

Global Architecture

# 世界建筑

Piano + Rogers  
Ove Arup Engineers  
Centre Beaubourg, Paris, France,  
1972-1977  
Edited and Photographed by Yukio Futagawa



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**世界建築**

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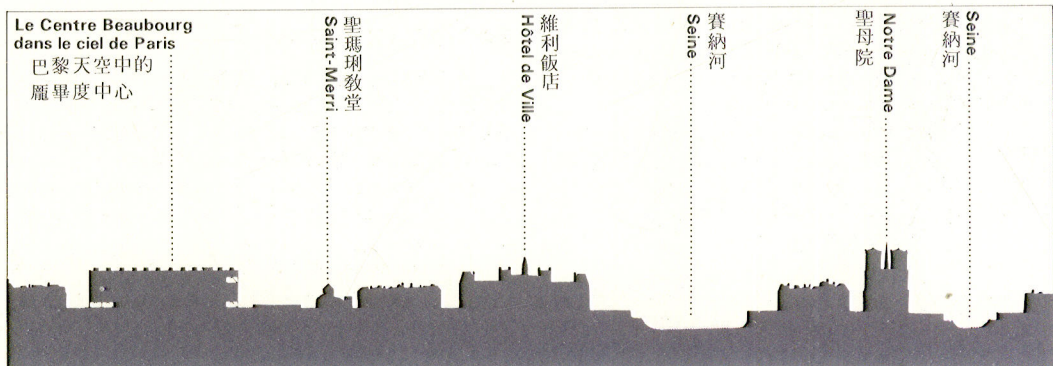
## ● Competition Brief 1971

On December 11, 1969, the French President decided to have a Centre erected in the heart of Paris, not far from Les Halles, devoted to the contemporary arts, which would include a public library of all-encompassing scope. This decision is of singular value at a time when the traditional notions of art and, moreover, of culture itself, seem to be undergoing re-examination. The purpose is not merely to summarise the 20th century, however prestigious this may seem, nor to speculate about the future, but to assert that by means of its fertility, and even its contradictions, creativity in all its palpable forms has become the most complete and direct means of expression of our time. The meeting, in one place, of books, the fine arts, architecture, music, cinema and industrial design — which has not yet been recognised as an art form in our culture — is an idea of great originality. This confrontation should enable a far greater public to realise that although creativity affects an appearance of liberty, artistic expression is not inherently autonomous, its hierarchy is merely fictitious, and that there is a fundamental link between today's art forms and the productive relations within society.

The execution of this scheme will endow Paris with an architectural and urban complex which will mark our century.

Essentially, the project includes the following:

- A Public Library. This is to be of a new type (one million volumes, 3000–4000 visitors a day) having the cumulative advantages of an encyclopedia and an anthology. Readers will be able to consult freely the finest works and pictorial documents in all fields, which will be kept constantly up to date in relation to the progress of knowledge and of current events. Similar libraries exist abroad, for example in New York or Berlin. This one will be unique in France.
- The transfer and re-organisation of the National Museum of Modern Art, currently located on Chailot hill (Avenue du Président Wilson), where it has



been since 1937. Once they are placed in an adapted setting, the exceptional quality of its collections should make it one of the most frequently visited Modern Art museums in the world.

- A focus on all contemporary activities (exhibitions, documentation, research) which are presently handled by the National Museum of Modern Art and the National Centre of Contemporary Art.
- A Centre of Industrial Design, brought into existence by the Central Union of Decorative Arts.
- Multi-purpose halls for theatre, music and cinema will be used not only for specific activities, but also for combined performances. These halls, to be used also for lectures and seminars, are an indispensable part of the Centre.
- Rooms equipped for contemporary musical research. These activities will only be meaningful if they convey a shared experience, permitting a mixture of ideas and men. None can be self-sufficient: all are needed. Unity must be created by the public.

This complex will be unique in several respects:

- Its location in the very heart of Paris is exceptional.
- The combination of an all-encompassing library and a museum has famous precedents: the Royal, now National Library, with its medals, antiques and

engravings departments, and the British Museum in London. But such a combination has not been attempted in the 20th century; the aim for permanent education which has inspired it and the will to create a large centre for documentation on all subjects give the undertaking an experimental aspect.

— Indeed, the entire Centre has been inspired by an original perspective, that of constantly renewing information: news of artistic creation in its many forms, news of industrial design, and especially the constant keeping up-to-date of those institutions, Library and Museum, which may be considered the memories of ideas and forms.

— Finally, if it is true that certain libraries and museums are to be considered among the noteworthy achievements of the 20th century, never before has the conception and the execution of such a complex been the object of an international competition.

In response to the hopes which the Centre embodies, it will attract many people of all nationalities, origins and ages. It will be visited by approximately 10 000 persons a day:

- Primarily, the people who live in the district, for whom the presence of the Centre should be a familiar element of their daily lives, and perfectly integrated into the urban environment;

## ● 1971年的競圖要旨

1969年12月，法國總統決定在雷札勒區附近的巴黎市都心地帶，建造一個以發展現代藝術為主旨的文化中心；它將包括一個網羅各門藝術領域的公共圖書館。正當傳統的藝術觀念、甚至於文化觀本身面臨再檢討之際，這個決定具有非凡的意義。就如衆所週知，其目的既不是給20世紀的發展作一個總結，也不是揣測它的未來；而是明白地揭示，由於20世紀的豐饒，甚至其矛盾，以任何可覺知之形式顯現的創造力，已經成為我們這個時代最徹底最直截了當的表現方式。而將各種藝術形式如文獻、美術、建築、音樂、電影、以及在我們的文化體系中尚未被肯定為一種藝術形式的工業設計等冶於一爐的想法，無疑是一種具有偉大原創性的意念。這種面對面的方式，將會使更多的世人了解：創作行為雖然有著任性的外貌，但藝術家的行事並非天生自主，其層系亦絕少虛構；而是當今各種藝術形式與社會的生產關係之間，具有一種根本的牽連。

這個計畫的實施，將會賦予巴黎一個銘記本世紀特質的建築與都市綜合體。

原則上，這項工程包括下列各部門：

- 一個公共圖書館：這將是一個新型的圖書館（藏書百萬冊，預估訪客每日約為三千到四千人），網羅各種百科全書及文選全集。讀者可

以自由自在地查閱各種領域最好的作品、圖片與文獻，這些資料將隨著最新的知識與時潮演變而不斷增加。類似的圖書館他國也有，如紐約或柏林，但它在法國境內却是獨一無二的。

● 搬遷及改組國立現代美術館：原館自1937年起即建於賽洛特山（威爾遜總統大道）。一旦重新安置在適當的地點時，它將可因其收藏品的獨特水準而成為世界上訪客最頻繁、屈指可數的現代美術館。

● 取代目前國立近代美術館及國立現代藝術中心的地位，成為所有現代藝術活動（諸如展示、資訊收集及研究等）的焦點。

● 由裝飾藝術中央聯盟籌組一個工業設計中心。  
● 供戲劇、音樂與電影之用的若干多用性會堂：不僅是專業性的活動場所，同時也可以用來作混合性的表演。它們也可以作為演講及研討之用，乃是本中心不可或缺的部份。

● 為現代音樂研究所設的空間：這些活動唯有能夠傳遞一種共有的經驗，並容許各種意念與人群的混合，它們才有意義。沒有任何一種活動是自我完全的：所有的活動互相依賴，其統一性須賴大眾來達成。

這個複合體在某些方面將是獨一無二的：

- 它那位於巴黎市最核心地帶的基地，是絕無僅有的。
- 把一個包羅萬有的圖書館與一個美術館組合起來的做法，雖然已經不乏先例，譬如皇家圖

書館，也就是現在的國家圖書館及其金器、古物及鑄版品收藏部門即為一例，他如倫敦的大英博物館。但類此的組合在20世紀却從未出現過；其作為激發創作意慾之永久性教育的目的，以及開創一個紀錄所有事物之文獻中心的意圖，使得這項建館工作帶有實驗性的色彩。

● 的確，這整個中心的誕生乃是導源於一種原創性的眼光，那就是不斷推陳出新的情報資訊，各種形式之藝術創作的訊息，工業設計的訊息，特別是那些永遠保持走在時代先端的機構——圖書館及美術館——它們可看做是創意與藝術形式的記憶貯存庫。

● 最後一點，即使有某些圖書館及博物館會被認為是20世紀顯赫的成就。但是，在此之前，却從未曾有過像這樣一種複合體的觀念與實現是通過國際競圖來完成的。

館方的期望是，一旦中心落成，它將吸引許多包括各種國籍、種族與年齡的訪客。每天約為10,000人次。

● 主要的是這一帶的居民：對他們而言，本中心的存在將成為他們日常生活的一個親密元素，而且它將完全溶入此地的都市環境之中。

● 年輕人：對他們而言，本中心將成為他們的教育中的一個生動有力的要素。它尤其歡迎對現代創作形態感興趣的學童與學生。

● 藝術家：除了中心所提供的學習的可能性之外，它還將以展示廳及工作室的方式提供藝術



- Young people, for whom the Centre will be a dynamic factor in their education. It must particularly welcome schoolchildren and students interested in present-day creative forms;
- Artists. In addition to the possibilities for learning offered by the Centre, it will provide facilities for experimentation, in the form of exhibition halls or studios, where they will have the possibility of producing their works in the presence of, or with the participation of the public;
- Workers. They will be able to quickly research a given subject and acquire complete knowledge essential to their professional activities, or their culture, while being informed of research data in all fields. In this way the general public will no longer be an outsider to specialised documentation centres reserved for a few privileged users. The results of this participation should provide an occasion to study means of overcoming the dangers of isolation in research;
- Industrialists, interested in the imaginative forms generated by interior and urban environmental design studies, will find solutions to problems created by the necessity for coherence between contemporary design and its uses;
- In general, the Centre, aimed towards a vast public, will present a total view of contemporary civilisation by means of its varied approaches.

This Centre should not therefore stay isolated; its activity will necessarily overflow the limits of the building, leaving its mark on the district and spreading throughout France and other countries by means of travelling exhibitions, television broadcasts, publications, etc. The possibility of consulting from a distance reference cards programmed into the Library's computer will create a service for the diffusion of knowledge which will be well appreciated.

