BRAIN in the House

exterior perspective

The human being creates many arts and cultures.
All of them are created by functions and works of their "Brain".
They have a brain weighting about only 2% of the whole body weight,
and a blood volume circulated within a brain has 15% of total blood volume of heartbeat.
The consumption volume of oxygen of a brain is about 20% against that of whole body.
The volume of glucose is 25% against that of whole body.
It is proved that the brain needs more volume of energy than that needs for the body.
This is caused by higher volume of current of electric signals,
occurring in a brain with complicities and activations.
What is now required for "House of Arts and Cultures" would be "Energetic Brain",
which can enable you to produce new arts from modern and various communication.
The art enables you to exercise more flexible activation of the brain and thus it can engender an art,
resulting from the continuity of circulating and supplying energy.
The art can be boldly expressed by "cultures" and they can give an impression to other's brains.
Our proposal is to create an architectural building place of newly borne arts
and its expression which come out of the brain.
Furthermore, it is architectural style which can ensure smooth transition of current of electric signals
with nature and environmental cares.

1-Characteristic of designs

1.1-Four pieces of outer wall (= skulls) protect the brain and it is hung by super structure in the walls.
And thus, you can see free air- space without pillars.

1.2-Each tiered areas of “Brain” has been directly connected with pipe shaft, elevator and stairs installed inside of the outer walls.
You will overlook whole lead tracks of people and the conducting wire of facilities as if they are circulated.

1.3-You can always feel how the brain works throughout circulations of “light”, “wind” and “sound” at where the room of the colonnade created in between the brain and an outer wall.

1.4-It can play a role of presenting arts towards city side which is newly created from the brain throughout an innumerable “LED” buried in an outer walls.
At the same time, four pieces of outer wall (=skulls) can also demonstrate the works that protect the brain from an external environmental (wind sand, sunlight, pollution).

1.5-Respecting an Arabian architectural design taste.
* A cubic image.
* The architecture is decorated as "Every Second Changing Art" which is expressed in an outer wall.
* Express the traditional beams.

2-Structure plan

2.1-An internal multi-tiered structure is lifted by only four pieces of outer wall and it is planned to have free air-space without the pillar.

2.1-Big nine pieces of pillars are hidden in each wall. Nine beams with the Rahmen structure will support the inside. Extremely thin and light board, flat slab will be used. It is the hybrid system that cast lightweight concrete to "steel honeycomb structure".

3-Facilities design

3.1-We do not use fossil fuel for a heat source at all.
It will be the heat pump system using subsurface water.
Utilization of two step system of a heat pump in consideration of an environmental issues of subsurface water.

3.2-As for the air conditioning system of large free air-space, it controls reservoir space only by installing air outlet that can control volume of air flow at longitudinally-extending duct.

3.3-Deployment of air-conditioning supply system that is used with sleeve in the pipes installed with floor structure, without installing a duct of air-conditioning in a ceiling.

3.4-Establish LAN, a high-speed digital line, a satellite digital line
Produce Intelligent Media Building.

4-Fire prevention plan

4.1-There is a blow-by in between an outer wall and architectural construction inside of the building. The refuge circuit is very much clear and highly visible for "right and left" and "up and down" sights.

4.2-Along side of natural flow of the partitioning, an automatic fire alarm box, sprinklers and etc will be installed at grid structure of ceiling.

4.3-In regard with smoke ventilation system, smoking duct installed inside of outer walls is utilized, since each tiered stair should be considered as "one free air space".

4.4-The integration of fire prevention and security system will be developed by builing "Building Management System".

5-Lighting plan

The Sun lights will bring into the building by utilizing "Automatic Sun light Tracking System" throughout a blow-by of an outer wall and architectural construction inside of the building. (It plays a role of the light shielding.)
The light diffusion will be spread out as if light road which conveys indirect lights in free air-space of the blow-by during the night time.
Every illumination of the ceiling achieve an effect for every exhibitions and installations.
The illumination will be installed in an interspatial of electric distribution lines in order to improve an effectiveness of lighting.
LED illumination and spotlights will be consolidated and thus it can comply with various purpose of the utilization.

6-Finishing plan

6.1-External Finishing

* Southern External Wall: Duplicated sashless glasses.
  (Muffled and designed glass, and transparent glass)
* Other three External Walls: "Sandstone plate." (Inlay LED illumination with 30mm pitch)
* Roof with waterproof coating by multi-painting.

6.2-Internal Finishing

*Inside face of external wall (Three faces excluding Southern side):
"Sandstone plate". Marble, metal panel, glass, or mirror coating for some other part.
* Elevator: With Sashless glass.
* Most appropriate materials to be selected for floor, wall, ceiling, depending on respective functions that is required for each stair.
  For example
  Floor: Stone, carpet, plastic tile, wood, metal and etc.
  Wall: Glass, metal, sound insulated board
  Ceiling: Fire Proof panel, acoustic absorption panel

7-table of space

7.1-Areas

1	**SITE AREA**		**3785 m2**
2	**BUILDING AREA** Building coverage		**2209 m2** 58.3%
3	**TOTAL FLOOR AREA** Building volume ratio		**21366m2** 564.5%
4	**EACH FLOOR AREA**	**6F**	**1569 m2**
		5F	**1569 m2**
		4F	**1617 m2**
		3F	**1617 m2**
		2F	**1617 m2**
		1F	**1617 m2**
		MF	**715 m2**
		GF	**2209 m2**
		B1F	**2209 m2**
		B2F	**2209 m2**
		B3F	**2209 m2**
		B4F	**2209 m2**

7.2-Surface Areas

Spaces		Area
A	Reception, Information	1303 m2
B	Performance and Conference hall	2575 m2
C	Exhibition Spaces	1172 m2
D	Work and Traning rooms	855 m2
E	Documentation Centre	830 m2
F	Cinematheque	320 m2
G	Cafeteria and commercial spaces	587 m2
H	Administration	420 m2
I	Miscellaneous Spaces	305 m2
J	Technical rooms	500 m2
K	Parking and delivery	8031 m2
TOTAL USEFUL SURFACE		**16898 m2**