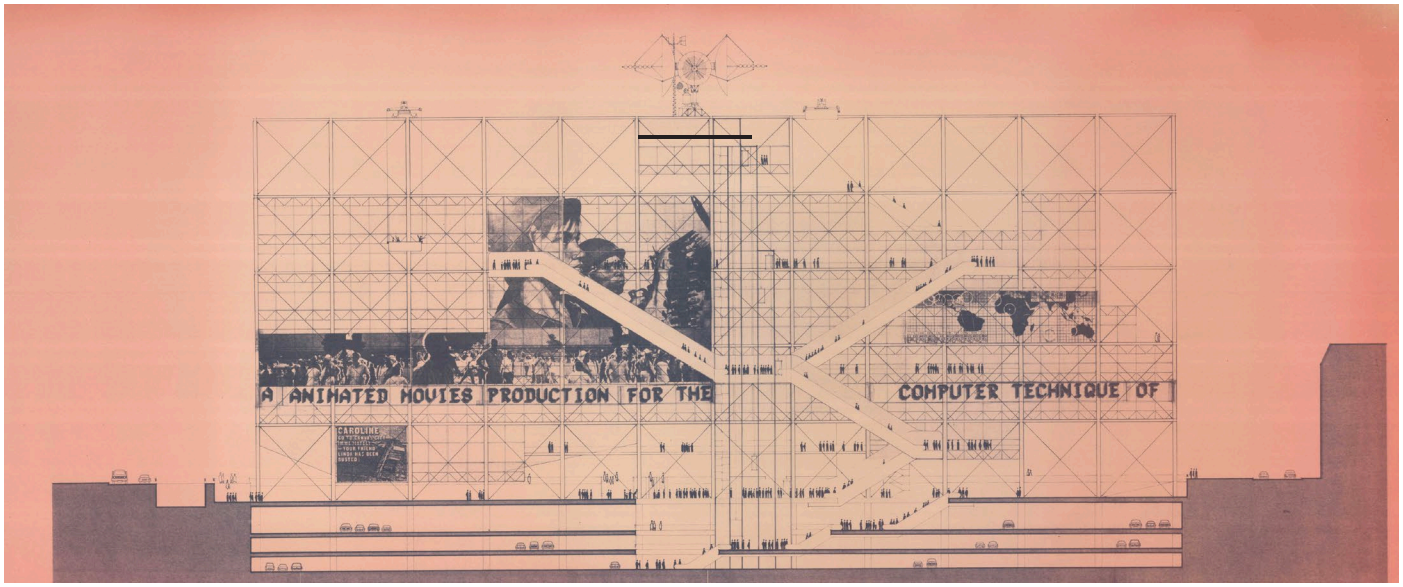
rendered in a pair of steel trusses over one hundred and sixty metres long, known as "3-dimensional walls", arranged at a distance of almost fifty metres from each other and conceived to support a sequence of platforms varying in size from 5500 to 7500 square metres



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and without intermediate supports. These platforms were "large" in order to accommodate all the functions indicated in the notice; they were "uninterrupted" because they avoided any type of encumbrance, from the structure to the technical organs ("totally uninterrupted floor space is achieved by limiting all vertical structure, servicing and movement to the exterior"); they were "flexible" because they allow any type of occupation and compartmentalisation ("the building offers maximum flexibility of use"); they were empty and therefore reduced to simple "floor areas" or "floor spaces". "[...] a number of large, flexible uninterrupted floor areas" is the definition given in the competition report.[5] Unlike the Burrell Gallery, for the Centre Beaubourg all the technical services were excluded from the Floor Areas, from the air conditioning ducts arranged in a cascade configuration on the 3-dimensional wall facing east, to the mechanical circulation system, whose scenographic complex of galleries, escalators and lifts was exhibited on the 3-dimensional wall to the west to be admired from a "sunken square" dug into the underground of the historic centre and extended to the entire project site.

Although Franchini studied the layout of the programme to be placed on the Centre's platforms, the idea that the platforms could accommodate any function was translated into one of the competition drawings, the 1:200 scale floor plan. Although it referred to a particular floor of what the team ambiguously defined as both a "grid" and a "building" – the Floor Area at an altitude of 71.20 metres above sea level – and despite the ambiguous choice of representing a battery of escalators, a partition and a toilet module inside it, this plan turned into the manifesto of an architecture reduced to a completely empty space, nothing more than a loft of x cubic metres

Fig. 05
Renzo Piano, Richard Rogers, Gianfranco Franchini (later Piano+Rogers Architects) and Ove Arup & Partners, Competition project for the Centre Beaubourg, elevation on the sunken square, Paris, June 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at the foundation in Genoa-Milan).

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of air.

The idea of allocating this loft to the kind of works of art contained in the Centre's collections appeared still ambiguous and uncertain. In the idea of Piano, Rogers and Franchini, the Centre wanted to be neither a traditional museum nor a classic library. It aspired to become an avant-garde educational institution that Piano, Rogers and Franchini had been thinking about since 1970. The team offered President Pompidou a "Live Centre of Information" for the production and exchange of a kind of counter-culture that at the moment had nothing to do with France's artistic heritage but with a topical genre ranging from "global disasters" to the technological advances of the West. The translucent and reflecting envelope experimented at the Burrell Gallery in Paris featured an original audio-visual envelope to be placed on the 3-dimensional walls and intended, in one case for the crowd gathered in the sunken square and in the other for the passing cars on Rue Beaubourg-Rue du Renard.

The fact that in the Parisian competition Piano, Rogers and Franchini were relying on the audio-visual technology to define a kind of anti-museum and that the nature of the museographic device for the works of art in the collection was uncertain is confirmed in the definition of the project shared in the opening of the competition report.[6] The fact that the Centre Beaubourg was presented as a "cross" between "an information-oriented, computerised Times Square" and the "British Museum" suggests that in the eyes of the architects, the audio-visual envelope was supposed to combine with a traditional kind of museographic display to be arranged on platforms, probably composed of rooms and galleries, and in any case incompatible with the kind of light,

