THE EU TOWER
a high-rise building for the European Union in Brussels

TALL VCE
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The project is a mixed use high-rise building for the European Union to come up in the European quarter of Brussels. It is a part of the original master plan for the Rue de la Loi by Christian Potzamparc to improve the public experience on the avenue. The design exercise aims at looking into the issues generated by contemporary high-rise buildings on the urban fabric and also about representing diverse European values and character in one single building.

Most of the central business districts of major cities are no longer welcoming to a pedestrian; with buildings shutting down their ground level to the passersby; leaving nothing for them to look at or engage with. The office building typology including high-rise towers which are filling up the cities for the last few decades have destroyed much of the original spirit of the European cities.

The design challenge is to approach these problems and develop a design which can integrate with its context while bringing new life and activities to the street and also deal with the issues of architectural form and identity.
and the idea of Europe

Europe is made up of different cultures each having their own distinctive characteristics, climate, history and architectural styles. It is difficult to pick an image which can find resonance with someone from different countries say, Spain and Finland at the same time. European cities, unlike their Asian and American counterparts are best experienced on foot and the public space of European cities are its streets and church squares. These are the underlying experiences which bind together cities as different as Barcelona and Copenhagen and can be called uniquely European.

The streets of traditional European city centres were pedestrian friendly, with short lengths and punctuated by small alleyways and open squares. They were lined on either sides by shops, cafes and restaurants giving plenty of chance for one to stop and pause; while most of the offices and residences are shifted to the upper levels of the building. This made the streets active for most part of the day and became magnets for visitors bringing the neighbourhood alive.
The European Union (EU) is an economic and political union of 27 member states which are located primarily in Europe. The EU operates through a system of supranational independent institutions and intergovernmental negotiated decisions by the member states.

Important institutions of the EU include the European Commission, the Council of the European Union, the European Council, the Court of Justice of the European Union, and the European Central Bank. The European Parliament is elected every five years by EU citizens.

The EU traces its origins from the European Coal and Steel Community (ECSC) and the European Economic Community (EEC), formed by the Inner Six countries in 1951 and 1958 respectively. In the intervening years the community and its successors have grown in size by the accession of new member states and in power by the addition of policy areas to its remit. The Maastricht Treaty established the European Union under its current name in 1993.[17] The latest amendment to the constitutional basis of the EU, the Treaty of Lisbon, came into force in 2009.

The EU has developed a single market through a standardised system of laws which apply in all member states. Within the Schengen Area (which includes 22 EU and 4 non-EU states) passport controls have been abolished. EU policies aim to ensure the free movement of people, goods, services, and capital, enact legislation in justice and home affairs, and maintain common policies on trade, agriculture, fisheries and regional development.

A monetary union, the eurozone, was established in 1999 and is composed of 17 member states. Through the Common Foreign and Security Policy the EU has developed a role in external relations and defence. Permanent diplomatic missions have been established around the world. The EU is represented at the United Nations, the WTO, the G8 and the G-20.

source: wikipedia
The argument is that a new form of international order has started to emerge, most clearly in Europe, and is a model for other regions. This idea is put forward by two authors, the first being the British diplomat Robert Cooper in his *The Breaking of Nations*, a book suitably ambivalently subtitled "order and chaos in the twenty-first century." Cooper, who was a foreign policy advisor to Tony Blair and in 2006 worked for the EU's Javier Solana, reveals the tenuous equilibrium that has emerged between three kinds of states. There are what he terms the pre-modern ones of Afghanistan, Somalia and places where the Soviet Union has lost control, such as Chechnya. These may be 'failed states', or ones driven by drugs and crime, and they pose the chronic threat of terrorism. Then there are the typical modern states, in the Cooper trinity, of China, Brazil and India. Finally, the post-modern ones are not nations at all but amalgams, such as the EU.

