

CASE STUDIES

365 Main St, San Francisco

Architects:

Client: 365 Main

227,000 sq ft.

The building at 365 Main in San Francisco represents a flagship facility for a leading operator of data centers. The building offers continuous power, cooling, connectivity and security capabilities. Of the 227,000 sq. ft. 184,000 is rentable space and 90,000 is usable square feet of raised floor area. These ratios are shocking when real estate is at a premium.

Technical features include: 24" concrete core raised floors that offer a structural load of 250 lb/sq. ft, 24 hour on site security staff, 60 CCTV cameras, Power: 35kV feed from Pacific G&E, six (6) 3750 kVA transformers, forty-eight (48) 480 v/3 Phase PDU units, 128 RPPs, ten (10) 2.1 MW continuous power system generators, a 20,000 gallon fuel tank, HVAC: six (6) 800-ton cooling towers, eighty-eight (88) 30-ton CRAC units



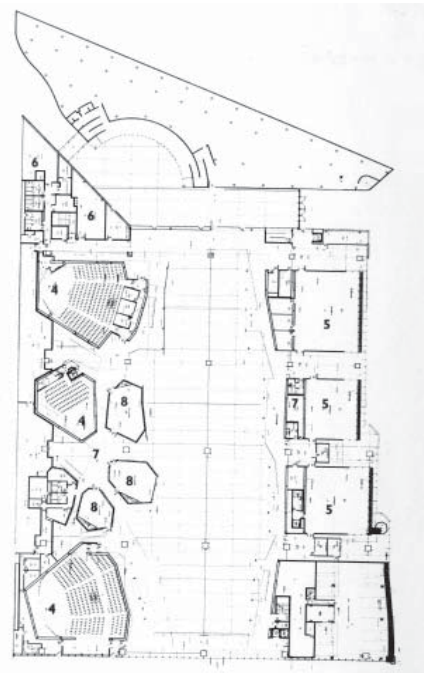
Communication Center, Boulogne-
Billancourt, France
Architect: Jakob + MacFarlane
Client: Renault

The firm of Jakob + MacFarlane have worked with many existing buildings in the past. This project converted and remodeled a former car factory into an ideas factory. The existing building was only 25 years old when Renault changed operations and needed a new space for its white collar creatives. Three auditoria with capacities for 100, 300 and 500 people line the Western edge. A central exhibition hall divides the building. Artifacts from past automotive manufacture are displayed within the hall. This links the past use to the present.

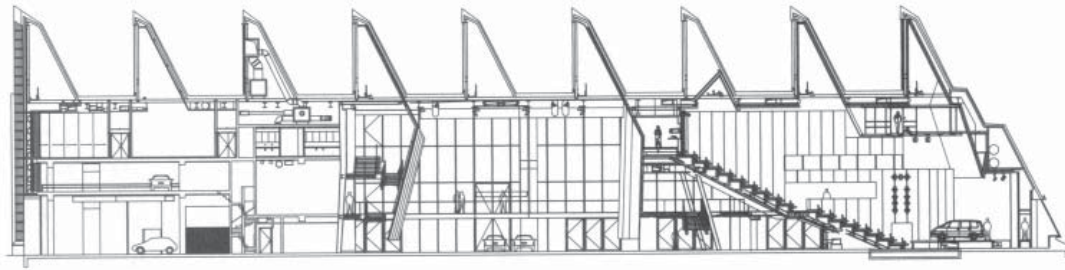


4

As a building form, the existing building closely resembles that of the Bates site. The mass consisted of three shed like volumes with a stepped roof supported by a grid of concrete columns. The intervention therefore lends ideas for working with a grid of columns and a sawtooth roof. In this case, modular meeting spaces and auditoria are placed in between the column grid. The roof formed a starting point for the new insertions which are conceived as a series of planes extruded downwards and then cranked and kinked to define new spaces. In some places the walls do not completely extend to the ground but hang from the roof structure, like



5



cross section

6

large pieces of scenery. In this sense the approach is useful in the design of a theatrical/museum like program.

This building provides an excellent example of bridging manufacturing roots with the service sector. From basing the wall insertions off of the roof structure and leveraging available light with promotional spaces, this design offers many useful lessons.