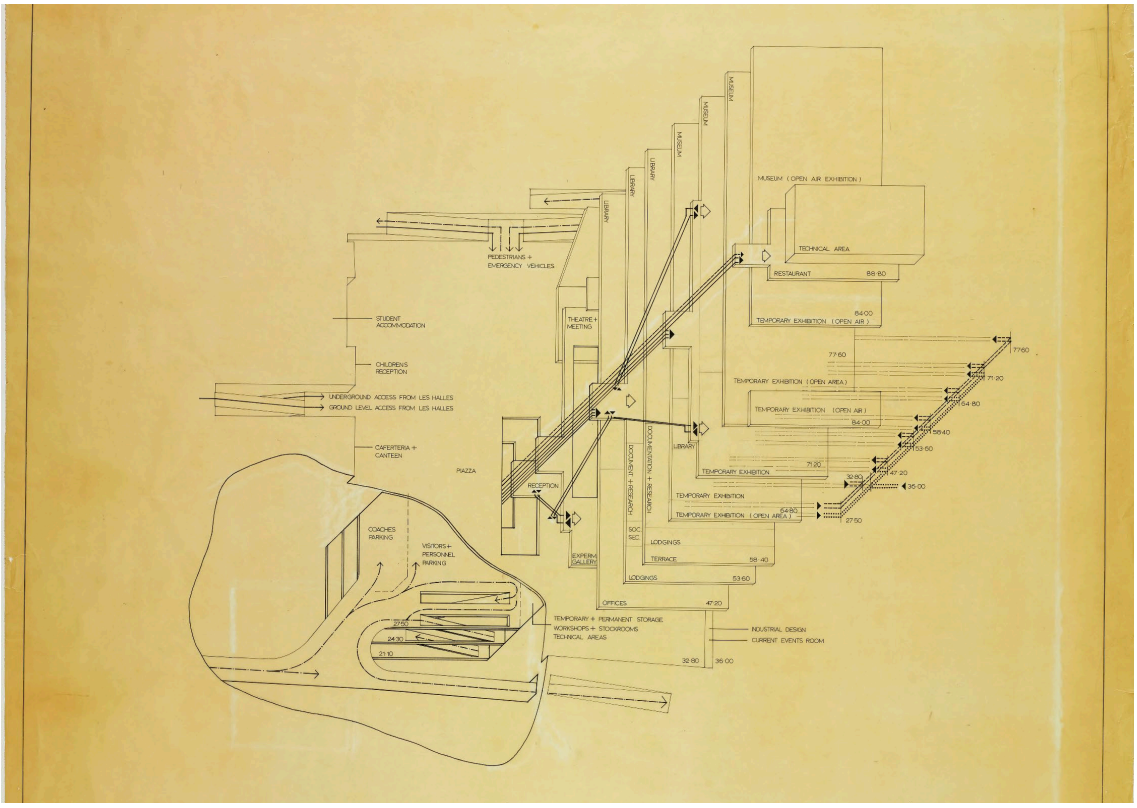

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Fig. 06
Renzo Piano, Richard Rogers, Gianfranco Franchini and Ove Arup & Partners, Competition design for the Centre Beaubourg, axonometry with uses, Paris, June 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives).

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reconfigurable equipment Piano, Rogers and Franchini were looking at.

The jury's verdict: a flexible suitcase for the satisfaction of users

In spite of the uncertainties entrusted to the competition text, the image of empty platforms where anything can happen did not go unnoticed by the members of the international jury headed by the French builder Jean Prouvé, who in July 1971 were called to the Grand Palais in Paris to identify one among more than six hundred visions that as many teams from all over the world were ready to offer Georges Pompidou. The interest of the jurors, and in particular of the four members called upon to represent the content of the future Centre – the museum director Willem Sandberg, the former director of the Département des arts et de lettres Gaëtan Picon, the curator of the painting collection of the Louvre Museum Michel Laclotte and the former director of the British Museum of London Frank Francis – could only go towards a proposal like the one presented by Piano, Rogers, Franchini and Ove Arup & Partners, since it intercepted the competition organisers' interest in a kind of space that was intrinsically flexible and evolutive. Confirmation lies in the very first ideas Pompidou shared with Sébastien Loste, the man he appointed to outline the content of what he already considered his "monument". Between the winter of 1969 and the spring of 1970, Loste associated the museum spaces of the future Centre with the image of "large, equipped hangars" mentioned by the director of the Moderna Museet in Stockholm, Pontus Hulten, one of the greatest protagonists of post-World War II museography and destined to beco-

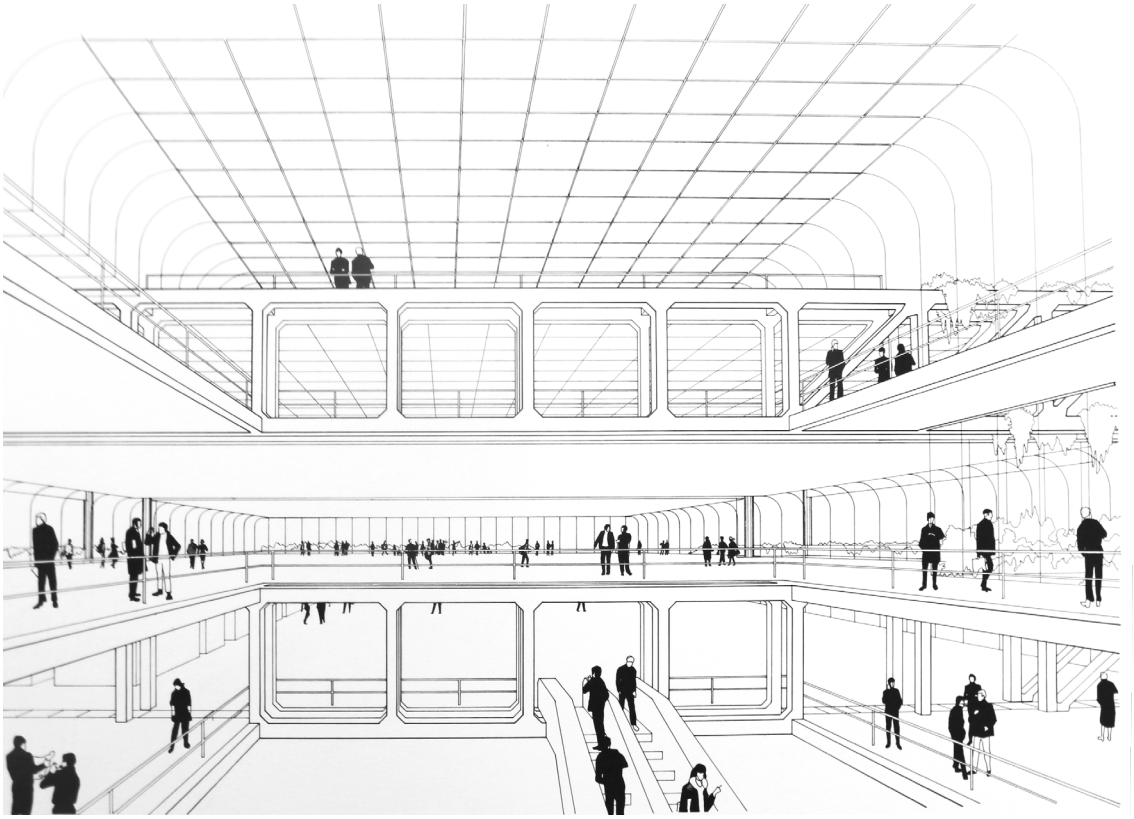

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Fig. 07
Piano+Rogers Architects and Ove Arup & Partners, Centre Beaubourg, First fine-tuning of the project (Avant-projet sommaire I), interior view with superimposition of servant and served floors and translucent envelope near the exhibition areas on the top floor, Paris, November 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives).

