

Elevator Tower.
Render de proyecto. Estudio Leon11

EXPERIMENTAL ELEVATOR LABORATORY TOWER

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Colectivo Leon11

Un Lugar que representa a una ciudad moderna, no puede ser un hito estático, un icono tradicional o un objeto perpetuo de valores subjetivos. Creemos que el símbolo de una ciudad con estas características tiene que ser un lugar para la Innovación, el Intercambio y la Accesibilidad personal.

Proponemos un Laboratorio Avanzado de Invención donde los procesos de la ingeniería, la arquitectura y la tecnología se puedan TESTAR. Se trata de un lugar que acompañe a la tecnología y al pensamiento. Se trata de un centro de Exposición y Producción de Ideas. Se trata de una torre viva.

Para conseguir esta percepción dinámica y la variabilidad de ecosistemas, se propone una estructura móvil capaz de adaptarse a sí mismo en la forma demandada.

Queremos que la imagen de la "Elevator Tower" sea un símbolo de las tecnologías más avanzadas. Muestra sus mecanismos internos para concienciar y desvelar las nuevas oportunidades que la tecnología acompañará en los futuros rascacielos. Perseguimos el ideal de que el futuro de la ocupación vertical, no sólo debatirá temas de forma, sino de Percepción y Aprovechamiento Urbano. Nuevos sistemas de desplazamiento vertical, y nuevos usos inexplorados harán que este tipo de edificación no construya sistemas de referencia, sino de investigación.

Los avances en los campos tanto científicos como sociales se podrán testar en "Elevator Tower". Un lugar a la vista de todos los ciudadanos.
Un centro de investigación capaz de generar un nuevo y sorprendente paisaje artificial o actual.

INVESTIGACIONES DEL CONTEMPORÁNEO "URBANISMO VERTICAL"

Actualmente, la necesidad de construir torres, (sobre todo en Dubai) no es sólo por un motivo de necesidad de espacio. Nosotros reclamamos la necesidad de una nueva percepción espacial que consideramos debería empezar a ser demandada. De la misma manera en que existe una planificación de Urbanismo horizontal, proponemos empezar a pensar verticalmente en los edificios que son ciudades.

LOS "VIAJES" VERTICALES

De la misma manera que caminar o moverse en horizontal tiene diferentes formas de desplazamiento (metro, a pié, coche…), velocidades y paisajes, proponemos viajes en sentido vertical que sugieran e Integren nuevos programas.

NUEVAS PERCEPCIONES: LA TORRE EN MOVIMIENTO

Para aprovechar y disfrutar esta dimensión en altura, proponemos nuevas tipologías de transporte Vertical.

Creemos que el mismo ascensor que nos ha transportado de un piso a otro durante un siglo no debería estar basado en el mismo sistema estratégico que el que ahora nos permite la tecnología y la ciencia para desplazarnos a lo largo de 100 plantas.

Proponemos el estudio de nuevas tipologías de soporte móvil que den lugar al estudio y construcción de nuevos prototipos que ayuden a disfrutar de la imprescindible dimensión vertical.

LA VARIABILIDAD

Esta propuesta convierte la torre en un elemento activo que participa en la distribución de sus usos. Queremos construir un lugar donde los programas de la torre se mueven según los usos y se adaptan a el número de usuarios que lo forman.

ESTRUCTURA DE ACTUALIZACIÓN

La Estructura que proponemos para la torre esta formada por:

Estructura Interior: formada por un núcleo de hormigón armado comprimido.
Estructura Exterior: formada por dos familias de cables a tracción.
Estructura en la parte superior de la Torre: un anillo de compresión que transmite las cargas de la estructura exterior a la interior.

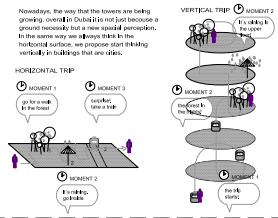
*En vez de tener varios anillos de compresión a lo largo de la altura de la torre (como muestran los ejemplos de Ricolais), proponemos que cada programa de actividad genere un elemento rígido que funciona como elemento conector de la estructura interior y exterior. Estos núcleos rígidos de actividad de uso, se desplazan verticalmente mediante un sistema mecanizado colocado en el anillo superior de la torre. Este tipo de pensamiento estructural da lugar a la transformación constante de la imagen y forma de uso de la torre.

La Estructura que actualiza: Maquinaria que permite la modificación de la torre a través de los cables de la estructura a tracción.