7



axonometric showing new insertions 8

3

Digital Beijing, Beijing China

Studio Pei Zhu

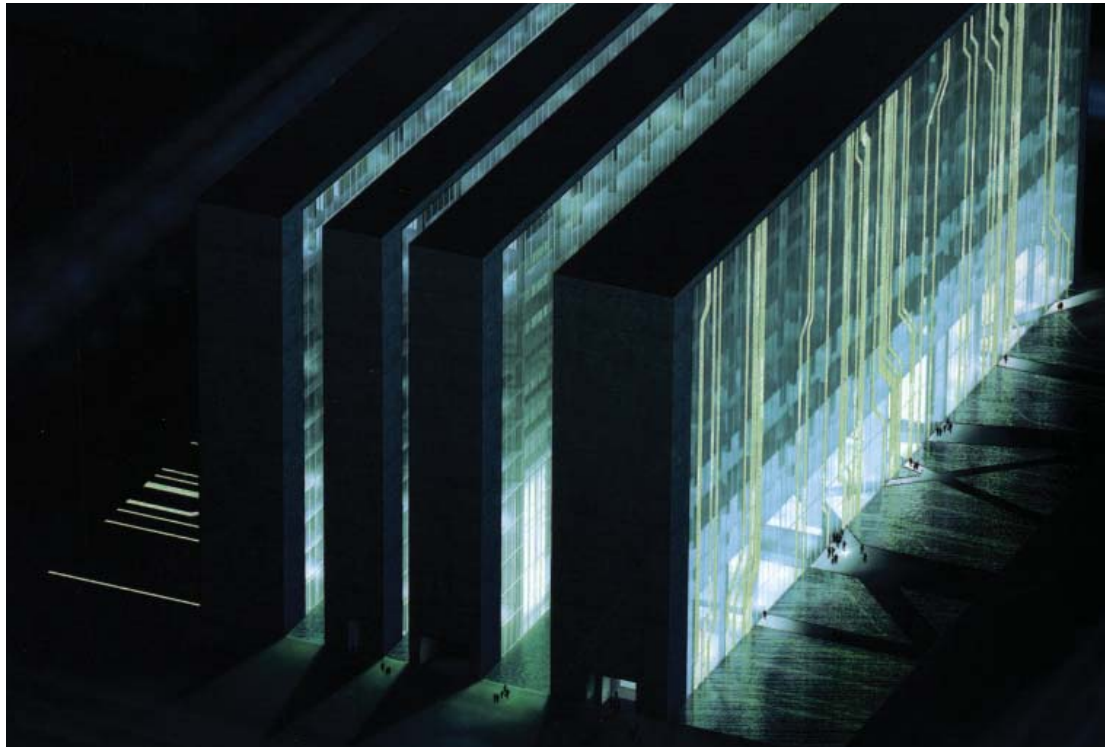
Architects: Pei Zhu, Tong Wu, Hui Wang

Client: Beijing Government

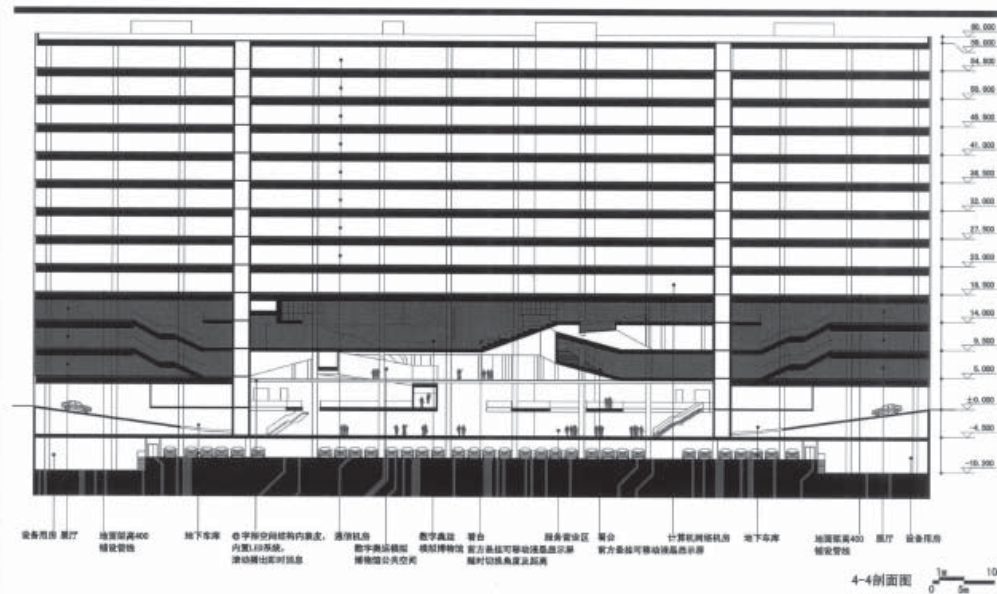
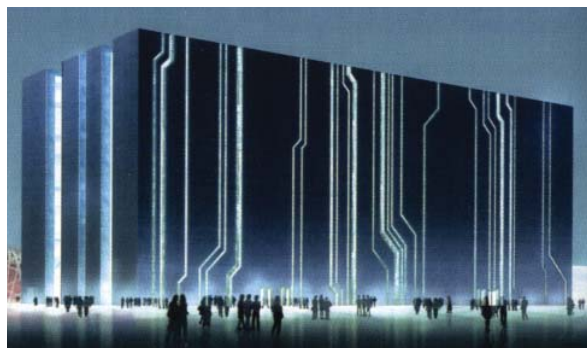
98,000 sq. m.