家從事試驗的設施。在此，藝術家們將會獲得在大眾面前或透過大眾參與從事創作的機會。

- 工作者：一旦各種領域的研究資料到手，他們將能夠非常迅速地研究某一特定專題，並獲得其專業活動或教養上必要的完整知識。如此，一般民衆將不再是那些爲了少數人而設的專門性文獻中心的局外人。這種參與的結果，將提供一種探討克服研究工作孤立危機之對策的良機。

- 對於由室內及都市環境設計研究所產生的富於想像力的形態有興趣的企業家，將可以找尋到從現代設計及其用途間之一致性的需要所產生的問題的解答。

- 一般來說，這個以廣大群眾爲對象的中心，將運用各種方式來刻劃現代文明的形貌。

因此，這個中心不應該孤立於其所在地，它的活動必須超越建築物的限制，經由巡迴展覽、電視傳播、出版物等方式，非但標示出本區的特質，甚至於澤及法國全境與世界各國。圖書館的電腦設備容許由館外遠方以諮詢卡片程式進行諮詢工作，它將開創一種廣受歡迎的普及知識的服務。

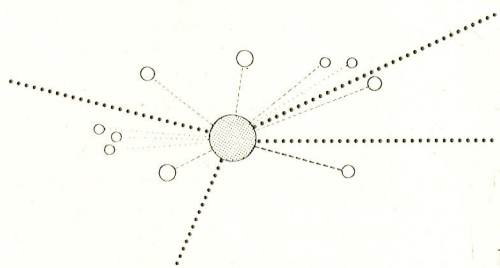
## ● Summary of Activities 1971

### 1. GENERAL EXPOSE ON THE ARCHITECTURAL CONCEPT WITH REFERENCE TO THE GUIDING PRINCIPLES OF THE CENTRE

We recommend that the Plateau Beaubourg is developed as a 'Live Centre of Information' covering Paris and beyond. Locally it is a meeting place for the people.

This centre of constantly changing information is a cross between an information-orientated, computerised Times Square and the British Museum, with the stress on two-way participation between people and activities/exhibits.

The Plateau Beaubourg information centre will be linked up with information dispersal and collection centres, throughout France and beyond; for example, university centres, town halls etc.



Information is shown in three areas:

- Within the building, which offers a number of large, flexible uninterrupted floor areas (varying between 5500–7500 sq.m.) housing books, fine arts, architecture, cinema and industrial design, etc.
- On two facades, one facing west across a sunken square and the other facing Rue Saint Martin. A 3-dimensional loadbearing wall carries constantly changing information, news, what's on in Paris, art works, television, robots, temporary structures, electronic two-way games and information, etc. The facade facing Rue de Renard will have visual displays related to moving traffic, whilst the facade

facing the sunken square will relate to pedestrians.

iii The large sunken square, including the open area under the building and the area around the edge of the square, is the horizontal continuity of the facade and will have, apart from the above-mentioned items, such things as mobile exhibitions, live theatre and music, games, stalls, meetings, parades, competitions, etc.

Around the edge of the square are shops, cafes, children's reception area, current events rooms, information rooms, Design Centre, etc. These areas, many of which lie along pedestrian underpasses, act as filters and links with surrounding pedestrian environment.

### 2. URBAN INTEGRATION

In order to segregate pedestrians and vehicles, a pedestrian sunken square has been formed 3.20m below ground level, which links through at low level to the surrounding pedestrian routes. Rue de la Reynie is sunk to the same level, thereby forming an extension of the square.

We propose closing Rue Saint Martin and removing it, opening the cellars and front doors of the neighbouring housing directly on to the sunken square, if possible converting the houses into studios and dwellings related to the new centre. The cellars and shops above being used for cafes, restaurants, reception areas, information areas, and other commercial and cultural activities and thereby giving more life to the square, whilst at the same time enlarging it, removing an unnecessary vehicular obstacle in a major pedestrian area and enhancing the scale of the square.

The building in the square has two scales. The 3-dimensional steel grill on the two long sides is light, semi-transparent and higher than the neighbouring existing buildings. The much lower enclosed volume inside is broken up by the grill and the applied information coming down in scale at the south end, with stepped terraces to relate to the neighbouring buildings.

## ● 應徵競圖設計案概要1971

### 1. 關於本中心之指導原則的建築概念的一般性陳述……

我們主張龐畢度中心應視同一個涵蓋巴黎，甚至於巴黎以外地區的「活的資訊中心」來規劃。對當地而言，它則是一個人群聚會的場所。

這個不斷更新情報資訊的中心，乃是一個情報化、電腦化的時代廣場與大英博物館的綜合體，而且強調群眾與活動／展示之間的雙向參與。

龐畢度中心的資訊中心將與法國全境以及國外的資訊傳播及收集中心，如大學中心、市政中心等，聯結成資訊服務網。

情報在顯示於三個區域：

- (1) 建築物的內部：這裡有許多面積廣大，而且毫無阻隔的彈性空間（面積約爲 5500～7500 m<sup>2</sup> 不等），存放文獻、工藝、建築、電影及工業設計等領域之資料。
- (2) 兩個立面上：其中之一爲西向跨越低陷之露天廣場的一面，另外就是面向聖馬丁大道的一面。三向度的承重牆披掛著各種不斷變化的消息，如新聞、巴黎時事、藝術創作、電視、機器人、臨時性的構架、雙向的電子遊戲及資訊等。

面向雷納路的立面上會有配合川流不息之交通的視覺展示；而面對露天廣場的立面則出

現配合行人的視覺展示。

(3) 廣大的露天廣場，包括建築物底下那片開放的空間以及圍繞於廣場邊緣的地區：這些地帶可以說是立面的一種水平延伸，在這裡除了上面曾經提到的項目之外，還會有其他的各種活動，如流動性的展示、生活劇場、音樂、遊戲、攤販、集會、遊行與競賽……等。

圍繞著廣場邊緣的，則是一些商店、咖啡店、托兒所、時事問題室、資料室、設計中心等。許多設置於地下步道沿線的這些空間，它們的作用就像是中心與周遭步道環境間之過濾網或鏈環。

### 2. 與都市環境的整合關係……

爲了隔離行人與車輛，在低於地面 3.2 M 之處規劃了一個步行的露天廣場，它將中心的底層與週遭的步道連通。雷尼爾路也沉落到相同的平面，因此形成了廣場的一種延伸。

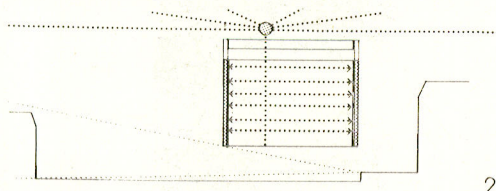
我們建議把聖馬丁路關閉而且將它遷移，把朝向露天廣場之鄰近房舍的地窖與正面都開放出來，可能的話不妨把這些房屋轉變成為與新中心有關的工作室與宿舍。上述的這些地窖及商店做爲咖啡屋、餐廳、接待空間、資訊空間以及其他的商業及文化活動，將會給廣場增添不少的活力，同時把它擴大。將不必要且妨礙到主要步道區車輛移走，更加伸展了廣場的尺度。

聳立於廣場裡面的建築物有兩種尺度。位



The type and display of the information on Rue du Renard will be related to moving vehicles and passing pedestrians, whilst that on the square will be related to more static viewing points.

The building is lifted on piloti, well above ground level, so that it is possible from Rue du Renard to see under the building the whole of the facades of the houses on Rue Saint Martin, whilst on entering the square from Les Halles direction, one is faced by the information grill.



### 3. UNITY OF THE CENTRE

See paragraphs 1, 2 and 5.

### 4. FLEXIBILITY CAPACITY OF THE CENTRE

The building offers maximum flexibility of use. Totally uninterrupted floor space is achieved by limiting all vertical structure, servicing and movement to the exterior. 3-dimensional walls, floors and partitions may be unclipped and/or extended at will; offices may be positioned anywhere, more highly serviced areas will tend to be located near the exterior for easier connections with vertical runs. Areas needing view, uninterrupted daylight and/or open space, such as the roof top restaurant, with its view over Paris, experimental and temporary exhibitions, outdoor museum, children's reception area, are located either on the roof on the south end of the building, with its view towards the Seine to the north, or in the square below, all areas free of the vertical grill. The roof itself is completely clear for display and community use, the restaurant being suspended over it.

Three types of panels are offered for differing

situations:

- i A highly insulated, lightweight, cored, solid panel.
- ii A highly insulated, translucent panel, such as Okalux laminate, (hermetically sealed, insulating slab of colourless, translucent capillary tubes)
- iii Glass

All lifts and escalators are clipped on to the facade and can be changed if the intensity of use increases or the positions of the departments or their entrances are changed.

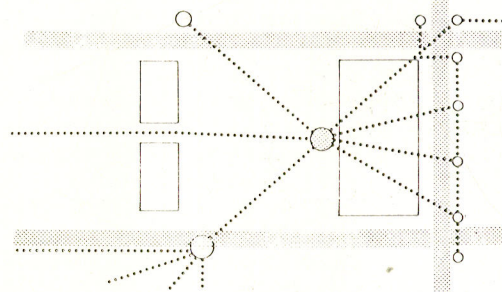
The external structural grill is designed to carry a constantly changing clip-on system of information. Cranes on the roof lift and maintain the different clip-on parts of the building, from wall panels to electronic components.

The square is a free open space used for congregation of people and the exhibition of things. The building stands on piloti, clear of the square, so that the area underneath is protected from the weather; also temporary structures can easily be erected. Major, socially relevant, information will be found in the square, including centres for disseminating information on the latest world catastrophies and the collection of aid.

Around the square are a variety of interchangeable smaller enclosed spaces — previously described.

### 5. ACCESS AND CIRCULATION

Pedestrian pass under the neighbouring roads on the way permeating through many of the 'information and commercial activities' before entering the sunken square, such as under Rue du Renard, where there are the current events room, industrial design permanent galleries and documentation rooms, or the sunken Plateau de la Reynie, or from Les Halles under and along Rue de Venise. We recommend bringing up the underpass from Les Halles so that it opens into Plateau Beaubourg at the level of square 32.80m. The removal of Rue Saint Martin helps move pedestrians in from the west side, see paragraph 2.



3

The car park for visitors and personnel is on three floors beneath the square. Access is by means of two entry and two exit points on the underground road system. Cars enter from the west via the underground road under the Rue Aubry le Boucher and from the east via a ramp connecting the underground road with the Rue Rambuteau near its junction with the Rue du Renard. The exits are westwards, towards Les Halles and eastwards on to the ramp connecting with the Rue Saint Merri.