These last operate on the basis of international law and an openness to enter into each other's domestic affairs, varying from military agreements to the regulation of beer and sausages. Cooper points out such mutual agreement to interfere in national sovereignty is an 'extraordinary revolution'. It. It has also created a large market of over 460 million people, where goods and capital can flow, somewhat freely, and where there is little need for conflict or expensive armed forces. This is the new Russian bargain of trade-offs. The nation-states of Europe willingly cede much control over their countries in order to increase their standards, both of living and security. According to this model, the USA is in an undecided space looking two ways. It is a modern/post-modern state in suspension, providing the military shield for Europe and acting unilaterally as it furthers international freedoms (when it suits American goals). Such, in brief, is the new post-modern settlement, operating within the pre-modern and modern worlds.

Many trading blocs are following suit such as ASEAN, the Association of Southeast Asian Nations, or the more informal APEC, uniting some of the same countries in the Asian Pacific area. Japan as an entire country is a post-modern state, entering into multi-lateral links.

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**Critical Modernism**

*by Charles Jencks*

Charles Jencks gives the EU the tag of 'postmodern state', the next stage in the evolution of modern nation states. Here an organisation of multiple states comes together and make decisions and agreements which improve the lives of their citizens. For this new state, 'trade and finance comes first and political and cultural differences are set aside.**

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**Form**

The EU has always been a struggle to define its form—both ideological and cultural. From its formation in 1951, no official plan or debate has ever existed regarding how to represent the institutions of the EU formally and architecturally. Functionality and security was the criteria for the buildings chosen for the institutions. There was always an attempt to choose an architect who was both an appropriate official representation and an architect who was chosen from a building competition, so the EU cannot be seen as a rational choice.

**Existence in Virtual realm**

EU, the post modern state dispels with icons and images and exists in networks, agreements and laws.

**Architectural language**

The buildings of EU are always nonfunctional, context-less masses whose language of generic office buildings fail to define an organisation of international significance.

**Buildings and People**

The organisation is involved more with bureaucrats and lobbyists than public because of the nature of the works. So there is no precedent or arrangement for interaction with the public.

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**Manifestation of EU...**
The city of Brussels was associated with EU from its infancy and had a major role during its evolutionary phase till the formation of the institution in its present form.

The European Union has seven institutions which controls its day to day functions and 4 of them are located in Brussels which makes the city the de facto capital of European Union.

The social, political, and cultural differences in Brussels are unparalleled by any other European city. It is precisely this reality of the city that makes Brussels the “ideal” ground zero of Europe. If “Europenness” can only be expressed through “urbani-ty”, then the actual complex form of brussels is the potential representation - in miniature - of Europe.

- Brussels A manifesto; Towards the Capital of Europe
1357
First city walls - 25000 inhabitants

1777
Second city wall

1858

1880
80,000 inhabitants

1930

1975

1990

2008
1,004,329
The origins of Europe's crucible, Brussels lay in the settlement which came in the present location around 977AD and the city thrived benefitting from its position in the cross roads of Europe connecting Britain, France and Germany. The city became the capital of Belgium in 1830 and went through extensive refurbishments and expansion which lay the structure for the city as seen today. Leopold quarter with Rue de la Loi was an important extension of this development.

The city still lacked an overall structure and many large scale urban interventions in the post war era like the Manhattan project kept changing the urban fabric of the city, without any confirmation to its past. The result has been a fragmented urban pattern and has magnified the social divide of the urban populace.

The launching of the European Community in 1957 in the Leopold quarters accelerated the post war changes within the traditional neighbourhood and the rapid 'invasion' of EU buildings were dubbed the 'Trojan Horse', wherein the organisation spread along the area by taking office spaces in many buildings around Rue de la Loi. After signing the single European Act in 1986, this was transformed into a more prominent presence in the area.
Rue de la Loi, 1950 and in 1970

33% of total office space
in the city

Occupied by 2.65% of total
inhabitants

EU and the city
Office districts in Brussels

Concentration of employed labour force

Concentration of EU labour force
All the European Union facilities are concentrated around the Wetstraat avenue adjacent to the Leopold quarters.
Site location
CONTEXT AND URBAN STUDIES
Potzamparc’s concept was to open up the streets of the city by breaking the traditional Haussmann’s block structure of the buildings and thus create more open streets. Concurrently his masterplan for the Rue de la loi was built around this open streets principle and intended to have more streets which are pedestrian friendly.