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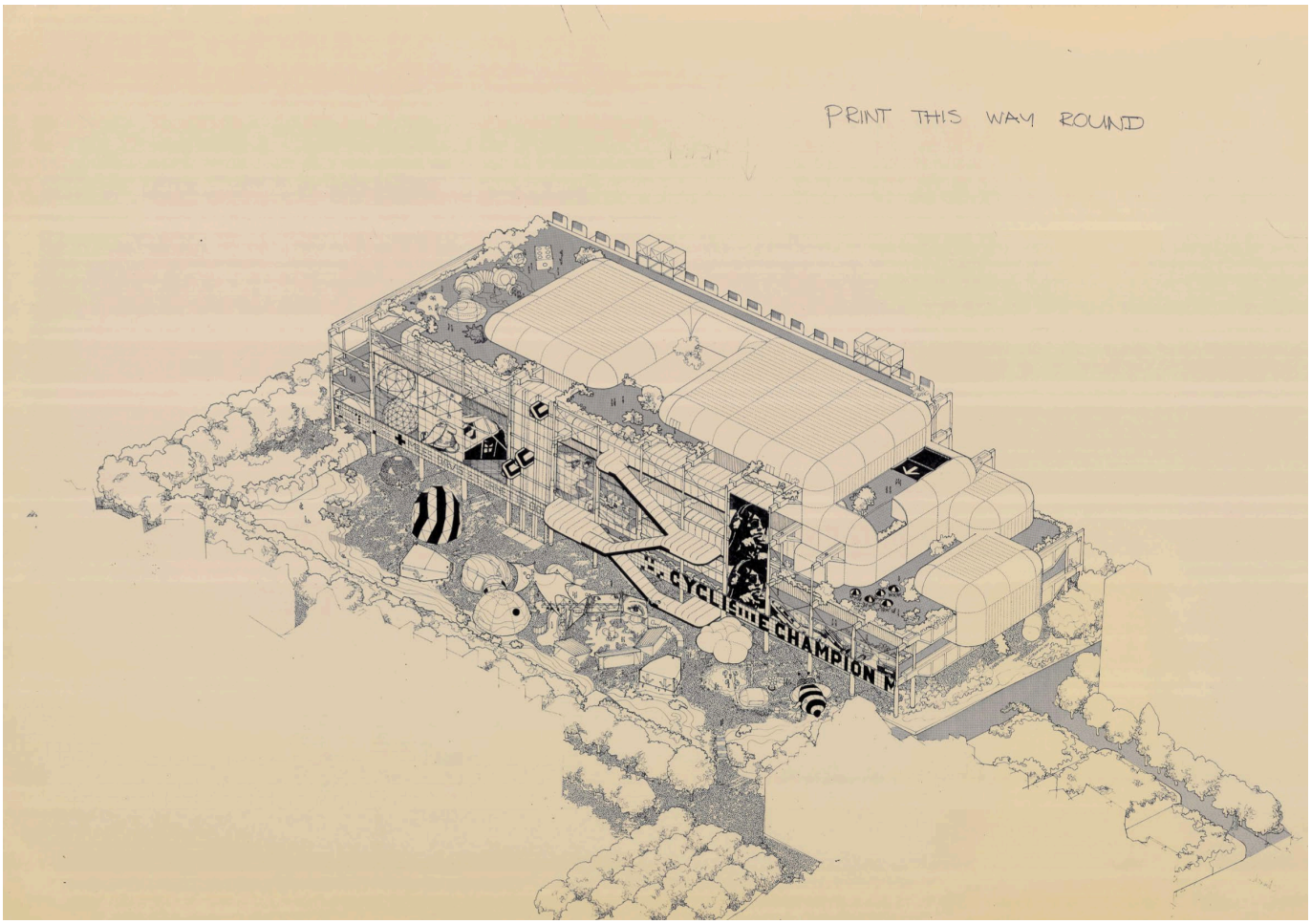

08

me the first director of the Département des arts plastiques of the Pompidou Centre.

The fact that the flexible platforms offered by Piano, Rogers, Franchini and Ove Arup & Partners satisfied a number of jurors is confirmed by their comments during the selection process. Firstly, they assigned the epithet "valise" (suitcase) to the future winning project, which, in addition to the box-like volumetry, had to do with the inherent flexibility of the Floor Areas. Secondly, in the framework of the final jury meeting for the Parisian competition, Francis emphasised the spatial "potentials" of the project; Laclotte considered it "the best [project] for the museum" and Picon, in the decisive intervention for the victory of this project, highlighted its "flexibility", declaring that its victory would "satisfy all the users [of the Centre]".[7]

The hesitations of the curator of the Musée national d'art moderne Bozo: "a refusal of the museum"

Following their winning in the Parisian competition, Piano, Rogers, Franchini and Ove Arup & Partners were invited to meet with the main members of the body set up to coordinate the realisation of the project, the Délégation pour la réalisation du Centre Beaubourg (Delegation for the realisation of the Centre Beaubourg), and the representatives of the institutions destined to be contained in the Centre. The Musée national d'art moderne was represented by its director Jean Leymarie

Fig. 08
Piano+Rogers Architects and Ove Arup & Partners, Centre Beaubourg, First fine-tuning of the project (Avant-projet sommaire I), axonometric view of building and active surface, Paris, November 1971. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives).

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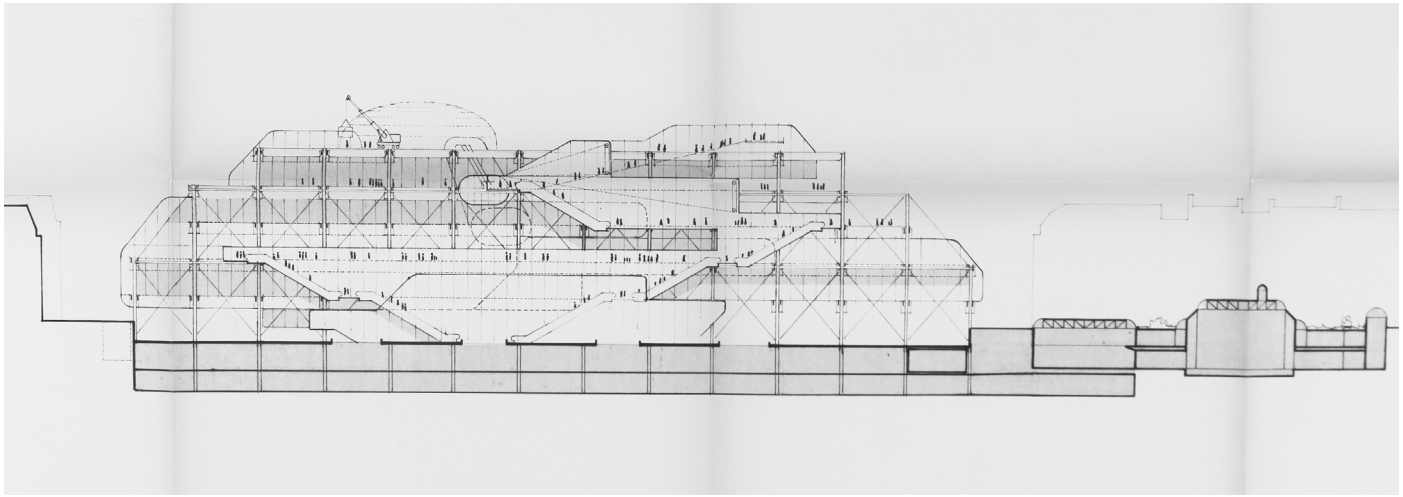

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Fig. 09
Piano+Rogers Architects and Ove Arup & Partners, Centre Beaubourg, draft for the second fine-tuning of the project (Amended Design), elevation of the building with organic, rounded profile envelope, Paris, February 1972. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at Archives Nationales,).

and curator Dominique Bozo, while the Centre national d'art contemporain was represented by its director Blaise Gautier and curator Germain Viatte. The representatives of the programming teams of the Délégation and the Centre national d'art contemporain approved the museum layout of the winning project, while the Musée national d'art moderne raised numerous observations. The meeting in this case took place in the presence of Loste, François Lombard, head of the programming team of the Délégation, Hubert Landais, adjoint of the director of the Musées de France Jean Chatelain and Bozo, but without Leymarie, whose absence was already a forewarning of what would in the following months turn out to be a resistance and then a boycott of the transfer of the museum's collection from its historical location at the Palais de Tokyo to the Centre Beaubourg. In the framework of the discussion with the architects, Landais criticised the ambiguity of the quotation on the British Museum, judging it as an outdated model; he applauded the use of an inherently flexible device; but he urged the team to back up what he interpreted as a volumetric approach to the museum with a detailed design. Landais hinted that the loft design had, at least in some cases, to be reworked into what he described as "rooms".[8]

From this stage of the project, Bozo also seemed to share Landais' opinion. After all, Bozo is the same person who, years after the inauguration of the Centre, would have undermined the flexible museum layout imagined by the architects with the kind of "rooms" Landais was speaking about in the summer of 1971. At that meeting, Bozo did not yet make explicit his own museum vision for the Centre, but he did hint at his aversion to the idea of reducing the museum to a sequence of empty platforms. Both in their nature and in their arrangement on the upper floors of the building (and consequently in a position away from the street and the main access to the Centre), according to Bozo, the Floor Areas of the Centre represented a contemporary tendency that he labelled as "a refusal of the very idea of a museum".[9]