Because of its large size, and to simplify management, the car park is split into two parts, with limited interconnection for vehicles. This arrangement provides access from all directions and sufficient road space for the peak traffic generation. In the short term, before the construction of the link between the underground road and Rue Rambuteau, the car park will operate as a single unit with one entrance and two exits.

A separate underground coach park is proposed on one level, adjacent to a western boundary of the site, with one entry and one exit point on to the underground road system. There is space for the future expansion of the coach park beneath Rue Saint Martin.

To service the centre, the square and properties fronting on the pedestrianised Rue Saint Martin and to provide for fire engines, ramps are shown connecting the square with Rue Rambuteau. An en-

於兩個長邊的三向度鋼架是輕盈的、半透明的、且比鄰近的既存房舍要來的高。至於夾在中間較矮較封閉的空間則被鋼架打散。在南端，層疊的資訊裝置又把尺度縮小，以階梯式的露台來調和、呼應鄰近的建築物。

沿著雷納路那一面所陳示的訊息種類及陳示方式，都將對應於飛馳的車輛以及穿梭來往的行人，而廣場這一面則對應於較靜態的觀看位置。

建築物底部挑空，懸離地面層。因此使得從雷納路上可以看見聖馬丁路上房子的立面，而由雷札勒方向走入廣場的人，則正好面對消息看板。

### 3. 中心的統一、協調……

(請分別參閱第1、2及5節)

### 4. 中心之彈性……

建築物本身提供使用上的最高限度的彈性。全然延綿無阻的樓板空間，乃是由於將所有垂直構肢、設備以及動線均集中限定於建築物的外圍而成。三向度的牆、樓板與隔間都可以隨意拆卸或擴充，辦公空間要設置在那裏都可以。設備量較高的空間則設在靠近外緣的位置，以便於與垂直走向的設備管道連接。而需要視野、無遮欄之陽光或開放空間的區域，譬如屋頂餐廳——它要有能夠眺望整個巴黎市區視野、實驗性以及短期展示室、戶外美術館、

托兒所等，則或置於建築物南端的屋頂——它的視野可以及於中心北邊的塞納河，或置於建築物下方的廣場。所有的這些空間都與垂直的鋼架毫無關連。屋頂面完全作為展示社交之用，餐廳則懸掛在它的上面。

為了應付各種不同的狀況，採用下列三種版 (panels)：

(1) 高度絕緣處理之輕量實心硬質版。

(2) 高度絕緣性之半透明版，譬如 Okalux 塑合版 (密封成型、無色透明、毛細管狀的絕緣版)。

(3) 玻璃。

所有的升降機及自助扶梯都是卡夾於立面外緣，一旦其使用強度日增，相關之使用部門的位置或入口有所更動時，可以配合改變。

外部的結構框架，係針對為了使它承載以卡接系統披掛其上之情報看板而設計的。屋頂上設有起重機，用以提取或維護各種卡接在建築上頭的組件。從牆版到電氣設備構件。

廣場是一個自由的開放空間，供人們用作集會及展覽事物的場所。建築物底部挑空，使廣場通暢無阻，也因此使得建築物下方的空間免除天候的干擾，同時亦方便了臨時性結構物的架設。通常，重大的社會性的消息都可以在廣場裡得到，在這裡還包括有一些傳播最近世界災難消息以及募集援助的中心。

圍繞著廣場四週的是各種可以互換的、較小的包被空間——一如前文已述。

### 5. 通路與動線……

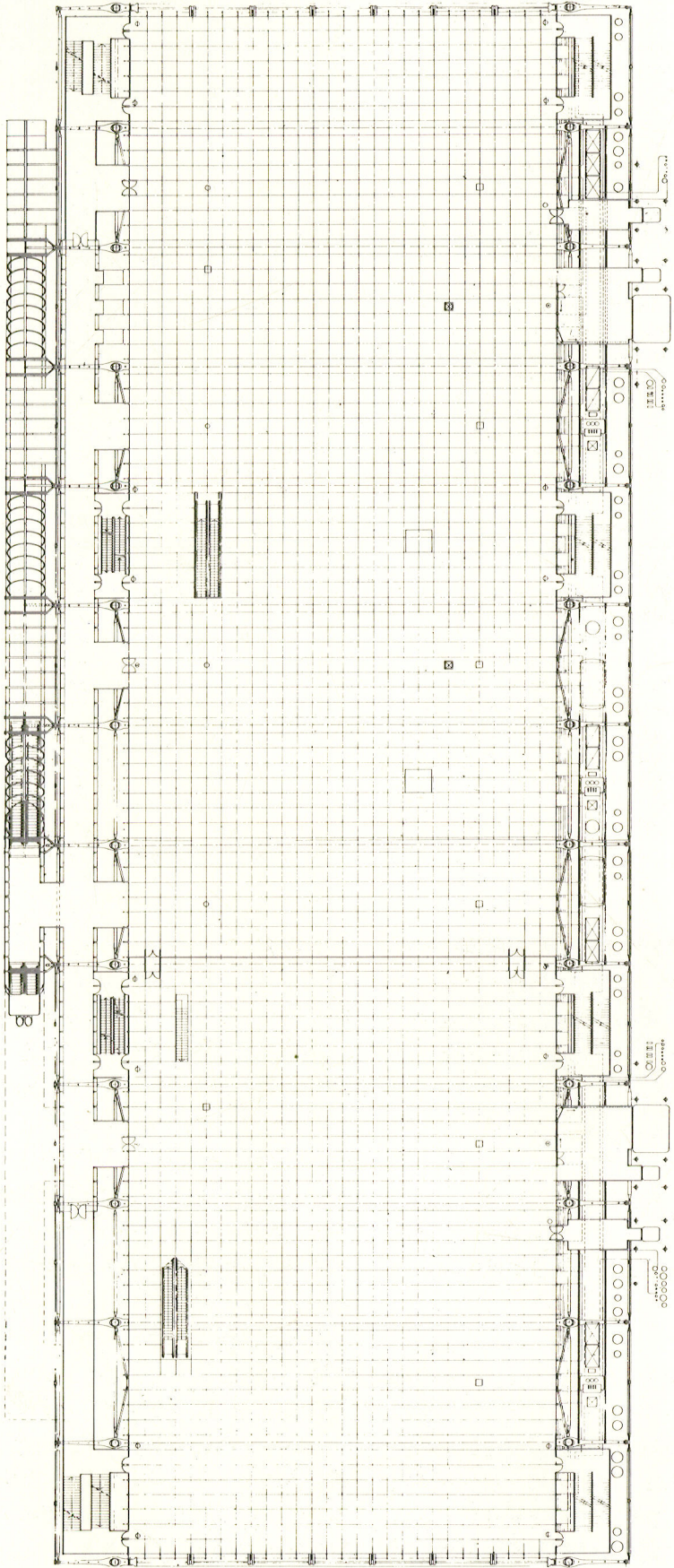
步行者進入露天廣場以前可以先穿過鄰近各道路下方的許多“情報與商業活動”區，例如雷納路底下，這裡是時事展示室、工業設計永久展示部及資料室。或者露天的雷尼爾平台、或者是從雷札勒沿著維尼茲路下方前進的通路。我們建議將從雷札勒而來的地下道延長 32.80 公尺，如此一來，它就能在廣場的同一平面上與龐畢度中心銜接。將聖馬丁路改道，有助於讓步行者從西邊進入本中心，參見第2節的說明。

訪客與職員的停車場設在廣場底下的三個樓層。出入的方式是利用地下車道系統的兩處入口與兩處出口。西邊來的車子經由鮑契爾路下方的地下車道，而東邊來的則從連接靠近雷納交叉口的藍布多路與地下車道的坡道進入。西向的出口通向雷札勒，東向出口則以坡道與聖瑪珊大道銜接。

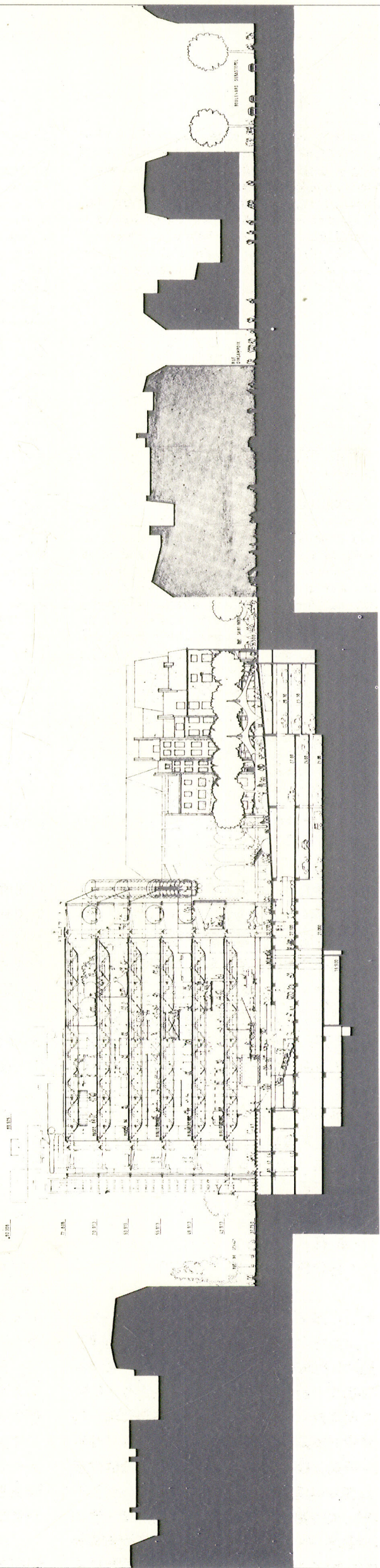
由於規模龐大，而且為了簡化管理之故，停車場被分隔成限制車輛相通的兩部份。這種安排使得各個方向的來車都有進入的機會，而且能夠騰出足夠的道路空間來容納顛峯時間的交通。簡而言之，在地下車道與藍布多路的聯絡道工程尚未施工以前，停車場將先使用一個單元——只有一個入口，兩個出口。

分離的公共汽車地下停車場計劃集中在一個樓層。位於靠近西側邊界之處，以一個入口、一個出口與地下車道系統銜接。在聖馬丁路





Typical floor plan (second floor)



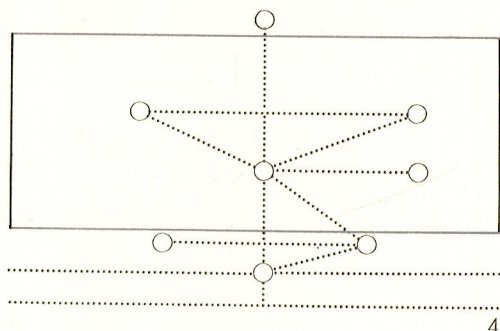
Section through piazza



closed service yard in the open air, with a covered loading bay, is provided under the building. In view of the heavy traffic volumes on the surrounding roads it is proposed that servicing should take place at night.