The proposed project is part of Christian Potzamparcs original master plan for Rue de la Loi, where he is implementing his open block principle of urban design to bring in more open spaces. The design for the EU tower should be able to complement this design.
Proposed master plan for Rue de la Loi by Potzamparc

Existing street connections

Proposed street connections
Footprint restrictions

Footprint of buildings

* If area $\leq 2000$ square meters, the footprint will be 75% of the total area (see figure 1)

* If area $> 2000$m, the footprint will be:
1500 square meters + $\frac{2}{3}$ * area above 2000 square meters
Height restrictions
Transportation study

Proposed site is located favourably on one of the major traffic intersections in the CBD with a Metro station located right in front of the site.
Neighbourhood study

Office buildings heights varying from 6 to 8 floors

No programs at the ground level to attract the public and contribute to the street life

Dead streets with little or no public life anytime during the day

The park to the east of the site is one of the few accessible green spaces around the district

The south west corner of the site has a heritage unit (view 10) which can be preserved
Rue de la Loi suffers from the common problems facing European cities with the development that took place in the CBDs of these cities in the last few decades. The streets are no longer welcoming to pedestrians; with buildings shutting down their ground level to the passerby; leaving nothing for them to look at or engage with. The office building typology which includes high-rise towers filling up the cities for the last few decades have destroyed much of the original spirit of the European cities and leaves behind streets and neighbourhoods devoid of life or activities.
empty streets

opaque ground levels
“the functionalist monotony as legislated by zoning practices. the skyscraper, groundscraper, cbd, commercial strip, office parlis are invariably vertical or horizontal concentration of single uses in one urban zone, in one building programme, or under one roof.”

- Léon Krier

In “Delirious New York”, Rem Koolhas while talking about highrises discusses how all other architectural forms have more potential for organising urban life than highrises. Skyscrapers deny rather than promote interaction and communication. Our buildings no longer exist at human scale and have lost their sense of scale and place. Louis Sullivan called skyscrapers apparatuses for reinventing city life. A constructivist social condenser: a machine to generate and intensify forms of human intercourse.
“Towers have a problem: they end. Although they are icons for densification and therefore city life, they actually behave like introverted and isolated islands. Although they are meant for intense networks they, actually operate like dead end streets.”

- MVRDV ‘KM3’
The program aims at bringing together different EU administration wings spread across the city into one single building and consists of 220,000 m² of floor space which includes offices, residential, retail and conference facilities. The office space will be occupied by different administrative wings and departments of EU. Conference facilities will be utilised for meetings of these separate departments and also for major conferences. The retail units will be open to public and aims to utilise the large occupancy in the building.

### Program of requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>offices</td>
<td>180,000 m²</td>
</tr>
<tr>
<td>conference center</td>
<td>30,000 m²</td>
</tr>
<tr>
<td>(25 conference rooms varying in size)</td>
<td></td>
</tr>
<tr>
<td>public atrium</td>
<td>6,000 m²</td>
</tr>
<tr>
<td>(private owned covered public space)</td>
<td></td>
</tr>
<tr>
<td>retail</td>
<td>4,000 m²</td>
</tr>
<tr>
<td>total</td>
<td>220,000 m²</td>
</tr>
<tr>
<td>(incl. circulation and cores and excl. building services and parking)</td>
<td></td>
</tr>
<tr>
<td>public space (could be on all levels)</td>
<td>4,000 m²</td>
</tr>
</tbody>
</table>
The offices of the future would no longer be based in cubicles and workstations in an office building and such a massive floor are dedicated for office will be wasted. The programs were revised to add more diversity which can make the whole program a self-sustained complex and add life to the neighbourhood. The revised program includes a hotel for 600 visitors, apartment for 500 residents, increased retail space and semi-public spaces which can compliment both the offices and apartments and bring a new experience to the occupants.