Loste, however, who must certainly have identified those platforms with the avant-garde museology trajectory indicated by Hulten, defended the museum layout of the project from Landais' and Bozo's criticism

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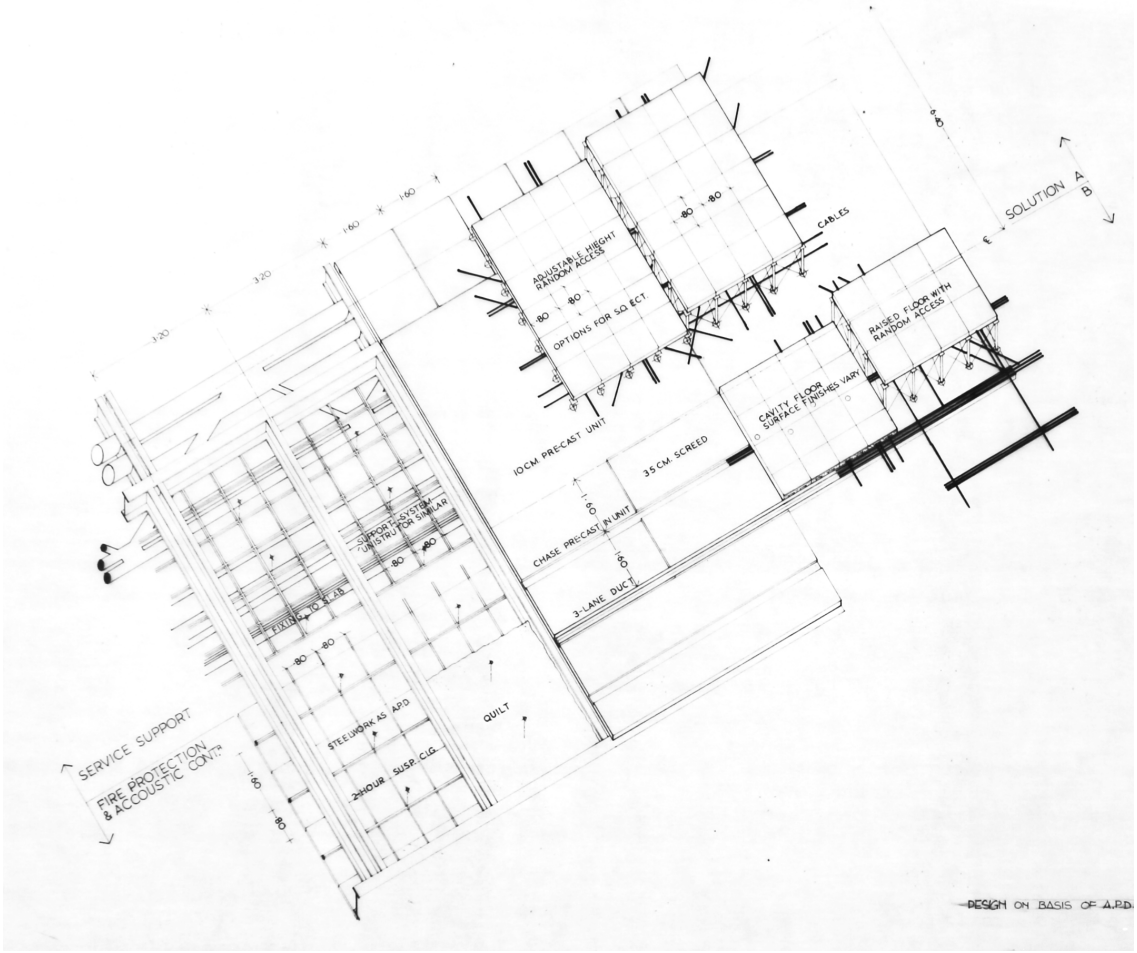
and urged the architects to equip the museum with a zenithal lighting system, according to a solution already experimented at the Burrell Gallery.

Architect did not, however, delve into the museum layout destined to fit into that container, perhaps by choice (as was made clear in the Burrell Gallery report), or perhaps because of the constant absences of the Musée national d'art mod-



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From the attempted organic transfiguration of the museum space, to equipping the loft with high-tech gadgets

During the first two years of the project's fine tuning, from the autumn of 1971 to the summer of 1973, the Piano+Rogers Architects team devoted itself to the perfectioning of the Centre's works of art container, from the nature of its envelope to the development of a series of highly technological equipment at the service of its users. Piano+Rogers

erne representatives at the periodic meetings for the adjustment between programme and project.

In the first phase of the project's fine-tuning, between the summer of 1971 and February 1972, under the direction of Tony Dugdale and then that of the young Anglo-Saxon trio composed of Mike Davies, Alan Stanton and Chris Dawson, all of whom had professional and academic experience with the Anglo-Saxon group Archigram, the Centre's platforms lost their nature of emptied and flexible environments. In the

Fig. 10
Piano+Rogers Architects and Ove Arup & Partners, Centre Beaubourg, Third fine-tuning of the project (Avant-projet detaillé), computer floor, Paris, November 1972

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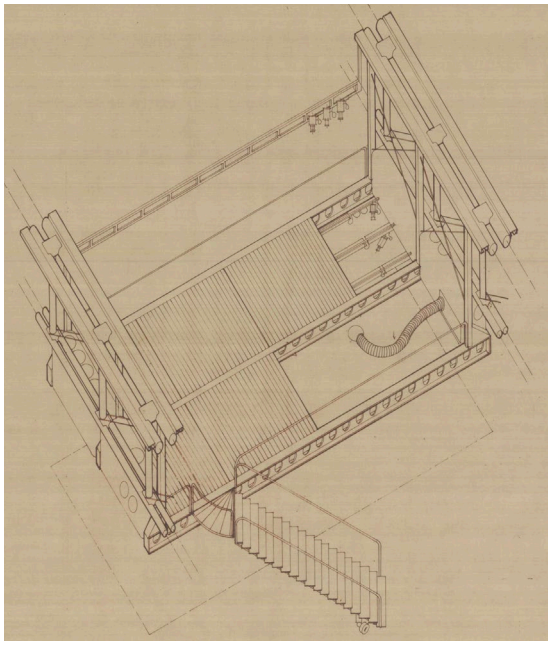
first preliminary design report, the so-called Avant-projet sommaire of autumn 1971, the platforms were transfigured into spaces traversed by colossal Vierendeel-type floor beams and enclosed by translucent shells offering the zenithal illumination sought by Loste at the price of an enclosure with *archigramsesque* rounded profiles similar to those of the Zip-Up series. The intention to experiment with a kind of space independent of the trilithic structure of the 3-dimensional walls and platforms was taken to extremes in the second Avant-projet sommaire drafted between December 1971 and February 1972. The Centre interiors were transfigured in a play of expansions and contractions of volumes borrowed from the pneumatic forms experimented and realised by Davies, Stanton and Dawson in the United States. The result consisted of a space for art made of concavity and convexity envisioned by Frederick Kiesler in the Endless House and then by David Greene in his Spray Plastic House.