## 6. RECEPTION AND ORIENTATION OF VISITORS

For easy orientation and flexibility, all vertical movement takes place on the face of the building, so that it can clearly be seen by anyone viewing the building from the square in front. The only built form which interrupts the open square is the glazed reception area under the free-standing building. The reception is vertically linked, by escalators and lifts, down through a wide opening in the square to the parking below and up the face of the building to the different departments. Each of the major department entrances are indicated on the facade by a clearly coded system.



## 7. CORRELATION BETWEEN THE PROGRAMME AND THE PROJECT FROM A1 TO D4 See paragraph 4.

## 8. INTERRELATIONSHIPS

See paragraphs 2 and 4 and diagram of activities and interrelationships.

New Proposals:-

- The closing of Rue Saint Martin, see paragraph 2 for reasons.
- The underground pedestrian route from Les Halles enters via a ramp from the west up to the level of the sunken square.
- The forming of the maximum number of pedestrian routes under the neighbouring roads. To do this on Rue Saint Merri, we have slightly changed its proposed depth.
- The basic idea is of an information centre which presents information on the outside, as well as on the inside, of the building, relays it and is linked up to other centres throughout the world.

## 9. TECHNICAL CONCEPT

Fire escapes can be freely located within the 3-dimensional grill on the outside of the building. For security, everyone passes through the reception area, each department has a single supervised entrance. Closed circuit television would be used, plus all the usual security measures.

Air conditioning is proposed to normal comfort standards by a system designed to maintain the flexibility and adaptability in space planning and usage which is considered essential in the philosophy of this building.

Air conditioning systems, therefore, will be on a modular basis, each plan module being 48m wide by 12.8m of the building length. Central station air handling units located at roof level will thus be provided to serve each of the twelve modules over six floors.

Each plant will supply a treated mixture of recirculated and fresh air, via vertical main supply ducts passing within the external structural framework, to branch ducts within the false ceiling space at each floor level. Sub-division and zoning re-heat boxes or volume controllers may be readily incorporated within the ceiling space to suit final requirements. Exhaust air will be extracted through ceiling voids into vertical shafts and returned to the central plants for recirculation as required.

Areas with special ventilation/cooling loads, such as television studios, restaurants and so on, will be served by separate plants. Central refrigeration plant will be located within the basement area and will provide chilled water to the various air handling units.

Hot water will be taken from the district mains at basement level to serve the various heater batteries as required.

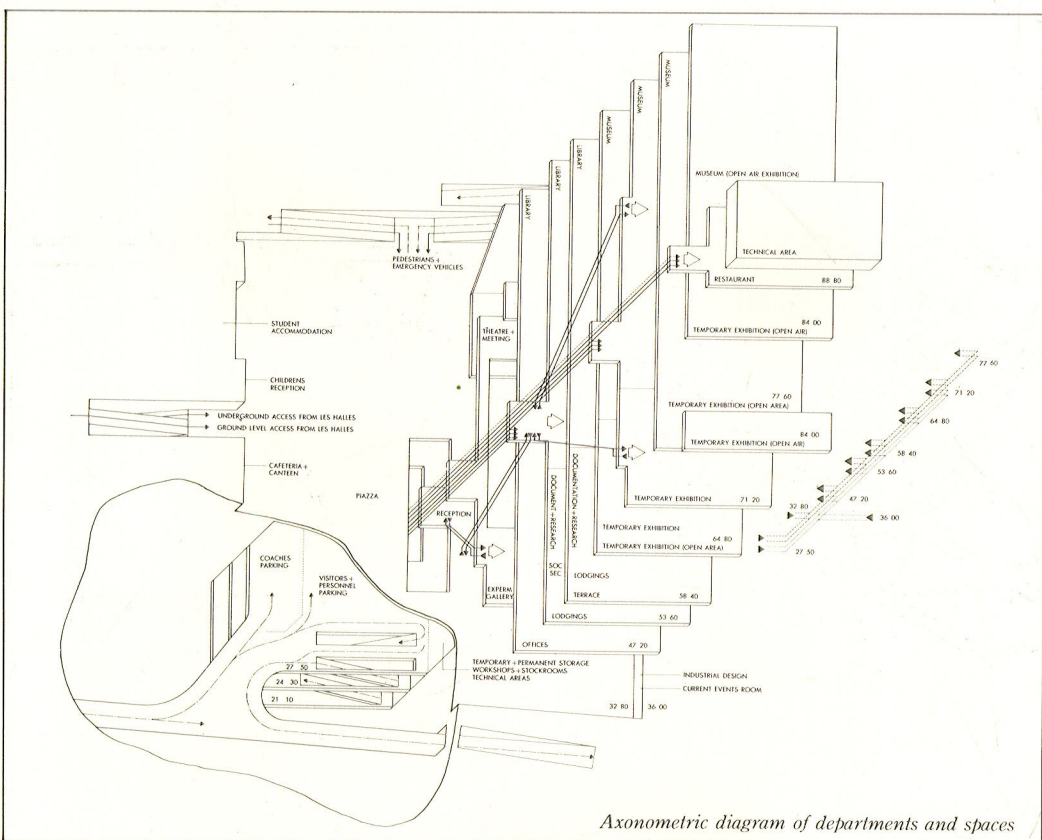
The structure is assembled from elements. The permanent elements are the columns and the cross members which provide basic stability. These columns are fabricated on site from steel tubes of the same external diameter but appropriate wall thicknesses. The moveable parts are the floors and their supporting beams, which can be dismantled and re-positioned to produce a true future flexibility. A special friction collar has been developed to express and make possible this flexibility. Steel has been used throughout and this is protected against fire and corrosion by filling the tubular spaces with treated water. The deflection of the floor elements is controlled by ensuring that the precast concrete topping acts monolithically with the steel supporting beams. Transverse stability is provided by the fire wall needed to separate the temporary from the permanent exhibition space and by infill panels at the end of the buildings. These infill elements are also used to reduce the spans in the heavily loaded library areas.

## 10. CONSTRUCTION PROCEDURES AND TECHNIQUES

See paragraph 9 for structural materials. Wall panels are interchangeable depending on the different activities enclosed.

- Glass
- Okalux laminate (hermetically sealed insulating slab of colourless translucent capillary tubes).
- An opaque, lightweight GRP clad, sandwich panel.

Internal partitions are demountable and acoustic.



Axonometric diagram of departments and spaces

的下方有一些空間，預留給公共汽車停車場未來擴充之用。

為了便於對中心、廣場以及面對改為步道的聖馬丁路的建築物提供服務，以及消防車的出入，因而設置了連接廣場與藍布多路的坡道。在建築物底下設有一個露天、圍起來的、卸貨台有遮蓋的服務後庭，鑑於四週道路交通流量的繁重，我們建議服務活動應於夜間進行。

## 6. 參觀者的接待與參觀動線

為了便於參觀者辨認方向以及觀賞的彈性，所有垂直方向的運動全部集中於建築物的立

面上進行，因此人們從前方廣場的每一個角落都可以清楚地看到建築物。在建築物懸空的下方以玻璃圍起來的接待區是唯一阻碍廣場之開敞性的東西。接待處以電扶梯與升降梯下接開闊的廣場及地下停車場，上接建築物立面以到達各個不同的部門。而每一個主要部門的入口都用十分鮮明的標示系統顯示在立面上。

## 7. 規劃書與 A1 到 D4 之計劃案之間的關聯

參見第 4 節。

## 8. 中心與四周環境之連繫

參閱第 2、4 節，以及描述活動與相互關係的簡圖。

新的提議：

- (1) 封閉聖馬丁路，見第 2 節所陳述的理由。
- (2) 從雷札勒而來的一條地下人行通道，利用一道斜坡接上露天廣場西邊的地面。
- (3) 於基地週圍的道路底下儘可能規劃一些步行路徑。為了在聖瑪琍路做到這一點，我們稍微修改了它原來的建議深度。
- (4) 這個資訊中心的基本構想就是要把所有的消息都能呈現於建築物的外表及內部。將情報傳播出去而且與世界各地類似的中心形成聯繫網。