New program of requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Area</th>
</tr>
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<tbody>
<tr>
<td>Offices</td>
<td>120,000 m²</td>
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<tr>
<td>Conference center</td>
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</tr>
<tr>
<td>(private owned covered public space)</td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td>10,000 m²</td>
</tr>
<tr>
<td>Hotel</td>
<td>25,000 m²</td>
</tr>
<tr>
<td>Apartments</td>
<td>25,000 m²</td>
</tr>
<tr>
<td>Mixed/semi-public</td>
<td>6,000 m²</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220,000 m²</strong></td>
</tr>
<tr>
<td>Public space (could be on all levels)</td>
<td>4,000 m²</td>
</tr>
</tbody>
</table>
Individual programs need to be distributed across separate towers to attain maximum efficiency in terms of services and circulation. By clubbing together similar and complimentary programs, a simplified and efficient core can be designed. Programs like office and conference have requirements for cooling while apartments and hotels need heating. The programs are distributed across 3 towers which comes to the minimum specified height of 216m. This is high enough to make the towers the tallest in Brussels but short enough to avoid the use of sky lobbies for vertical circulation.
1. Volumetric representation of programs

2. Converting the volume into three towers
3. Adjusting the height to 216m and repositioning multi use spaces

4. Public space becomes the plaza around building
Core studies
Bank of America, New York  
Height: 288m, 58 floors  
Core: 22  
Lifts: forming 26% of the core area  
Circulation & lobby: 21%  
Toilets: 10%  
Fire stairs: 2 in number forming 8%  
Service ducts: 24%

New world tower, Shanghai  
Height: 271m, 59 floors  
Core: 21  
Lifts: forming 26% of the core area  
Circulation & lobby: 13%  
Toilets: 1%  
Fire stairs: 2 in number forming 10%  
Service ducts: 20%  
Structure: 19%

Core analysis for office towers  
Conclusion

Average area of Lifts & corridors  50%  
Average area of stairs & toilets  25%  
Average area of services & ducts + structure  25%
Rose Rotan suites, Dubai
Height: 333m, 67 floors
Core %: 25
Lifts: 9 forming 39% of the core area
Circulation & lobby: 25%
Fire stairs: 2 in number forming 15%
Service ducts: 11%
Structure: 19%

Tomorrow Square, Shanghai
Height: 285, 60 floors
Core %: 19
Lifts: 6 forming 24% of the core area
Circulation & lobby: 14%
Fire stairs: 2 in number forming 16%
Service ducts: 40%

Capital city, Moscow
Height: 286, 71 floors
Core %: 17.30
Lifts: 5 forming 36% of the core area
Circulation & lobby: 19%
Fire stairs: 2 in number forming 18%
Service ducts: 25%

Century tower, Dubai
Height: 270, 55 floors
Core %: 18
Lifts: 7 forming 26% of the core area
Circulation & lobby: 18%
Fire stairs: 3 in number forming 15%
Service ducts: 35%

Ocean heights, Dubai
Height: 310, 82 floors
Core %: 10
Lifts: forming 49% of the core area
Circulation & lobby: 19%
Fire stairs: 2 in number forming 16%
Service ducts: 10%

Core analysis for residential towers

Conclusion

Average area of lifts & corridors: 55%
Average area of stairs: 15%
Average area of services & ducts + structure: 25%

Core studies
Problems of public spaces in urban cores have been studied in depth by William H Whyte during the 1970s in and around Manhattan. This study was based on human behaviour and activities or the lack of it in public plazas around skyscrapers. The study threw up interesting results which threw light into what makes a good public space and what do not.