Digital Beijing, the name of the data center used in the 2008 Olympics, is sited in the Olympic Green. Its proximity to the Herzog and De Meuron Stadium indicates its importance as a public building. As a built project, this building is the first to directly address the aesthetic of a data center. In contrast to its contemporary utilitarian buildings, Digital Beijing sends a message through its juxtaposition of solid concrete massing and kinetic facades. Digital Beijing provided communication, information security and IT services during the Olympic Games, and is now used by the Beijing municipal government's data storage and emergency-response command. Regarding its program, much of its office space is located on the first couple of floors and the servers are located above.

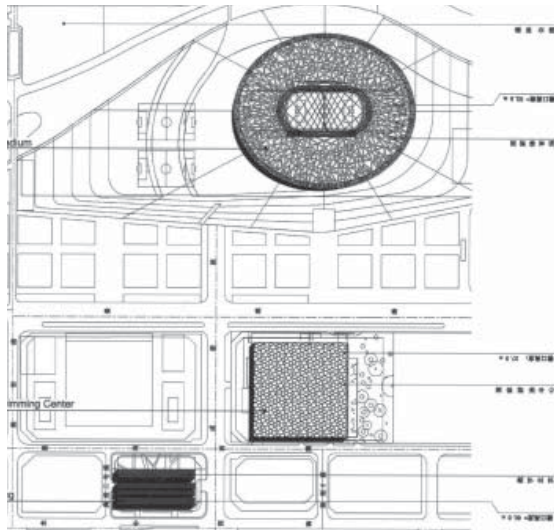
4



9



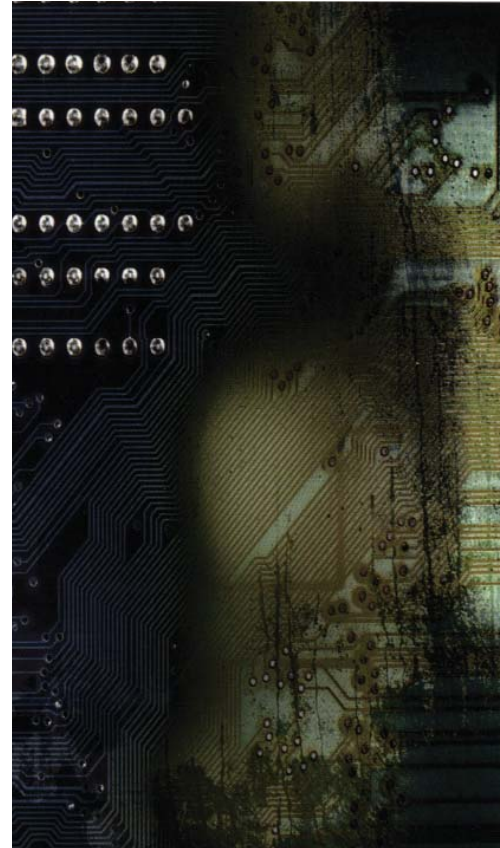
10



11



12



13

This project is relevant to this thesis because it directly addresses the architectural challenges involved when representing a modern data center. In this case, the architects used the ideas and images of printed circuit boards as a design aid for the facade. The building is massed in a way that may invoke the sequence of 0s and 1s in binary code. L'Arca comments that, "Digital Beijing looks like a unilateral profusion of energy, its physical traits translate onto the outside all the operations it is designed to serve, representing the immaterial nature of information through various striking expedients."