## 9. 技術構想

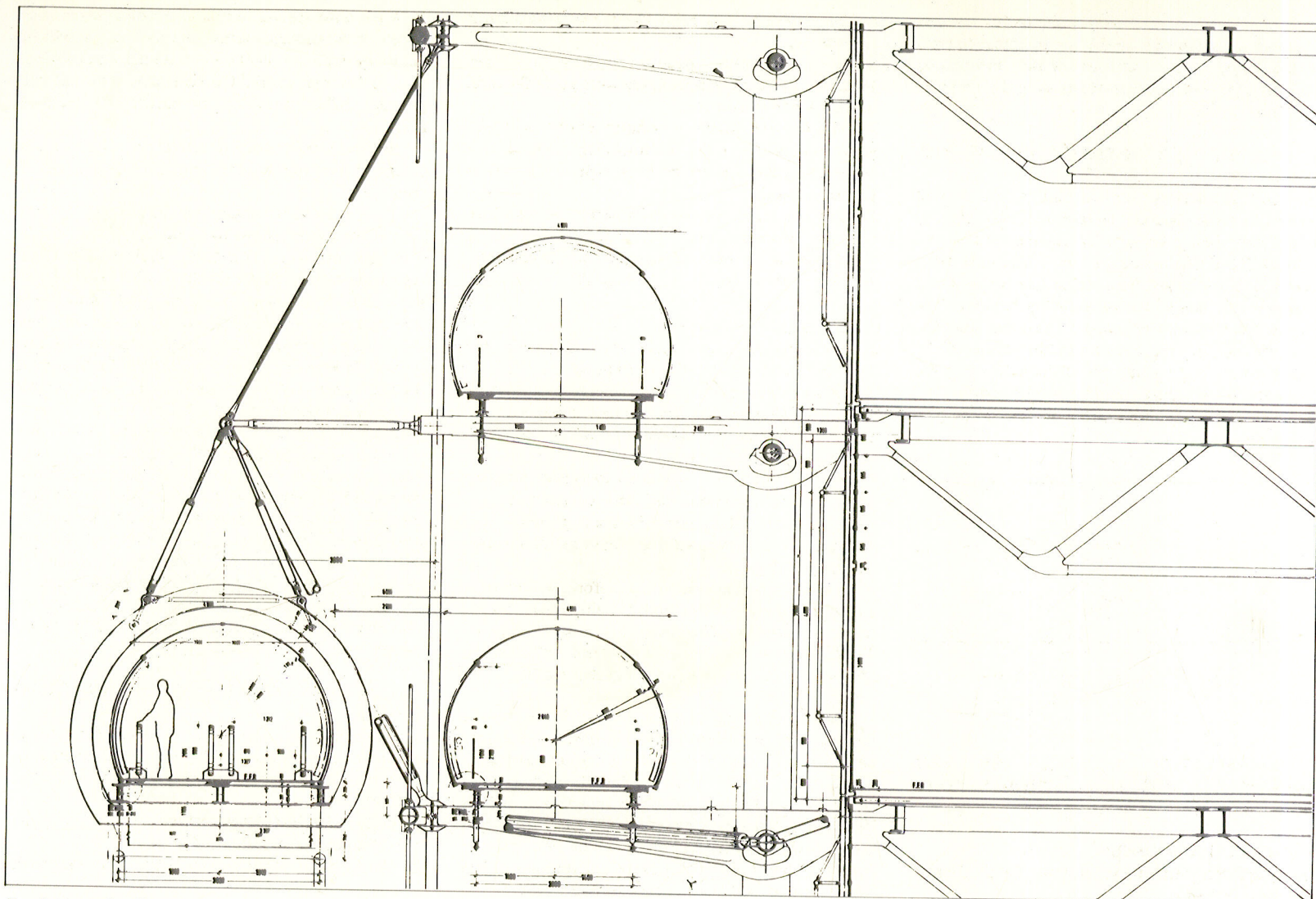
火災避難梯可以很自由地設置於建築物外緣的三向度鋼架上。基於保安的理由，每一位來客都必須經由接待區進入，而每一個部門亦都設有單一的監視入口。採用閉路電視監視系統，再加上其他常用的安全措施。

空調設備採用一般的舒適標準，其系統設計係針對空間規劃及使用上的彈性與順應能力，也就是本建築物之理念的基礎。

因此，空調系統必須依據一種模距基礎。每一個計畫模距是 48 米寬乘以 12.8 米建築物的長度。因此設在屋頂層的中央空調理氣機須對貫穿六層樓共 12 個模距單元的空調區提供服務。

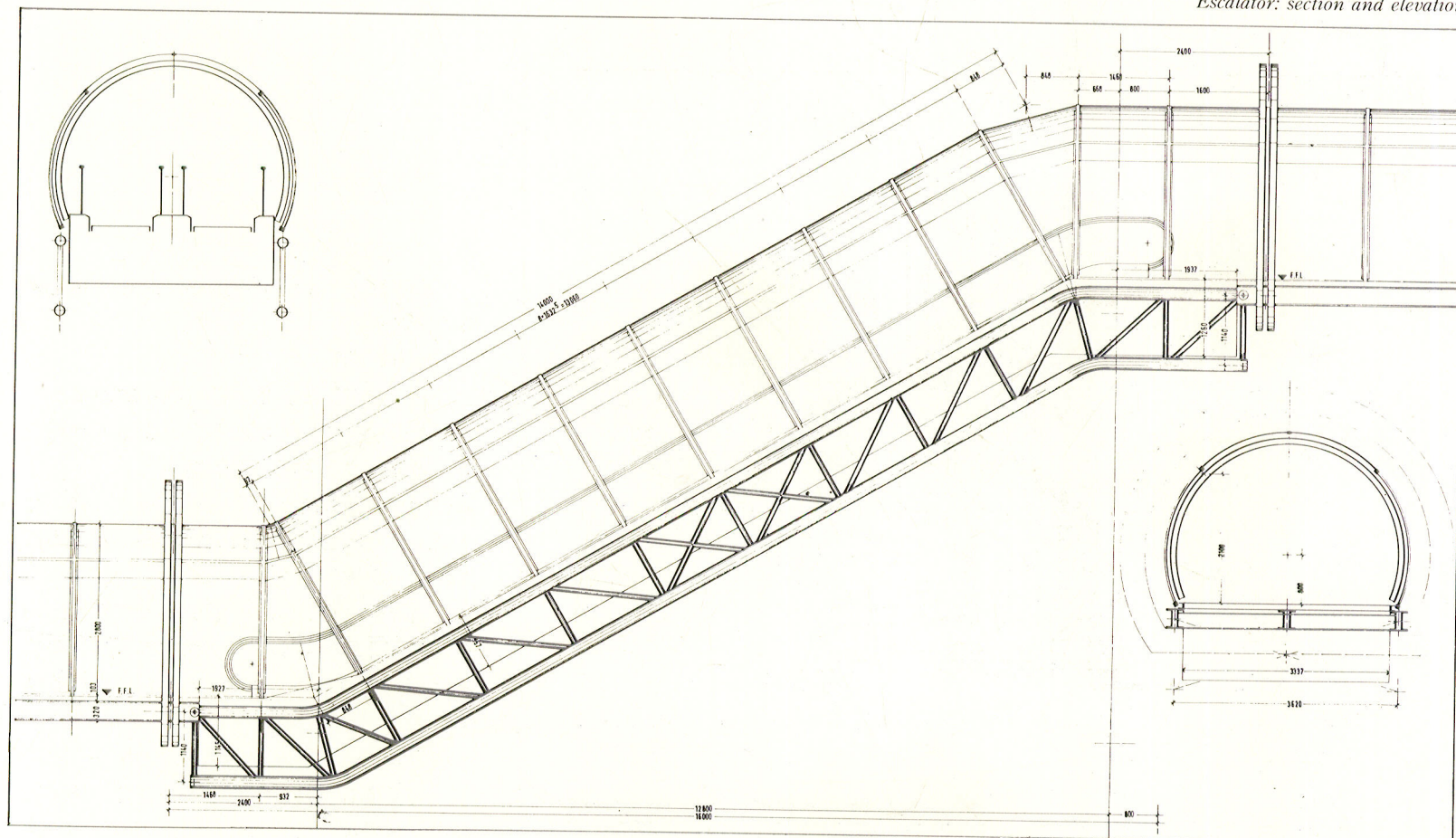
每一組設備將把經過混合處理之再循環空





Escalator and gallery: section

Escalator: section and elevation



氣及新鮮空氣，藉由垂直穿梭於外部結構鋼架上的主空調管，送到隱藏在每層樓假天花裡的分管。次分區及區域再熱處理器或調節閥可以迅速地於天花內部協調操作以滿足最後的溫度需求。回風則經由天花板面的空隙部份吸回垂直回風管，送到中央空調主機加入次一循環。

一些需要特殊通風或冷氣負荷的地方，例如電視錄影室、餐廳等等，將利用獨立的空調設備。中央冷卻機組設置於地下層，它負責供應冰水給各個空調機。

熱水主要也是來自地下層，供應各個蓄熱槽之需。

結構體是由構件組合而成。固定構件為用以維持基本穩定性的柱子與橫向的構件。這些柱子以鋼管在現場製造，所有鋼管的外徑一致，但管壁厚度視需要而調整。可動的部材則為可以拆卸及移裝之樓版及承托樓版的橫樑，藉此提供一種真正的未來彈性。發展出一種特殊的摩擦軸管以表現這種彈性並使之成為可能。徹底使用鋼材，而這些鋼材都在管內充滿經過特殊處理的水而達到防火及防腐蝕的性能。樓版構件的撓曲是靠確保預鑄混凝土頂面與鋼樑結成一體的作用予以控制。橫向的穩定性則依賴用以分隔常設與短期展示室的防火牆以及建

築物端部的填裝嵌版。這些填裝構件同時也用於縮減負荷較重之圖書館區的跨距。

#### 10. 施工程序及技術

參閱第9節有關結構材料部份。牆版可以依據各種活動之需要而互換：

- (1) 玻璃。
- (2) Okalux 塑合版（密封成型、無色透明毛細管狀的絕緣版）。
- (3) 一種不透明、輕質 GRP 覆面的夾心版。

內部的隔間牆具有隔音性能，而且可以拆卸。



## CAPTIONS TO PHOTOGRAPHS

## 照片說明

Centre Beaubourg		龐畢度中心
Top level of the series of glazed escalators and pedestrian walkways	P. 9	框玻璃的電動扶梯與步道的最上層
West facade at night	10~11	西側立面夜景
General view of the west facade	12~13	西側立面全景
South side	14~15	南側外觀
Partial view of the east side. Piping for each of the equipment systems is painted a distinctive color	16	東側局部，每一種設備系統的配管都以顏色區別
East facade seen from the <i>Rue du Renard</i>	17	自雷納大道所見的東側立面
Partial view of the east facade	18	東側局部
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Entrance hall. Vasarely's portrait of Georges Pompidou hangs on the left	22~23	門廳，瓦薩雷利所作的龐畢度肖像懸掛於左側
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Library	26	圖書館
Restaurant on the top level	27	頂樓餐廳
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Exterior corridor on the west side. The escalator system is visible on the far left	29	西側的外廊
Escalator-system support posts	30	電扶梯系統之支柱
Piping on the east side; red for transportation, green for water, blue for air conditioning, and yellow for electrical wiring	31	東側的配管，紅色為交通，綠色為給水，藍色為空調，黃色為電氣配線
View of Paris across the escalator system from the top level of the building	32~33	由頂層穿過電扶梯所見之巴黎
Interior of one of the walkways in the escalator system	34	電扶梯系統中之步道內景
Escalator system and support structure	35	電扶梯系統及其支撐構造
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Terrace on the south side of the top level	37	頂層南側露台
Structural joint	38	結構接頭
Upward view of the support structure, with the air-conditioning equipment in the rear	39	仰視支撐構架及其背後的空調設備
Centre Beaubourg and the Paris skyline	40	龐畢度中心及巴黎市的輪廓綫



Global Architecture

# 世界建築

*Piano + Rogers Architects  
Ove Arup Engineers  
Centre Beaubourg, Paris, France. 1972-1977  
Edited and Photographed by Yukio Futagawa  
Text by Piano + Rogers*