The following pages show a few case studies and analysis of public spaces around large buildings which have been widely considered to be successful.
Seagram Building plaza
New York

Seating facilities including ledges, sittable walls, planters etc

Accessible Podium with small height variations

Partial seclusion using planters and landscaping

Pedestrian pathways
Rockefeller centre
New York

Segregated space for performance and art and scultural displays
Walkway connecting main avenues through plaza
Shops and restaurants at ground floor level within the plaza
Multiple levels and platforms to create vistas
Sony Centre, Potzdamer platz
Berlin

- Covered/shaded areas to support year round activities
- Basement level shopping and recreational facilities
- Multiple entry points to plaza
- Buildings around plaza helps in creating a different environment
Conclusion

Seating facilities in around the plaza in the form of fixed, movable chairs and benches along with ledges, small walls etc

Stairs and ramps for people to sit, have lunch etc

Pedestrian routes to connect main streets running across the plaza

Accessible plaza in terms of height and entry points

Landscaped areas and shaded areas to complement open to sky area

Multiple levels to create vantage points and views

Galleries, theatres, shops, cafes and restaurants to generate activity and attract public

Water pools, play fountains and landscape features for people to look at and gather around.
PROBLEM STATEMENT AND RESEARCH QUESTIONS
PROBLEM STATEMENT AND RESEARCH QUESTIONS
The office building typology which includes high-rise towers filling up the cities for the last few decades have destroyed much of the original spirit of the European cities and created lifeless streets with little or no public activities.

The Wetstraat and neighbouring areas were originally one of the many low-rise neighbourhoods of Brussels built on Georges-Eugène Haussmann’s block structure. A high-rise tower in a low-rise context needs to react to its context sensitively, and respect the scale of the existing urban fabric. This is essential to retain the integrity of the neighbourhood and maintain a sense of continuity.

The proposed tower for EU will be the tallest in the city; and with its multiple programmatic requirements will surely have a certain critical mass to attain a monumental status. This opens up issues of identity and image the building will bring to the institution occupying it. In a fast changing political and economic landscape, it is increasingly important for democratic and stabilising institutions to assert an image of stability and permanence to the society.
Problem statement

“ A high-rise tower design which can re-establish the lost relationship between the street and the building - an active public space “

“ A context generated architectural form which responds and respects the scale of its neighbourhood “

“ With an architectural language that tackle the issues of identity and image for the EU and city ”
URBAN AND DESIGN STRATEGIES
Step 01   Response to context

Step 02   Program division

Step 03   Massing studies
An analysis of the immediate urban context and the programming of the site and its relations.

Zoning of the site is done first to position the buildings in such a way that it contributes to the surroundings in a productive way.

Critical analysis and revision of the proposed program

Volume studies to understand the program mass relationship

Massing studies using the results from volume-program analysis

Massing studies using block models to arrive at an architectural language which respects the immediate environment and neighbourhood

Architectural language and identity of EU - a study
Orientation
A direction for the proposed buildings is fixed to face the major EU buildings located to the East of site.

Opening up the site
Site opened up towards the direction of the park to enhance the feeling of space on Rue de la loi.
Establishing axes of movement
Pedestrian walkways which connect either parts of the site and pull in the public movement into the site
The podium rises as a natural extension of the site divisions, with a stepped profile to reduce the scale at the ground level. This also helps in relating to the surrounding buildings. This stepping of the podium creates a series of terraces which extends the public space at the plaza level and invites the public to a series of activities. These terraces can be used to support restaurants, cafes and other semi public activities.
Different relationships between the towers were explored using block models studies. Smaller blocks were used to represent the individuality of the members and organisations within the EU. The massing created using smaller blocks will represent a whole created from diverse elements. The podium design was developed with the aim of bringing down the scale and improving accessibility. The terraced podium reacts to the neighbourhood buildings and also creates public spaces at multiple levels.