At the instigation of Rogers and with the complicity of the Délégation, in the spring of 1973 the project regained the boxy appearance of the competition and Piano+Rogers Architects devoted themselves to equipping the platforms with high-tech gadgets. The floor of the loft was fitted with a modular counter-floor, known as "computer floor", which, crossed by an infrastructure for the passage of energy, fluids and data, allowed users to imagine evolving set-ups. To offer a further degree of flexibility to the interior, Piano+Rogers Architects equipped the Computer floor modules with pistons capable of transforming the ground into a three-dimensional relief reminiscent of the set design Maurizio Sacripanti had



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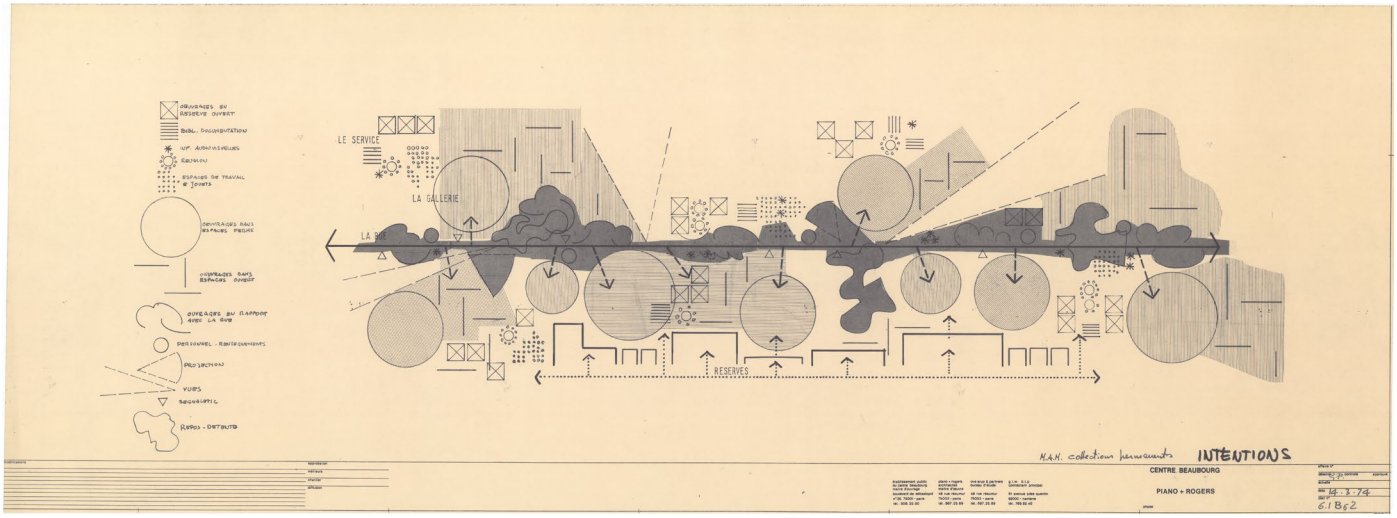
imagined for his *Teatro totale*. The computer floor was counterpointed by self-propelled mezzanines to compartmentalise the loft into double-height rooms for exhibition purposes. For the enclosure of the loft, an envelope of modular panels was envisaged. Even if Rogers would have liked to reduce it to a pioneering system of hot and cold air jets in the wake of the dematerialisation of the envelope promoted by the critic Reyner Banham, it finally took the form of a more traditional glass enclosure with shapes and proportions similar to those of the Burrell Gallery. The use of a smooth ceiling similar to that of Archizoom Asso-

Fig. 11
Piano+Rogers Architects and Ove Arup & Partners, Centre Beaubourg, Third fine-tuning of the project (Avant-projet detaillé), mezzanine, Paris, November 1972. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives) .

Fig. 12
Piano+Rogers Architects and Ove Arup & Partners, Centre Beaubourg, Third fine-tuning of the project (Avant-projet detaillé), Model of the Forum equipped with mobile and reconfigurable stalls for performances and meetings, Paris, spring 1973. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at the foundation in Genoa-Milan).



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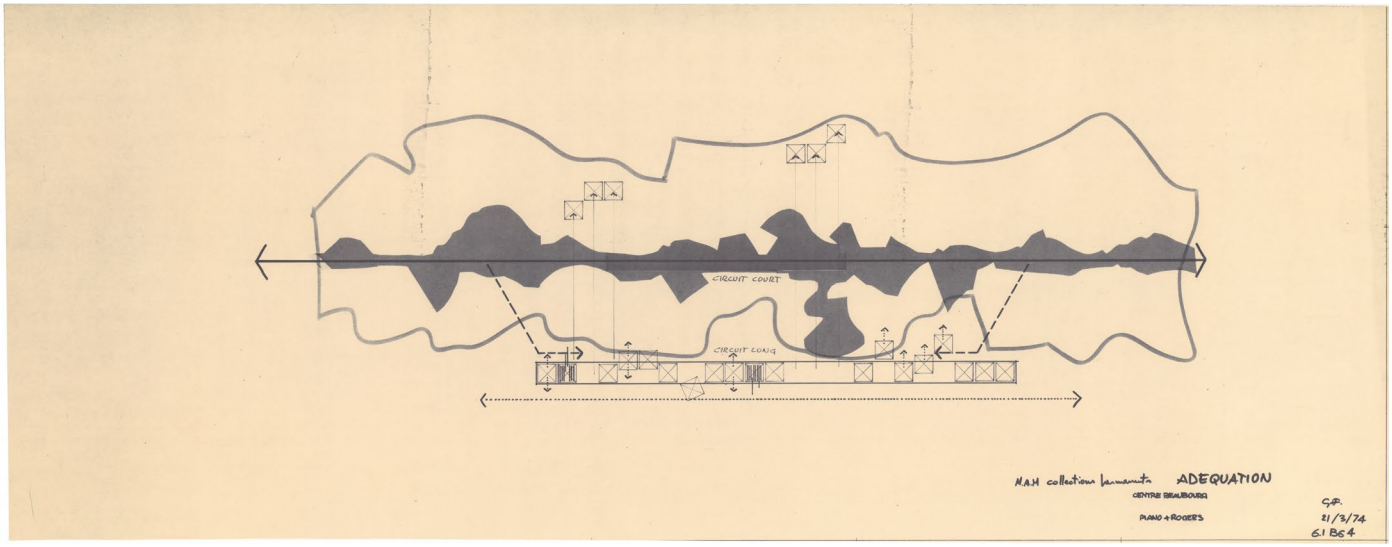

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ciati's *No Stop City* was called into question by the discovery of the aesthetic and decorative value of the air conditioning system. The colossal air treatment chambers invaded the roof of the building, putting an end to the hypothesis of a translucent roof for the illumination of art. Instead, the air distribution and recovery ducts were hooked to the ceiling in a configuration that, together with the imposing exposed Warren steel trusses, made the technical services the new protagonists of the Centre's interior.

The French fire authorities also contributed to undermining the spatiality outlined in the competition. They required the compartmentalisation of the loft into three sectors by means of heavy, thick firewalls which Piano+Rogers Architects would have liked to transform into retractable bulkheads to be activated in case of need, but which were ultimately translated into mighty opaque partitions. For the envelope, the fire authorities obliged the architects to forego a completely transparent closure and to resort to opaque diaphragms to be arranged in correspondence with the structural lines of the building and the air-conditioning system intended to run across the entire width of the 3-dimensional wall facing east. Although they devised multiple solutions to ensure total transparency of the envelope – the removal of the

Fig. 13 Gianfranco Franchini (Piano+Rogers Architects), museum layout for the collections of the Musèe national d'art moderne at the Centre Beaubourg, schematic plan, Paris, March 1974. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives).