世界建築 No.44

龐畢度中心 / 法國・巴黎 / 1972-

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胡氏圖書



# 龐畢度中心 —— 撰 / 皮亞諾 羅傑斯

Centre Beaubourg, by Piano + Rogers

## ※建館始末

1. 競圖結果公佈 1971 年 7 月
2. 破土奠基 1972 年 3 月
3. 基礎工程動工 1972 年 12 月
4. 由於反對業主之訴訟第七次審判的結果，工地被封閉 1974 年 8 月
5. 季斯卡總統考慮撤回龐畢度音響 / 音樂研究中心之預算削減案，並重新擬訂該計畫 1974 年 8 月
6. 鋼構架工程動工 1974 年 10 月
7. 鋼骨大構架施工完成 1975 年 6 月
8. 開館 1977 年 1 月
9. IRCAM (音響 / 音樂研究中心) 完成 1977 年 7 月

## ※計劃概要

一個由現代美術館、參考資料圖書館、音樂及音響研究中心

## SOME DATES

1. Competition results announced July 71
2. Excavation commences March 72
3. Construction of substructure commences December 72
4. Site closed by 7th legal case brought against the client August 74
5. Giscard d'Estaing considers not going ahead with Beaubourg-IRCAM (L'Institut de Recherche et de Coordination Acoustique / Musique) budget cut and scheme redesigned August 74
6. Steel structure commenced October 74
7. Steel superstructure completed June 75
8. Opening of building January 77
9. IRCAM completion July 77

## BRIEF

A cultural center to be made up of four major specialist activities: Museum of Modern Art; a reference library; a center for music and acoustic research, plus supporting

，再加上相關服務設施如停車場、餐廳等四個主要專門活動領域所組成之文化中心。總延面積 1,000,000 平方英尺，工程造價約為四億八千萬法國法郎。預計於 1976 年 12 月完成。

## ※基地

基地位於距離聖母院、羅浮宮不到一公里之老巴黎市中心區，且正處於一中世紀形式、人煙稠密住商混雜的街區一隅。於競圖期間，在此都心地帶並沒有任何規模相當的開闢場地。附近的雷·札勒 (Les Halles) 不僅是一個世界有數規模龐大的食品市場，同時也是使用範圍遠超過實際設施極限的一個活躍的民衆活動中心。它正面臨拆除的命運，即將代之以一個地上層供作商業中心，而地下則做為巴黎主要公共轉運站的大樓。

競圖的基地大抵於 1930 年代就已清理出來。其北側，一個新的大規模住宅計劃已經提出。整個地區的情況基本上是在衰敗中。基地週圍現存的建築物主要是建於十七至十九世紀間的石造房

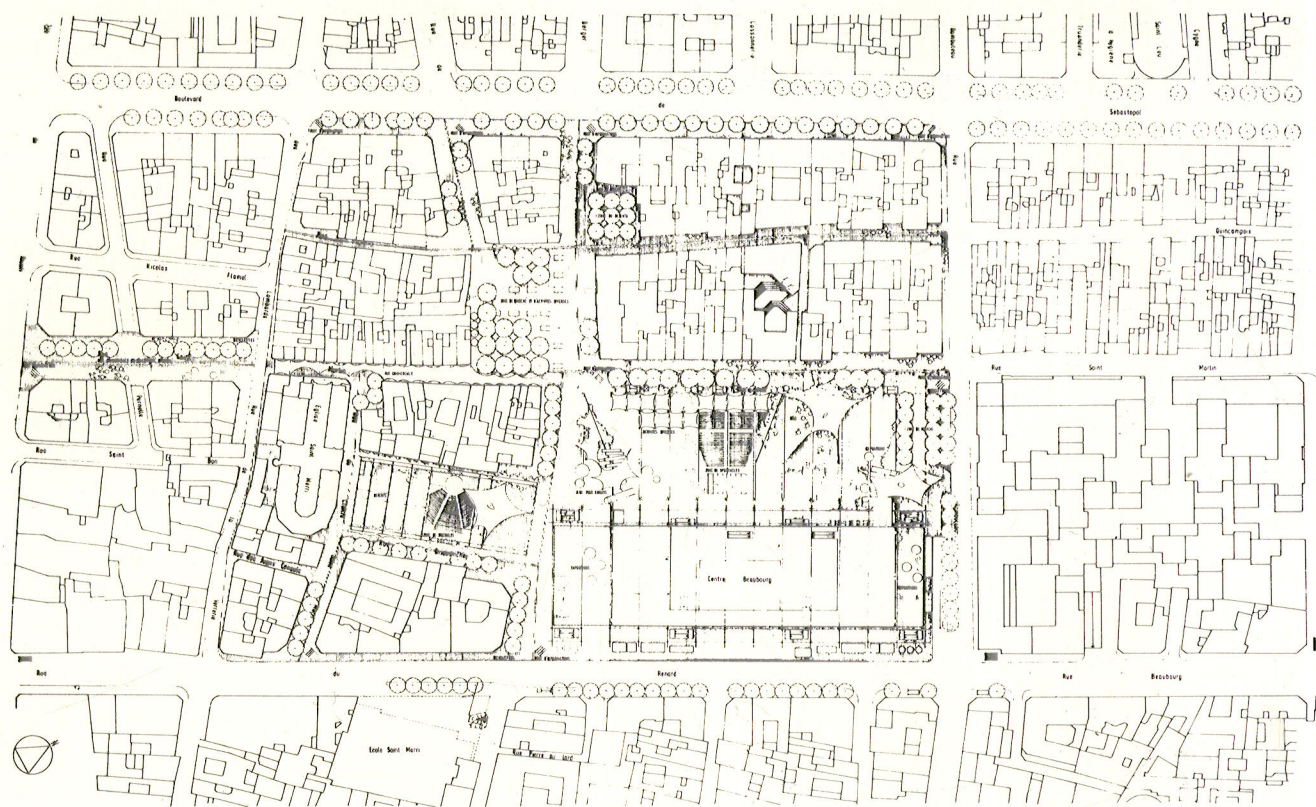
services such as car park, restaurant etc. totalling 1 million square feet for an approximate cost of 480 million French Francs to be completed by December 1976.

## THE SITE

The site is in the center of historic Paris within 1km of Notre Dame, the Louvre, and on the edge of the densely populated Medieval quarter where people both live and work. At the time of the competition, there were no sizeable open spaces in this central area. The neighbouring les Halles, not only one of the world's great food markets, but a dynamic center of popular activity which stretched well beyond the limits of the actual pavilions, was being demolished to be replaced above ground by a commercial center with Paris' major public transport interchange built below.

The competition site had been mainly cleared in the 1930's. To the north a large new housing development is proposed. The area is in crisis. The existing buildings around the site are mainly of stone, 17th to 19th century,





Site plan

屋，高度介於 24 至 34 公尺之間。基地之一側與巴黎的主要幹道——雷納大道接境。

#### ※通盤的構想

從一開始就已決定要使這個中心成為“一個活躍的情報、娛樂及文化中心”——亦即使此建築物既是一個可塑性的容器，又是一個動態的溝通裝置；提供高度的服務，而且以預製之組件建成。其目的在於突破傳統文化制度之束縛，藉以吸引儘可能多的民衆。

此外，業主亦指定了若干專家級的文化活動設施，我們的意圖是，在擴大計劃意旨的同時不致於忽略了專家們的需求；創造一個屬於專家、遊客以及附近衰敗中社區之居民的文化中心。它不是一個被瓜分為四個不相干部門的中心；而是一個真正充滿活力，各種活動在彈性而設備良好的空間中重疊進行的聚集場所，能夠引來愈多的人參與，它就愈成功。

between 24 and 34 meters high. There is one major road bordering the site, rue du Renard.

#### GENERAL CONCEPT

It was decided that the center was to be “a live center of information, entertainment and culture” — the building to be both a flexible container and a dynamic communication machine, highly serviced and made from prefabricated pieces, aimed at attracting as wide a public as possible by cutting across the traditional cultural-institutional limits.

The client specified a number of specialist cultural activities. It has been our intention to broaden the brief whilst not forgetting these specialist needs; to create a center for specialist, tourist and people who live in the neighbourhood, a neighbourhood in crisis; not a center divided into 4 water-tight departments but a true dynamic meeting place where activities overlap in flexible well-serviced spaces. The greater the public involvement, the greater the success.

The building is a well serviced shed that consists of

建築物是一個設備完善的棚屋，係由層層的均質空間，從外部以一個自主的結構框架支撐而成。整個建築物不論平面、剖面及立面均能予以改變，以應付一切不可預知的變化。這樣一個可以不斷改變的構造，對於年長及年輕的人，門外漢及在行的專家而言，就像是一個鋼鐵組合的工具箱，一個可以攀爬親近的構架。於是乎，這個自由而可變的效果就如同建築物本身一樣，成為一種建築的表現。

#### ※建築物配置

基地的大半空出來作為開放的廣場，以容納各式各樣的公眾活動。如專家與業餘者的市集、展覽與即興表演、雜耍、集會、托兒所、遊戲、咖啡館……等。道路也封鎖了一大片，使商店能遍佈於步行區。

建築物有一半埋在地下，其餘的部份就依照南北軸向安置於車水馬龍的雷納大道旁，這樣一方面使廣場能隔絕噪音與煙塵，

superimposed uniform spaces supported externally by a freestanding structural frame, the whole capable of change in plan, section and elevation, so as to absorb the unforeseen. An ever changing framework, a meccano kit, a climbing frame for the old and the young, for the amateur and the specialist, so that the free and changing performance becomes as much an expression of the architecture as the building itself.

#### SITING OF THE BUILDING

Over half of the site was left as an open square for a wide variety of public events for both specialist and amateur-markets, exhibitions and visual happenings, circus, meetings, creches, games, cafés, etc. The roads were closed over a large area so that shops could spill over the pedestrian area.

Half the building is below ground; the rest is sited on a north-south axes along the heavily congested rue du Renard, so that the square is shielded from noises and fumes, whilst retaining the street quality of rue du Renard.