While admiring the design teams attempt at invigorating the prototypical server box into an engaging design, it is the opinion of the author that it is anachronistic and reductionistic. Will the public care to look at a circuit board in twenty years when the technology is commonplace? Could the idea of a circuit be used beyond facade treatment and be used to plan circulation or spacial sequence?

5



14

Nantes Arts Center, France

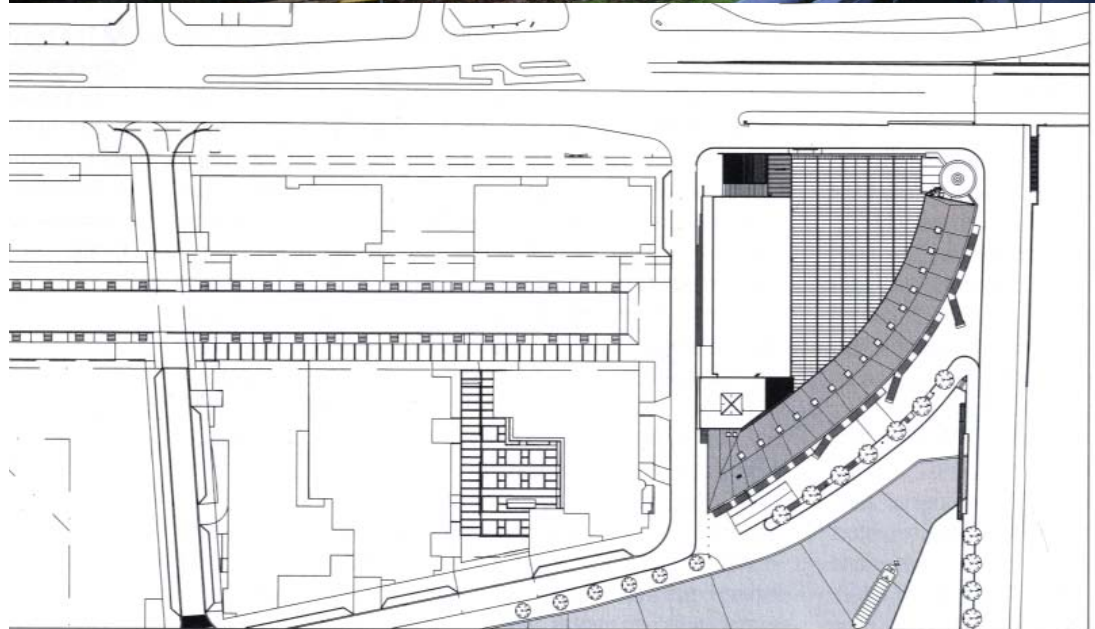
Architects: Patrick Bouchain, Nicole Concordet, Loic Julienne
Client: Ville de Nantes

The Village of Nantes, France wished to convert an old factory into an arts center. The program includes a restaurant, bar, gallery, theater and courtyard. Prior to its renovation, the building had been an old wine storehouse and the residence of squatters and artists alike. In the bohemian spirit, the architects sought to retain the ambiance of the warehouse. To execute this goal, they employ the strategy of the 'already present,' the vacant, and minimizes intervention.