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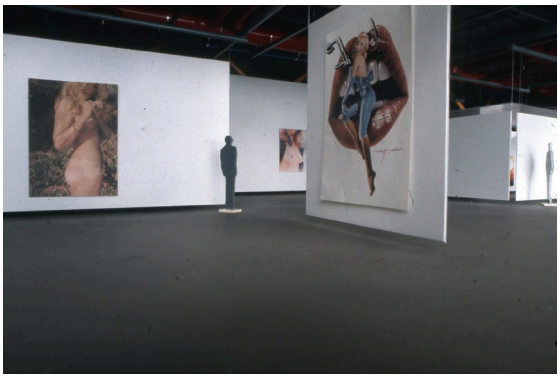

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Fig. 14
Gianfranco Franchini (Piano+Rogers Architects), museum layout for the collections of the Musèe national d'art moderne at the Centre Beaubourg, schematic plan with indication of the visitor circuits, Paris, March 1974. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at RSHP Archives).

Fig. 15
Shunji Ishida (Piano+Rogers Architects), Museum layout for the collections of the Musèe national d'art moderne at the Centre Beaubourg, model, view of suspended panels, Paris, March 1974. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at the foundation in Genoa-Milan).

Fig. 16
Shunji Ishida (Piano+Rogers Architects), Museum layout for the collections of the Musèe national d'art moderne at the Centre Beaubourg, model, view on suspended panels and "cinakothèque", Paris, March 1974. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at the foundation in Genoa-Milan).

metal frame and the use of pioneering reinforced glass are being studied – the architects and engineers gave in to the partial infill of the Centre's envelope with an opaque sandwich panel that on the 3-dimensional wall to the east, rendered the entire façade opaque, transforming it into a rear wall, while to the west it drew a heavy grid that turned the main façade into a windowed wall, thus putting a definitive end to what could have appeared as a "total light box" in the heart of Paris.

The museum layout by Piano+Rogers Architects: diaphragms suspended in a fluid and continuous space

Between the spring and summer of 1973, at a time when the impossibility of using the audio-visual and informational envelope that would revolutionise the very definition of a museum as a container for art had become explicitly clear, Franchini, by then in charge of the team in charge of defining the interiors and flanked by Stanton, drew up the first proposals for the museum layout of the Centre Beaubourg. Franchini and Stanton intended to immerse the visitor in a chronological itinerary to be developed along the longitudinal axis of the platform. The traditional circuit consisting of a succession of rooms and galleries enclosed by walls and ceilings was replaced by an open arrangement of panels where canvases could be hung according to a solution already experimented in Herbert Beyer's installation for the Werkbund exhibition at the Exposition des Arts Décoratifs in Paris, in the most famous installations of the British Independent Group, and in the monographic exhibition on Piet Mondrian that Mies van der Rohe adopted in his Neue Nationalgalerie in Berlin.

By using a "rolling beam" designed to hook onto the ceiling in the most diverse configurations to accommodate the exhibition panels and the lighting system, and by suspending the panels from the floor, Franchini and Stanton transfigured the wall into a diaphragm that no longer compartmentalised the space into an enclosed environment for the intimate contemplation of the work of art. The diaphragm preserved and celebrated the continuous space outlined at the competition – a space where art floated according to a solution that multiplied the points of observation of the canvas and pushed it to confront other works in the collection according to previously unimaginable visual and perspective games. Although there are no precise indications as to the reserves of the collection, it

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is possible that the containers that Piano+Rogers Architects started drawing on the platforms to generate a spatial organisation borrowed from the German *burolanshaft* to enhance the principle of the free plan could also be used to store and display works of art. From panels hovering on rolling beams to self-propelled capsules for the free appropriation of space, Franchini and Stanton are developing a display device that goes beyond the Miesian model that inspired them, enriching it with an unprecedented degree of mobility, impermanence and change.

The arrival of Hulten, the opposition to the expressive display of technology and the use of the metaphor of the village of huts

Following Leymarie's increasingly explicit resistance to the transfer of the art collection to the new Centre,[10] between autumn 1972 and spring 1973 Pompidou convinced himself to entrust the future Département des arts plastiques, born from the merger of the Musée national d'art moderne and the Centre national d'art contemporain, to Hulten, chosen after a round of consultation in which the presidential secretary for cultural affairs Henry Domerg and the director of the Delegation, Robert Bordaz, took part.

Having taken over the new functions at the Centre, Hulten expressed immediately a number of reservations regarding the studies of Piano+Rogers Architects. The Centre's loft certainly resembled the "large, equipped hangars" Hulten had indicated a few years earlier as the new direction of contemporary museology.[11] Hulten was also aware that the Centre's loft represented a great opportunity for an alternative layout – "Beaubourg is a rare opportunity to create a system that differs from what currently exists in the world".[12] Nonetheless, this was precisely the reason that led him to recognize that the complex mechanics conceived by the architects to make the interior of the Centre flexible were eventually incompatible with the questo of liberation of the work of art from its support. In Hulten's opinion, the rolling beam subjected the configuration of the installation to the movements limited by its own mechanics and this was unacceptable because "all systems for displaying works of art are always based on the need to adapt to an existing building" and Beaubourg was an opportunity to conceive "a completely free display layout".[13]

In order to protect the works of art from the cumbersome mechanics envisioned by Piano+Rogers Architects Hulten requested the elimination of the rolling beam and reacted to the opportunity offered by the loft in the definition of a cubicle installed on the ground, ("Mr Hulten felt the need for a fixed element"),[14] enclosed, where the structure and installations disappeared, where technology was reduced to air conditioning and light filtering through a permeable roof, and where art could be contemplated on a scale that was not that of the loft but that of the individual works, to create a "dramatic" and "intimate" effect on the public.[15] This cubicle could bring Hulten back to the room of traditional museology. In the choice of the name "cabane" (hut), clarified as early as October, Hulten

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revealed his willingness to colonise the undivided space of the loft with an element capable of generating original aggregations, which, a few months later, in December, would have been specified in the metaphorical images of the village and the labyrinth.[16]

With the same assumptions that led him to the hut, Hulten also transfigured the mezzanine and, from a self-propelled technological device, turned it into a closed and fixed container, where the works of art normally arranged in the museum's reserves could become accessible to the public, and where the suspension system could be used to extract the paintings with an original curtain mechanism.[17] In this way, Hulten revived the architects' idea of using container-capsules to arrange the collection's reserves but deprived it of the degree of freedom of movement provided by their original arrangement on the ground.

Although the huts allowed Hulten to create spatial aggregations new to museography such as the labyrinth, the desire to structure the visit according to a didactic itinerary that conveyed the evolution of 20th-century art guided him towards the linear solution suggested by Franchini and Stanton, which for Hulten, however, echoed the image of village dwellings arranged on the sides of a road. The aggregation of the huts on the sides of an axial path risked returning the layout of the Centre to the traditional configuration of a sequence of rooms and galleries, but Hulten avoided this risk because, true to the metaphor of the village, he arranged a maze of huts on either side of the main axis where the visitor could enter to discover the works of art. The result consisted of an itinerary based on the combination of two museum