而同時也保持了雷納大道的街道性格。於建築物西側，廣場以有遮蓋的圓形劇場的型態緩緩朝向其立面斜降過來。建築物的立面本身成爲一個活動的容器，一個人群在上面走來走去，向下瀏覽的三向度結構骨架。許多東西攀附在它上面，如篷帳、座椅及自動影視銀幕等。這個區域以及本中心的成功，事實上，泰半有賴於當局鼓舞廣泛活動而又同時維持交通秩序的能力。

#### ※動線與活動的區劃

這個中心有四個主要的區劃：

- 1 周圍的環境與廣場。
- 2 地下層的空間。
- 3 地上的建築物。
- 4 IRCAM (音樂/音響學研究中心)

地上的建築部份明確地劃分爲四個區劃：

- 3.1 五個大而開放的樓層。

On the west side of the building, the square is in the form of a sheltered amphitheater sloping down towards the facade. The facade itself becomes an activity container, a 3-dimensional structural framework with people walking on it and looking down from it, a wide variety of items clipped to it, tents, seating and audio-visual screens etc. Much of the success of this area and, in fact, the center will depend on the ability of the authorities to encourage this wide range of activities whilst keeping out traffic.

#### ZONING MOVEMENT AND ACTIVITIES

There are 4 major zones:

1. the environment and square
2. the substructure
3. the superstructure
4. IRCAM

The superstructure is clearly divided into 4 zones:

- 3.1. the five large open plan floors
- 3.2. the west 7 meter wide structural zone facing the square

- 3.2 西側面向廣場，7 米寬之結構區帶。

- 3.3 東側面向雷納大道，7 米寬之結構區帶。

- 3.4 屋頂。

1 關於環境與屬於這些空間的戶外活動：前文已經論及，這裡都是些多目的的公衆娛樂及訊息交流的空間，而圍繞著它們的則是由鄰近建築蔓延出來的商業活動。這些一般性的公衆活動甚至還延伸到建築物內部以及西向的立面上。

2 地下層的空間：沿街以及廣場的樓層是一些大型的公共空間：聚會場、劇場、商店、門廳、咖啡館、兒童活動場所、時事活動區 (Current events areas)、展覽區等。其下層則是一些技術的及儲藏的區域，如視聽設備、電腦、攝影、安全監視控制、機械設備控制室等。而於廣場下方則是公共汽車、貨車以及一般汽車的停靠站與停車場。

3 地上的建築物：開放的樓層容納了各種主要的文化活動、室外露台與行政部門。最頂層則是較一般性的活動，可以開放

- 3.3. the east 7 meter wide structural zone facing rue du Renard

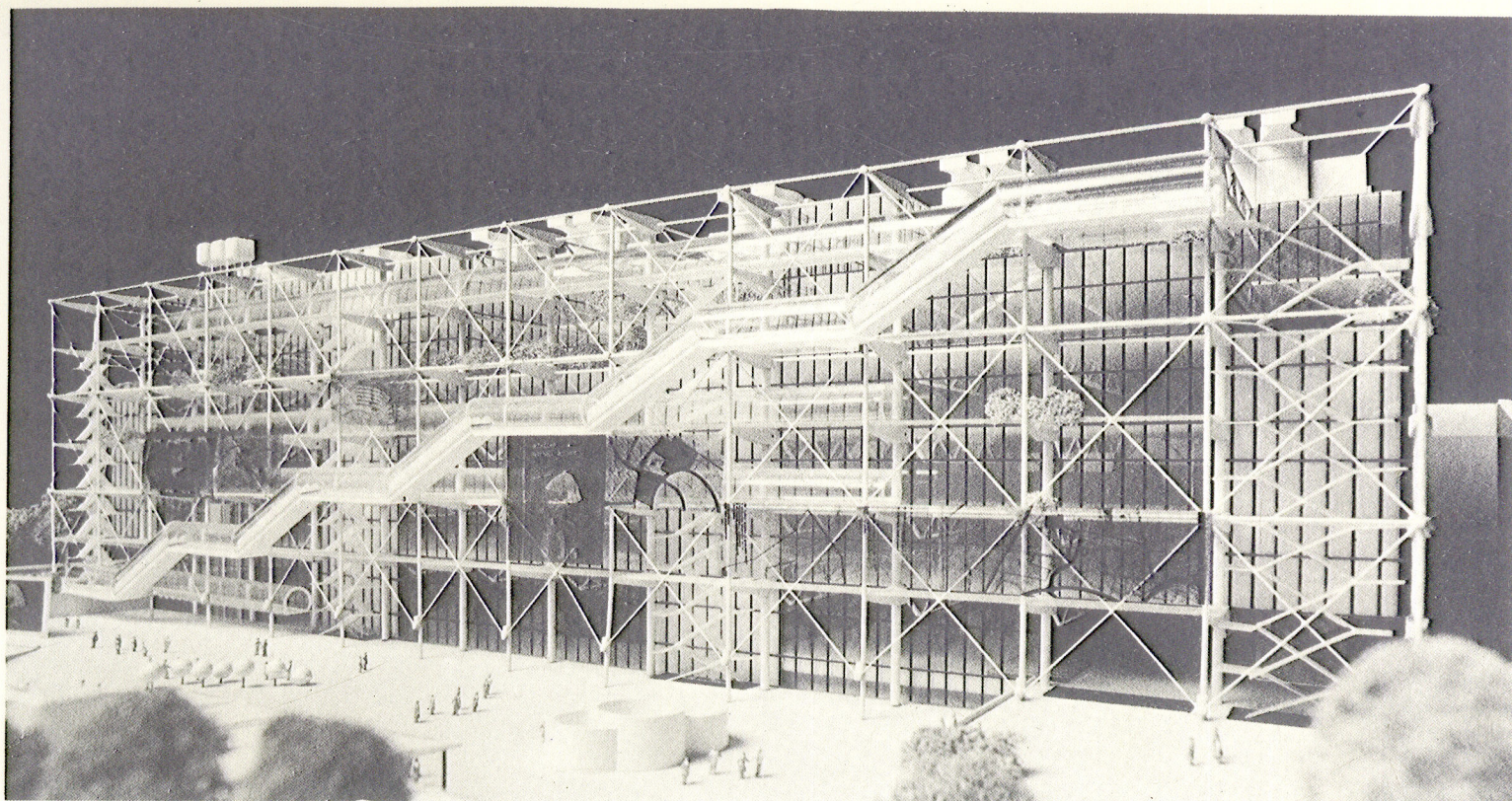
- 3.4. the roof

1. The environment and the external activities appertaining to these spaces have already been discussed. These are multi purpose public entertainment and information spaces surrounded by commercial activities which can spill out from neighbouring buildings. These general public activities continue both under the building and up the west facade.

2. The substructure. At the street and the level of the square there are large public areas: the forum, theatre, shops, reception, café, children areas, current events areas, exhibition areas etc. Below this are technical and storage areas i.e. audio visual, computer, photographic, security control, mechanical services control etc. whilst under the square is the bus, truck and car arrival and parking areas.

3. The superstructure. Open floors contain the major cultural activities, outdoor terraces, and administration department. On the top floor there are more general public





Final design (1972): Model from facade

photo by Bernard Vincent

得較晚，因為有利於增進建築物的夜間景觀並賦予它一種持續的活力。這些空間包括餐廳、實驗電影院和短期的展覽室等。上述各部門由早上十點開放到晚間十點。

3.2 面向廣場的西側結構區帶：這是可以飽覽巴黎街景，供水平及垂直交通的地帶。電扶梯、升降梯、安全梯，以玻璃做為外殼而且開敞的迴廊或走道，視聽設備的銀幕、告示牌、展示品等都附著在上面。既延伸了下方廣場上的活動，而且也使活動更顯得熱絡。

3.3 面向道路的東側立面結構區帶則容納了所有的機械設備，貨用升降機和有連續鋼廊——為了便於維護及變更——的防火梯。

3.4 屋頂區有花房、冷却水塔等。

4. IRCAM——一個音樂與音響的多目標學術研究中心，藝術家及科學家們在此共事，以分析、改造及整理音樂的本質。共區分為四個部門。

activities which will close late at night benefitting from the view and giving a constant life to the building i.e. restaurant, experimental cinema and temporary exhibitions. The departments themselves will be open from 10.00 a.m. to 10.00 p.m.

3.2. West structural zone facing the square. This is for vertical and horizontal movement benefiting from a wonderful view over Paris. Escalators, lifts, escape stairs, glazed and open galleries or corridors, audio visuals screens, announcements, exhibitions etc. will be clipped on animating and continuing the activities of the square below.

3.3. East facade structural zone on the road contains all the mechanical services, goods lifts and fire stairs with continuous steel galleries for ease of maintenance and change.

3.4. The roof zones contains plant rooms, cooling towers, etc.

4. IRCAM — A multi disciplinary research centre into music and sound where artists and scientists work together to break down, recreate, and document the nature of

由於這個研究中心的音響及一般使用性能，把它放在地下層跟放在地上一樣有效。因此將它安置在地下，我們便可以多空出一片規模較小的都市空間俾供公眾使用，包括戶外的音樂表演場，而同時亦開放了聖瑪琍 (St Merri) 教堂——一座美麗的16世紀教堂——方向的視野。

從沿西側的人聲吵雜區到沿東側分佈的無響室，音響區一共劃分為四部份。公眾活動區自地面層起向下伸展至 level 5 的實驗音樂廳。透過覆蓋整個公眾活動區的水平窗，可以看見映照其上，蜿蜒曲折有如蛇行的電扶梯的形影。

#### ※成長、變化及尺度

對建築物我們有一個信念，就是它應該可以順勢而變。而且不只是平面；剖面及立面亦然。它是一個能夠允許人們在其中自由自在各行其事的骨架，它的秩序、尺度與肌理是從對建築物生產過程——每一個別元素之最適化、其製造、儲藏、運輸、組立

music. There are 4 departments.