Design strategy for context
Stepped podium to bring down scale

Sections along stepped plaza showing the relationship to surroundings

Sections along stepped plaza showing the relationship to surroundings
To represent the identity of EU was to distill the essential construct of the institution as one formed of disparate but mutually beneficial individual institutions and nations....

Like a Tetris game, where the next member is unknown and often, unrelated to the existing system, the EU keeps growing....
The massing evolution takes cue from the tetris blocks. This gives an added dimension of dynamism and drama to the final structure and helps it distinguish from the rest of the buildings in the skyline.
Program distribution
SUSTAINABILITY IDEAS AND CONCEPTS
APARTMENTS
DECENTRALISED CLIMATE CONTROL

HOTEL
CENTRALISED CLIMATE CONTROL

Reflective roof pavers

Ceramic fritting for office facades help cutting down glare, reduce load on climate control systems

By clubbing similar programs in one tower, optimal utilisation of ducts and services is possible

Rainwater from the many terraces is collected in underground storage tanks which is then utilised for heating the floor and toilets
Sustainability & energy diagram

Hydronic floor heating systems saves energy spent on heating the office floors.

OFFICES
CENTRALISED CLIMATE CONTROL

The floor of the atrium is paved with heat conductive limestone.

Water for heating floors
Roof

Green roof
Provides insulation

Rainwater collection
Facade

Climate facade
Provides insulation
Energy savings on heating and cooling

Climate facade
- Double glazed external panel with ceramic fitting
- Singly glass operable shutter as the internal panel
- Operable curtains inside the climate facade cavity
- U value 1.1 W/m²K
- α value 0.50
Facade

Triple glazing
Integrated air treatment and intake units

For apartments and hotels
Facade

Ceramic fritting

Reduces solar gain
Floor

Hydronic heating
Circulating water for cooling in the summer
and heating in the winter
Covered by heat conductive flooring
Case studies

Hearst Tower, New York
by Norman Foster, 2006

The Hearst Tower is designed to be 26% more energy-efficient than a standard office building. Glass coating to reduce solar radiation and therefore cooling load - the glass has a special ‘low-E’ coating that allows for internal spaces to be flooded with natural light while keeping out the invisible solar radiation that causes heat. A limestone atrium floor with embedded polyethylene tubing for circulating water for cooling in the summer and heating in the winter. High-efficiency heating and air-conditioning equipment that uses outside air for cooling and ventilation for 75% of the year. A roof that collects rainwater in a 14,000gal basement reclamation tank, which then replaces water lost to evaporation in the office air-conditioning system and feeds into a pumping system to irrigate plantings and trees inside and outside of the building. The ‘Icefall,’ a two-storey waterfall that chills the ten-storey atrium, drawing off warm-season heat using rainwater from the roof. Few internal walls and low workstation partitions to maximise natural light. Walls are coated with low-vapour paints. Concrete surfaces are treated with low-toxicity sealants.

One Bryant park, New York
by Norman Foster, 2006

Use of natural air and green spaces. By using green roofs, the heat island effect can is reduced and lower the temperature of roofs...for this planters(small grass beds and plants/shrubs will also do). Four tanks (32000l) on different levels(service floors) to collect the filtering down rain water ; Water recycling from the terraces which will be stored in the underground tank for later use. Special coating on the glazing reflects heat but let in light..(frit pattern)
The towers mutates into a pile of boxes which appears to be unstable and conjoined.