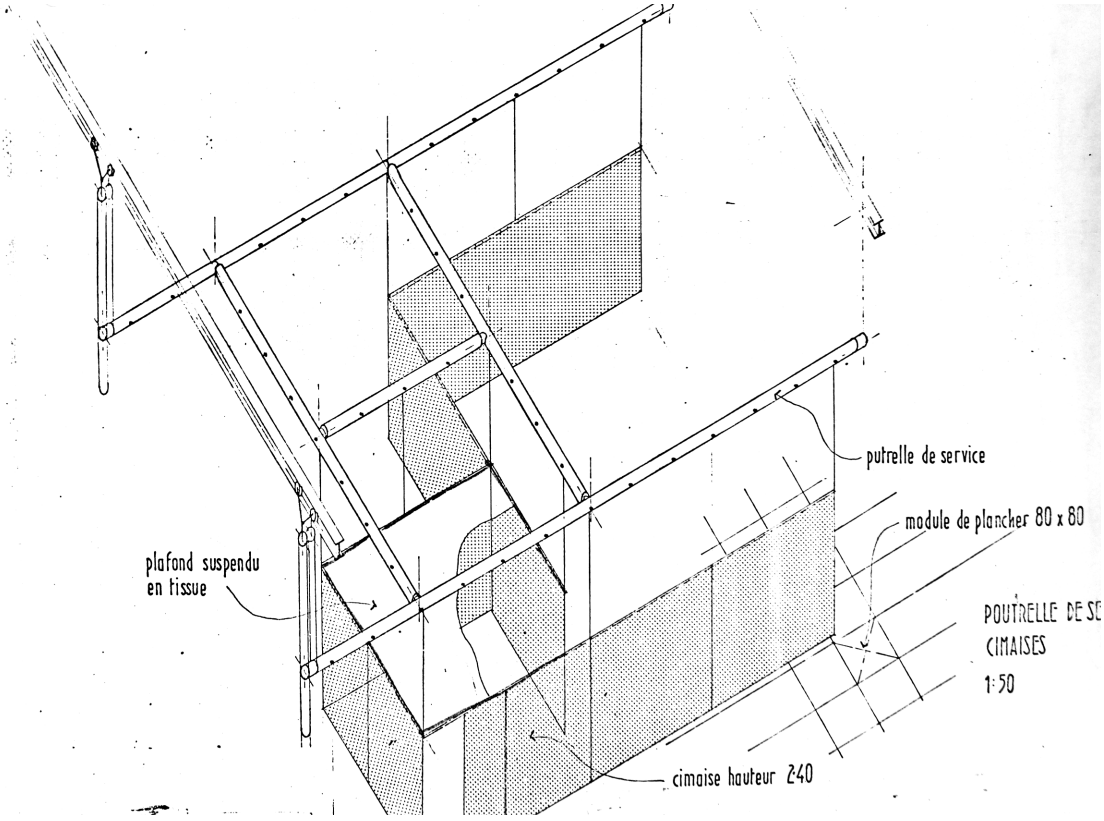

Fig. 17 Gianfranco Franchini and Alan Stanton (Piano+Rogers Architects), museum layout for the collections of the Musèe national d'art moderne at the Centre Beaubourg, detail of the panels with exposed tubular frame, Paris, summer 1974. Copyright Piano+Rogers Architects / courtesy Fondazione Renzo Piano (located at Archives Nationales,).

Boris Hamzeian
Piano, Rogers and Hulten for the museum layout of the Centre Pompidou. From the empty loft to the vernacular village of art
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circuits: one chronological-axial, to show the evolution of 20th century art through major works of art, and for this reason also suitable for a non-expert public; and the other, thematic-lateral, to allow visitors interested in particular works to penetrate between or inside the huts, to admire other works by the same author or of the same era, like a passer-by who, attracted by a shop window, enters to study the merchandise.[18] The number of huts also contributed to this analogy between the exhibition space and the evolution of art: they had to be more numerous in the areas of the route corresponding to historical periods of intense artistic production, they had to disappear and be replaced by rest areas in those of rupture or creative silence. For the display of art, in addition to huts and suspended containers for works in reserve, Hulten foresaw as well vertical panels resting on the ground for the display of individual works in a "dramatic" function, and as yet unspecified devices for arranging artworks horizontally on the ground.[19] Like Loste, Hulten also suggested the use of a zenithal lighting system on the fifth floor, but this appeal was to remain unsuccessful given the final positioning of the technical installations on the roof of the building.

In Hulten's vision, art had not to be confined to the exhibition areas of the Département des Arts Plastiques but should find its place in the Centre's main areas, from the terraces, to the entrance on the ground floor, to the 3-dimensional wall, in order to reach the visitor at every moment of his visit and to encourage a popular and democratic artistic enjoyment. Although the hypothesis of making the 3-dimensional wall a support for the contemporary artistic avant-garde was studied by Piano+Rogers Architects according to a solution combining information screens and optical art panels capable of interacting with the building's mechanics, this solution was destined to remain on paper. The fate of the Centre's large access room on the ground floor, now known as the Forum, is different. Hulten called for the transformation of this environment, which Piano and Rogers had imagined as a vital popular theatre for the crowd, into a museum showcase that anticipated for visitors the kind of artworks housed in the museum arranged on the upper floors of the building. The Forum took the form of an exhibition space to host large-scale contemporary art installations, of which Hulten already mentioned "an experience of collective creation" by Jean Tinguely and an installation by Salvador Dalí.[20]

The reworking of the museum layout without Piano+Rogers Architects: from village's huts to neighbourhood boutiques

Between December 1973 and February 1974, Piano+Rogers Architects had to deal with one of the most delicate phases of the project's fine-tuning. The difficulty of controlling the design of the colossal steel structure and the technical installations (both moved under the control of Arup's engineers) convinced Rogers to review his positions and to design not only the Centre's main equipment but all its elements, from furniture to ashtrays, in the attempt to reaffirm the role of the architects in the project of the Centre.

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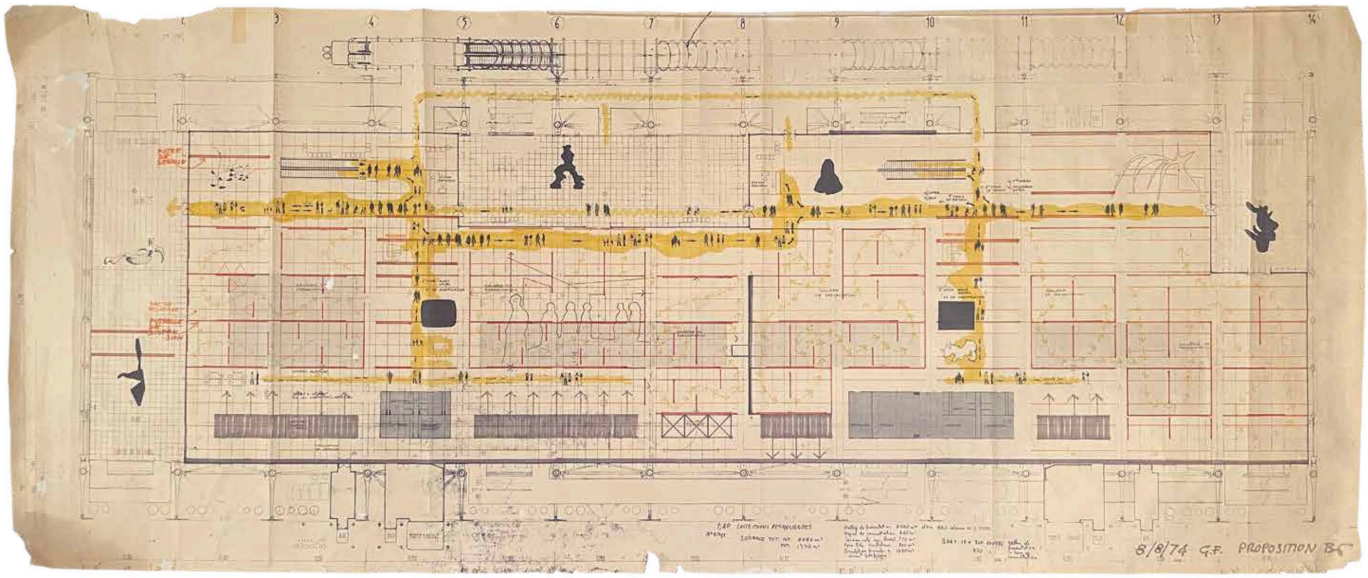

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Fig. 18
Gianfranco Franchini (Piano+Rogers Architects), Museum layout for the collections of the Musèe national d'art moderne at the Centre Beaubourg, plan, August 1974. Copyright Piano+Rogers Architects/ courtesy Fondazione Renzo Piano (private archive Gianfranco Franchini).