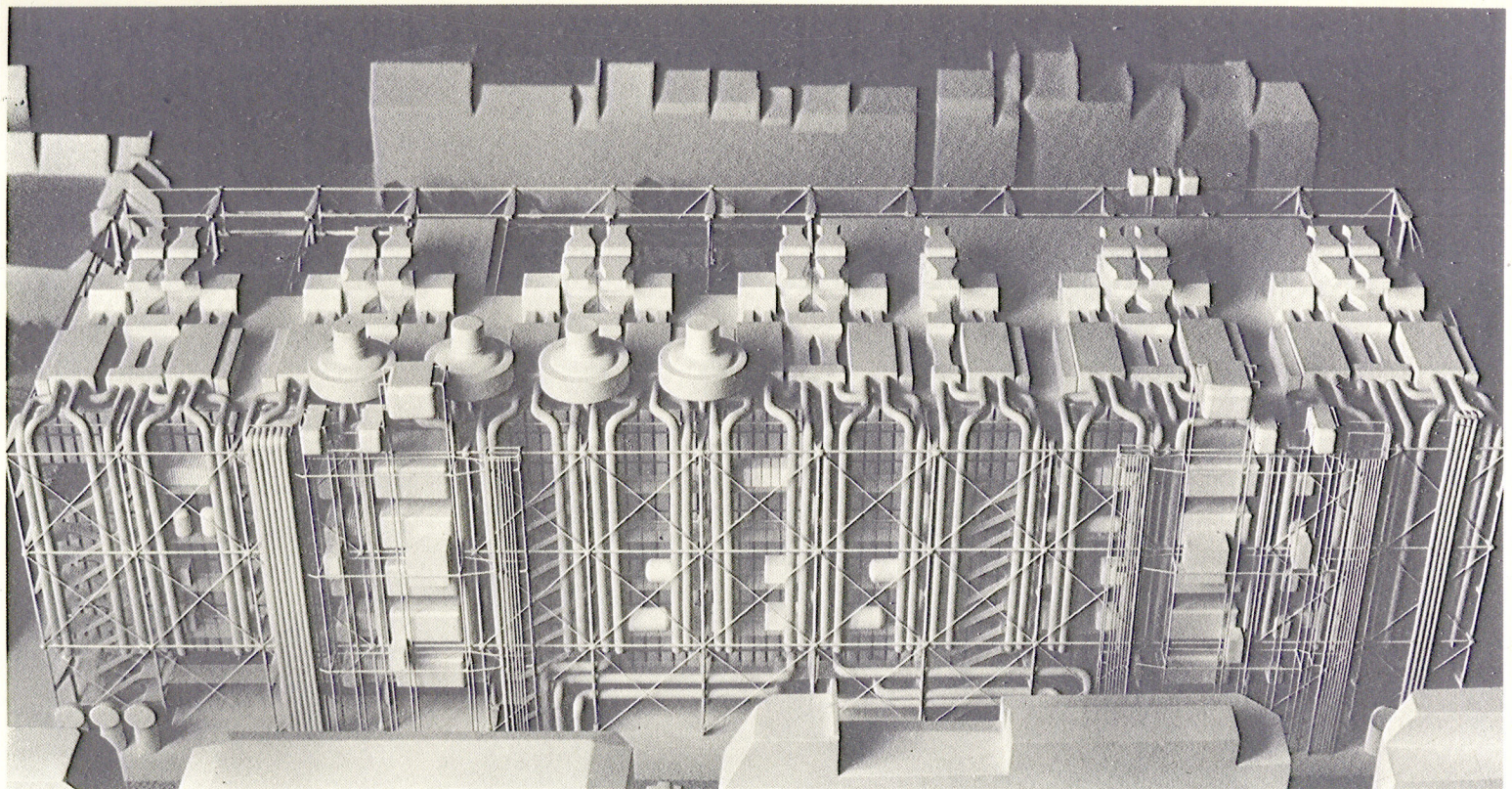
The building is situated below ground because its acoustic and general functional performance is as effective below as above. We therefore liberated a further small urban space for public use, including outdoor musical performance whilst also opening to view the side of St Merri, a beautiful 16th century church.

There are 4 acoustic zones varying from public noisy along the west side to anacoustic chambers along the east side. The public movement zone flows downwards commencing at ground level, down to the experimental concert hall at level 5 reflecting in a minor key the serpentine escalator one can see through the horizontal window which roofs over the whole public zone.

#### GROWTH, CHANGE AND SCALE

It is our belief that buildings should be able to change, not only in plan but in section and elevation. A framework which allows people freedom to do their own things; the order, scale and grain coming from a clear understanding





Final design (1972): Model from services side

photo by Bernard Vincent

、接合等均納入一個明確界定及合理的構架——的清晰理解與表現而來。這個構架必須因應技術的以及業主的需求而能改變與適應，讓人們在其內外揮灑自如。這種自由以及可變的性質，於是乎成為本建築物的一種建築表現。這也就是說，它是一個龐大的不斷改變的工具箱，而不是一個已經裝飾定型，傳統靜態的玩具屋。

這建築物必須要能反應兩種類型的變化——其一是來自技術上的要求，主要是發生在建造期間，諸如偶發的火警、安全性、荷重、造價、搬運和品質等問題，此外就是基本計畫之後續發展。建築物不僅必須對付這些問題，而且還要不斷地去對付這兩種類型的變化，譬如在基本計畫中所意含的龐畢度總統的逝世或美術館的位置問題。因為直到最後關頭之前，仍然無法完全肯定美術館是否真的要設在中心裡。

但是這並未對此建築物構成很不得了的影响，因為它那開潤而平坦的樓層以兩端開放的細部處理，相當能夠斟酌變化的情況

and expression of the process of building, the optimisation of each individual element, its system of manufacture, storage, transportation, erection and connection, all within a clearly defined and rational framework. The framework must allow people to perform freely inside and out, to change and adapt, in answer to technical and client needs. This free and changing performance becomes an expression of the architecture of the building, a giant ever changing meccano set rather than a traditional static doll's house with its cosmetic non additive shop-fitting detailing.

The building must be able to react to two types of change — those due to technical needs which happen mainly during construction i.e. unforeseen fire, security, loading, cost, delivery and quality problems, and changes due to continuous development of the brief. The building has had to cope and will continue to have to cope with both types of change: i.e. the implications on the brief of the death of Pompidou or the location of the museum, for up to the end it was not totally sure that the museum really would be in the Center.

而順應之。每一個主要樓層的規模是  $170 \times 48 \times 7$  公尺高，裡面沒有任何結構、機械設備或動線等垂直的阻隔物來限制使用者的自由活動。這大片的開放空間所需的設施；為來自天花——所有的管道及導線均露明俾便更動及維修；或來自地板——在地坪表面有14公分深度的範圍埋設電腦裝置。

所有垂直方向的聯繫都是沿著建築物的東西兩側設置。那些通常會妨礙平面開暢性的元素，如走廊、管道、防火避難梯、電扶梯、升降機、柱子以及斜撐繫件，皆堆列於建築的外緣。建築物的結構內外翻轉，即使它的各種組件易於調整、加裝或移置，同時又賦予建築物一種尺度感、透明感及動感。相對地它也消除了石材、玻璃或磚塊所構成的傳統的“封閉”性的立面。地上層內部所有的隔間更都是採用乾式構造的可動隔牆。不用說，這是一個彈性的體系，辦公室隔間板在一分鐘之內就可拆移，美術館的大型懸吊隔板約在一個小時，而防火牆約在一天之內就可以拆卸。總而言之，它們都是活動的，都在表達一種可動性。此外，

This has not drastically affected the building for, for it has been possible to adapt the deep plan floors and open-ended detailing to take the changes into account. Each of the major floors are  $170 \times 48 \times 7$  m high, with no fixed vertical interruptions of either structure, mechanical services or movement to limit the users' freedom. These large open loft spaces are serviced both from the ceiling where all ducts and conducts are exposed for ease of change and maintenance or from the floor, where there is a 14cm high computer floor.

All vertical connections are run along the East and West sides of the building. The corridors, ducts, fire stairs, escalators, lifts, columns and bracing which normally interrupt the open floors are exposed on the outside. The building is inside — out, making it both technically easier to adapt, clip on or remove components and giving the building scale, transparency and movement whilst doing away with the traditionally 'closed' facades of stone, glass or brick. All partitions in the superstructure are moveable made of dry construction. Naturally there is a hierarchy of



在防火方面，它不只有妥善而嚴格的防火區劃，甚至裝設有更昂貴的動態式阻火設備，在必要時它可以替代防火牆的功能。尤有甚者，建築物立面之換置系統並不與柱子連結，因此室內外空間可以對調，使這建築物多少有點透明感。

從建築物內部的樓層，尤其是從走廊和蛇行於建築外緣的電扶梯向外看的視野是非常獨特的。恐怕沒有任何一種立面的形態，能像它這麼透明、尺度適切，而與外露的開放式鋼構架中的活動如此緊密連繫為一體。這個建築物顯露其內部的機構，讓所有的人一目了然。它是一座有彈性的、有功效的、玲瓏剔透的以及內外翻轉的建築。它甚至是一個值得造訪的奇境妙地。

#### ※開館頭三個月

本中心已經有了一百萬名的訪客，平均每日約有 45,000 人到此參觀。綱要計畫中訂定的目標是每日最多 10,000 人。然而開館時還是在冬季期間，且每日只開放半天而已。在這當中大約

flexibility, the burölandschaft partition can be moved in a minute, the larger suspended museum partition may take an hour and the fire walls may take a day to unbolt. But all are moveable and express the moveability. Not even fire compartments are rigidly fixed and certain more expensive dynamic fire dividers can replace fire walls when the functions demand. Still further up the displacement hierarchy the facades of the building are not connected to the columns, so that outdoor indoor spaces may be changed, making the building less or more transparent.

The view out from the building from the floors and even more from the galleries and large escalator snaking its way outside the building is exceptional. There is no facade so transparency and scale has more to do with the activities within the external open steel framework. The building reveals its internal mechanism to all who look up at it. It is a flexible, functional, transparent, inside-out building. It could even be a fun place to be in.

百分之二十五的訪客並沒有進到文化中心的主要活動部門，而僅只是流連於電扶梯、走廊、享受巴黎的美景，在可以攀緣上下的構架內部、大眾聚會場以及露台裡隨處走動。在聚會廣場裡，Tingley 公司裝設了一部製造巧克力糖的機器，贈送免費的巧克力糖給每一個孩童。要達成許多我們曾經訂下的目標，特別是龐畢度中心原始計畫所嚴格訂定的宗旨以外的公眾活動領域中的目標，雖仍有漫漫長路。但人們已經逐步地在接管那些公共區域了。

#### THE FIRST THREE MONTHS

The center has been visited by 1 million people, with up to 45,000 people a day. The brief specified a maximum of 10,000 people a day. It is winter and the center is only open for half of each day. Approximately 25% of the visitors never enter the major departments, but just enjoy the escalators, the galleries, the views of Paris and the general exploration of the external climbing frame public forum and terraces. In the forum, Tingley's chocolate making machine is being built which will give free pieces of chocolate to all the children. Though we are a long way from achieving many of the aims we had set out, especially in the realm of popular activities outside the strict confines of the original Center Pompidou brief, the people are taking over the public areas.



*Piano + Rogers Architects*  
*Ove Arup Engineers*  
*Centre Beaubourg, Paris, France. 1972-1977*