The public plaza continues the language and drops down into a series of stepped plazas.
Final design
DIAGRAMS AND PLAN REFERENCES
Plan @ 0m lvl - Entry from Rue de la Loi
12m lvl - Fifth floor

16m lvl - Sixth floor
Bridges

Typical floors
Area divisions
Residential tower
Apartments - Division

Typical Apartment floor plans
Multi use bridges
CORES AND LOGISTICS
Tower 01
Retail, Hotel & Apartments

2 x 15 passenger express lifts
4 stops

42nd floor
(sky lobby) 30th floor
20th floor
(sky lobby) 8th floor
2 x 15 passenger express lifts
4 x 15 passenger lifts for 21 floors
2 going up for 10 floors
2 going down for 11 floors

Tower 01
Retail, Hotel & Apartments

6 x 15 passenger express lifts
6 x 15 passenger lifts for 16 floors

Tower 02
Offices
6 x 15 passenger express lifts
4 stops
6 x 15 passenger lifts for 16 floors

Tower 02
Offices

6 x 15 passenger express lifts
3 x 15 passenger lifts for 11 floors
3 x 15 passenger lifts for 11 floors

Tower 02
Offices
4 x 15 passenger express lifts
14 x 15 passenger lifts for
14 floors of conference facilities

Tower 03
Conferences & Offices

4 x 15 passenger express lifts
14 x 15 passenger lifts for
14 floors of conference facilities

Tower 03
Conferences & Offices
4 x 15 passenger express lifts
3 x 15 passenger lifts for 10 floors of office
3 x 15 passenger lifts for 10 floors of office

Tower 03
Conferences & Offices

4 x 15 passenger express lifts
3 x 15 passenger lifts for 10 floors of office
3 x 15 passenger lifts for 10 floors of office

Tower 03
Conferences & Offices
STRUCTURE CONCEPTS AND PRINCIPLES
Load bearing central core

Pair of 3d trusses fixed to cores

Top truss takes the load of 10 floors in compression

Bottom truss takes the load of 10 floors in tension and balances the load

Structure concepts and principles
core of 21.6m x 21.6m
dimensions with 1.5m thick walls
and openings and buttresses as per structural requirements
FACADE CONCEPTS AND EXPLANATIONS
Bringing in an element of Brussels to the facade is not easy. The facade has to express something which can be instantly related to the city. This has to be done in a subtle manner and not resort to direct transplanting.

The Brussels capital may not be as big and famous as the other European cities like Paris, London or Berlin, but holds its own charms. Brussels is widely known for its chocolates and also for its lace, popularly known as Brussels lace. Both are instantly identifiable as part of the city’s identity not only within Brussels and also across the world.

The Brussels lace is taken as an inspiration for creating the patterns in ceramic fitting on the facade. This would use a direct copy of a lace design, but a pattern in smaller scale is designed and repeated. The pattern is designed to have maximum visibility to outside.
Different facades for different blocks

The EU tower has 5 main distinctive programs within it, the office blocks. Residential units which include apartments and hotels, auditorium, multipurpose units like exposition and meeting spaces and retail units.

Of these the retail units will have structural glazing with high visibility for maximum visual connection between the outside street and the display inside. The other four units will have their own distinctive facades.

Office blocks

The office units total 5 blocks in number, with 1 office floors each. They have a total facade surface area of 26,320 m². With more daytime usage and large heat radiation from people and the electronic systems, the climate systems of an office floor will rely more on air-conditioning than heating. So the facade system for the office should have better insulation properties.

The facade system designed for the office blocks includes a climate facade system with its outer glass pane ceramic fritted to custom patterns. The air circulation system of the climate facade is linked to the climate system of the office making it more efficient.

The individual pattern for the outer print is designed in such a way to have maximum visibility outside while cutting down as much glare and sun as possible. The larger fritting layout is designed to cover 2 floors height with empty clear bands running across to give a grid pattern. The double floor height scale of pattern is aimed at bringing down the scale of the building.
Residential blocks

The residential units make up 4 blocks with a total facade area of 21280m². Of these, 2 blocks are apartments and 2 hotels.

The facade system for the residential units are triple glazed structural glazing to have better insulation and heat retention. Climate facade of the offices was not used here as triple glazing will have better view outside for the people inside.

In addition, the ceramic fritting layout of office blocks is in-served with empty bands converted into prints and the windows within left open for the residents to have a clear view of even during night time.