However, the continuous delays in finalising the architectural project convinced Lombard and his team to take an increasingly central role in its development to the point of convincing themselves to be able to finish it without Piano+Rogers Architects. With this idea in mind, in the first quarter of 1974 Hulten and his team pursued the study of the display device with a member of Lombard's team, Claude Pequet, who produced a preliminary study of the exhibition spaces in February.[21] The idea of a didactic presentation based on a historical and chronological circuit was specified in the decision not to make a distinction between French and foreign artists and to build the itinerary through a succession of "forerunners", "fauves" and "cubist", then proceeding with "Dada", "constructivist-oriented movements" and "Mondrian", and continuing with "Surrealism" and "Calder", up to contemporary trends such as English and American "Pop Art" and Optical Art with authors such as Victor Vasarely. Pequet also reworked the urban analogy of the circuit, and the image of the village huts next to the street is turned into that of boutiques to be explored, from shop windows to backrooms. According to this analogy, the "street" became the place for the "informative-pedagogic" route, the "shopwindow" that for the "exemplary works of art", the "boutique" that for the "significant works of art" and, finally, the "backrooms" that for the "documentary works". Pequet also specified the dimensions of the hut/boutique in a parallelepiped 5 metres long, 6 metres deep and 3 metres high, but soon realised that this arrangement could not be extended to the entire collection for lack of surface area.

The comeback of Piano+Rogers Architects and the reaffirmation of a Miesian device with accentuated technological equipment

When Piano+Rogers Architects regained control of the project in spring 1974, the study of the museum's layout also returned into the hands of the architects. On the basis of the surface problems of Pequet's solution, Franchini and Stan-

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ton proposed that the huts should be combined with display panels "freely arranged in the space" and "panels assembled according to open compositions", both of which bring back the De Stijl and Miesian museum layouts conceived the previous year. It is no coincidence that it was these two solutions and not the hut that Franchini and Stanton reworked in spring 1974 by means of models and technical drawings.[22] The panels took the form of rectangular "voiles" conceived over the entire height of the floor (7 metres), to serve as a backdrop for works of art, while the assemblages were specified in De Stijl compositions of thin panels lower to the ground but still connected to the floor truss by cables attached to a "service beam", which was nothing more than a light variant of the rolling beam. The drawings produced in March also show an attempt to bring the burolandshaft spatial organisation back into vogue with a compromise solution that on the one hand brought the containers for the works of art in reserve back on the ground and on the other reorganised them within a kind of structural linear spine to be placed at the side of the main circuit from which they could be extracted as required.

Franchini and Stanton put an unprecedented emphasis on the visual and aesthetic presence of the artwork supports. The use of panels with tubular metal frames left exposed, their suspension to the ceiling truss, their sizing according to the modular system of the computer floor and the enclosure, and the use of metal systems for fixing the paintings left exposed, all these solutions made clear the intention to relate the display support to the mechanical and technological aesthetics that had already invaded the ceiling, to the point of making the museum display yet another cog of the highly technological machine that the Centre Pompidou was supposed to be.

Towards the final compromise for the Centre Pompidou museum works of art: thick walls and translucent curtains suspended from the ceiling

The discussions between Piano+Rogers Architects and Hulten and his collaborators on the design of the museum's layout that took place between 1975 and 1976 should be interpreted as the search for a compromise between two museum visions that essentially diverged on the aesthetic and visual preponderance of the technological and service equipment. At this stage of the project, in fact, architects no longer intended to simply display these machineries on the ceiling. They wanted to boost their decorative and aesthetic appearance featuring them thanks to a pop colour code of garish yellow, blue, red and green tones capable of revealing the function and nature of each element.

Under pressure from Hulten, Piano+Rogers Architects reintegrated the huts into the museum layout. From individual panels to any kind of open or closed assembly, all partitions abandoned the nature of light diaphragms framed by tubular frames to turn into boxy, hollow exhibition panels – an ambiguous compromise between Hulten's vision and that of the architects. In its volumetric nature and significant

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thickness (almost ten centimetres), the panel, at Hulten's instigation, seemed to reaffirm the concept of the wall as the preferred solid and stable support for 20th century art. This position was definitively undermined by the final choice to suspend the panels a few centimetres above the ground by means of the system of cables and service beams conceived by Franchini and Stanton, eventually made even more complex by fastening points hidden in the ground to give the panel greater stability.

The same hesitations about the conceptual and spatial nature of the support for the Centre's artworks are reflected in the roof of the hut. Hulten and Bordaz would like to provide it with a flat, opaque roof to make it an intimate, enclosed place, while Piano+Rogers Architects wanted to free it from any kind of roofing to reaffirm its nature as a diaphragm suspended in space and to relate the artwork to the ducts running through the ceiling. Hulten succeeded in de-emphasising the problematic visual presence of these elements through a pictorial treatment in white of all the ceiling ducts in the museum floors of the Centre. Hulten also managed to provide the huts with the much sought-after cover, but the fact that it took the form of a thin fabric curtain attached to the ceiling and suspended a few centimetres from the top of the hut's walls reaffirmed the nature of the hut as an open assemblage of diagrams in continuous space.[23]

On 31 January 1977, the museum display of the Département des arts plastiques was finally opened to the public. All its elements, from the hut and panels of the permanent collection to the accessible reserves eventually suspended on the ceiling and known as "kinakoteques", to a pioneering "mur d'images" designed by Young for the Centre de création industrielle, were suspended from the ground and presented to the visitor as technological gadgets ready for reconfiguration and change. Their systematic suspension, however, no longer had anything of that natural propensity for displacement, flexibility and reconfiguration with which Piano+Rogers Architects intended to make the centre a self-propelled machine. As will be proven by the limited reconfiguration of the museum display between 1977 and mid-1980, the museum layout by Piano+Rogers Architects and Hulten turned the suspension from the ceiling into the symbolic form of a degree of flexibility that the Centre was intended to possess, which the museum layout failed to offer to the full, which Bozo would undermine in 1985 with the refurbishment designed by architect Gae Aulenti, and which only the architects and curators called upon to direct the Centre's approaching transformation (2025-2030) could bring back.

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Endnotes

1 John Young, in dicussion with the author, 25 July 2017.

2 Piano+Rogers Architects 1971.

3 Piano+Rogers Architects et al. 1971.

4 Piano+Rogers Architects 1971.

5 Piano+Rogers Architects, Ove Arup & Partners 1971.

6 Piano+Rogers Architects, Ove Arup & Partners 1971.

7 Loste 1971.

8 Lombard [attr.] 1971.

9 Lombard [attr.] 1971.

10 Domerg 1972a, 1972b.

11 Établissement public du Centre Beaubourg 1973a, 1973b, 1973c.

12 Établissement public du Centre Beaubourg 1973c.

13 Établissement public du Centre Beaubourg 1973a.

14 Établissement public du Centre Beaubourg 1973c.

15 Établissement public du Centre Beaubourg 1973c.

16 Établissement public du Centre Beaubourg 1973b, 1973c.

17 Établissement public du Centre Beaubourg 1973b.

18 Établissement public du Centre Beaubourg 1973d.

19 Établissement public du Centre Beaubourg 1973c.

20 Établissement public du Centre Beaubourg, 1974.

21 Pequet 1974.

22 Stanton, Franchini 1974.

23 Centre National d'Art et de Culture Georges Pompidou 1976.

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Abreviations:

AN: Archives Nationales, Paris

AP: Private Archives

C: Collection

CNACGP: Collection Centre National d'Art et de Culture Georges Pompidou

F: Folder

RSHPA: RSHP Archives, London.

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