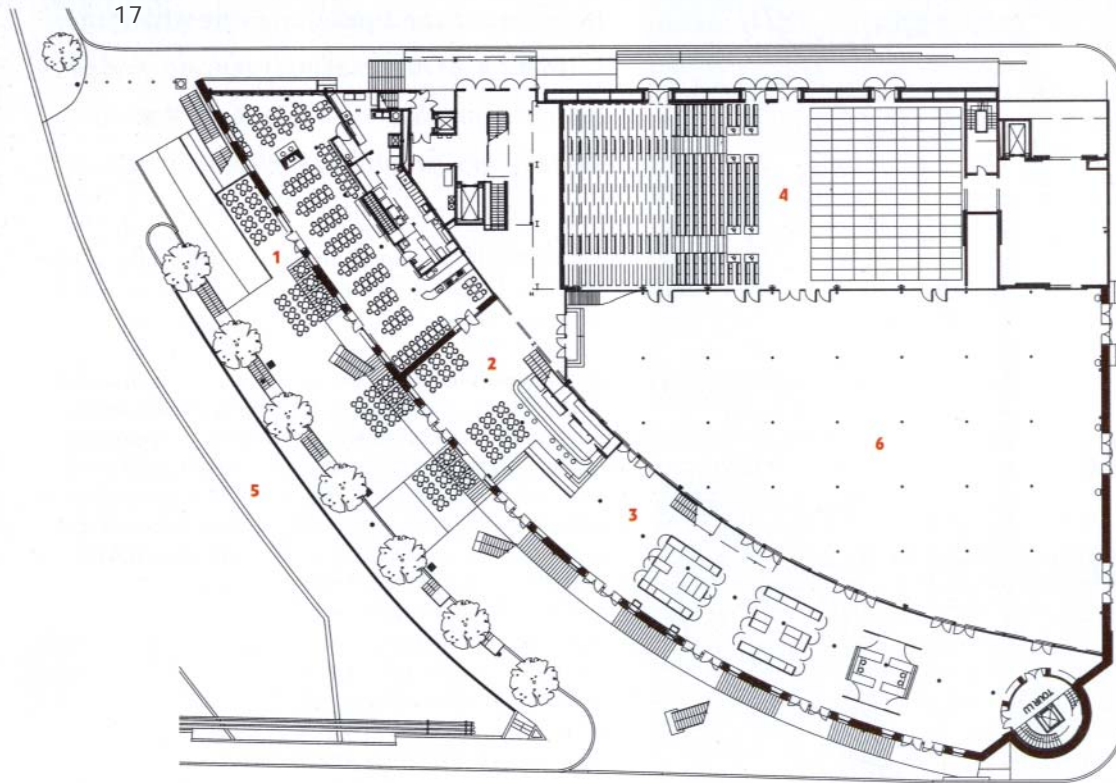
15

6 The architects of the Nantes Arts Center used an ideology of minimal intervention. Sited along a canal, the building is similar to that in my thesis. The existing principal facade along the canal, functions as an urban strip, grouping the main entrances to the center. A new addition houses the Grand Atelier theater which has 650 retractable seats. Made from rough concrete, the theater's materiality connects the past with the present.

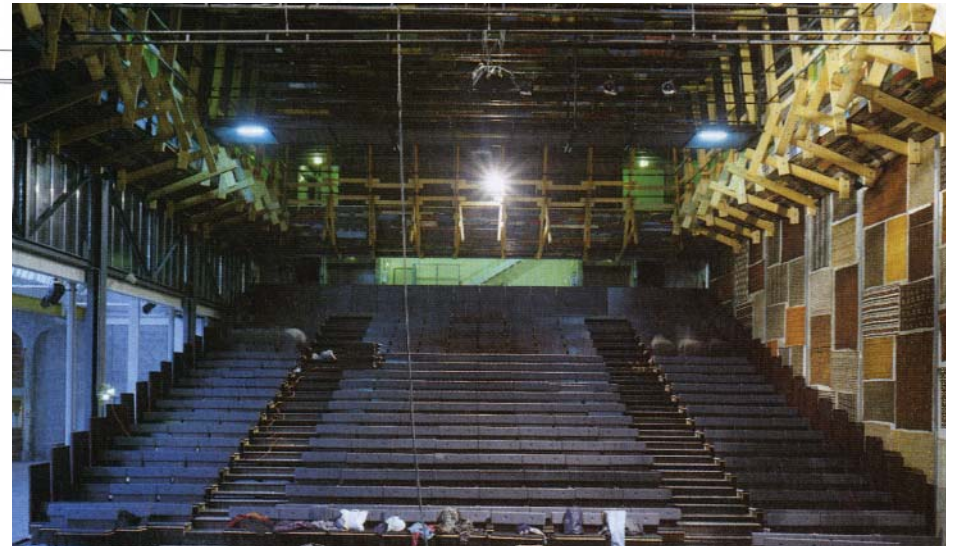


16

17



7



18