Proponemos una nueva visión para la construcción vertical, donde su objeto no esté basada en el apilamiento espacial, sino en la innovación del cambio perceptivo-social y el desarrollo tecnológico.

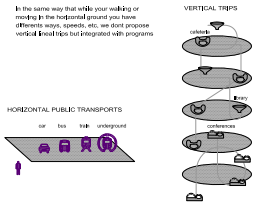
a VERTICAL PLANNING

Nowadays, the way that the towers are being growing, overall in Dubai it is not just because a ground necessity but a new spacial perception. In the same way we always think in the horizontal surface, we propose start thinking vertically in buildings that are cities.

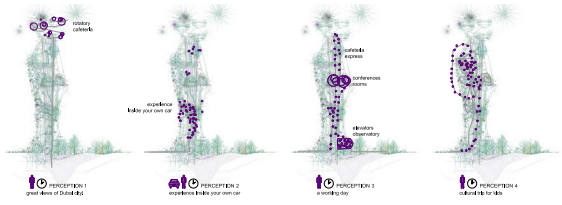


b VERTICAL TRIPS

In the same way that while your walking or moving in the horizontal ground you have differents ways, speeds, etc, we dont propose vertical lineal trips but integrated with programs



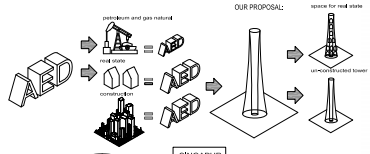
c VERTICAL PERCEPTION = TOWER IN MOVEMENT



WHY AN EXPERIMENTAL ELEVATOR TOWER?

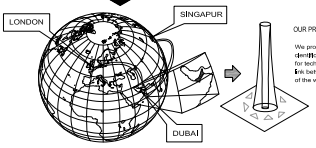
1 ECONOMIC PARAMETERS

The emirate's revenues are from trade, real estate and financial services. Revenues from petroleum and natural gas contribute less than 6% (2006) of Dubai's economy (2005). Real estate and construction, on the other hand, contributed 22.6% to the economy in 2005.



2 ECONOMIC PARAMETERS

The ELT constitute a financial and technical center with a world repercussion. According Dubai position in the world, the ELT place is strategically located in the middle point between London and Singapure



3 ECONOMIC/INDUSTRIAL PARAMETERS

Dubai has invested in the creation of industrial sites, with a specific legal, regulations and bussiness conditions :

- It is on the site of the investors and quickly set up of new companies in the city.
- allows the 100% of the capital resources return

DUBIOTECH

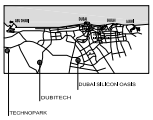
- Create, develop and advance research and development in the region.
- Foster Life Science education, training and industry support.
- Offer highly developed multi-faceted infrastructure and facilities
- Create and provide a supportive legal and regulatory environment.
- Building a knowledge-based economy for the region.

OUR PROPOSAL:

- the establishment of direct connections between the Dubiotech investigation areas and the experimentation spaces.

TECHNO PARK

- We attract direct investment in manufacturing and research and development, and also lead the way in the fields of applied science and technology.
- Key Features and offerings of TechnoPark are covers 21 million square metres of land, about 30 percent of which is open space areas.
- Brings the most advanced organisations in the world together, fostering shared understanding through research into and development of new technologies.
- Aims to cultivate greater knowledge for the future, by promoting continuous innovation and progress.



OUR PROPOSAL:

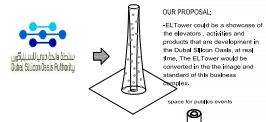
- We propose the ELT use in order to create a dinamic enviroment that encourage the investigation and training, that supports the didactic development of the Techno Park

DUBAI SILICON OASIS

- The GCC and MENA region also constitute the largest Halal products market in the world.
- Abundant and low cost supply agricultural products from the MENA and sub-continent region, along with the High-income levels of the GCC countries, present a lucrative opportunity for high value-added food and beverage companies.
- Attractive businesses would include frozen dough and long shelf life and processed seafood products.

OUR PROPOSAL:

- ELTower could be a showcase of the elevators , activities and products that are development in the Dubai Silicon Oasis, at real time, The ELTower would be converted in the the image and standard of this business



4 SOCIAL PARAMETERS

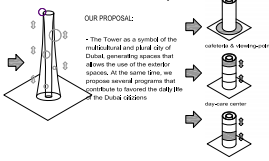
- Population: 1,679,272 inhabitants
- Emirate: 2,262,000
- Density: 408,18/km2 (1,057,26/sq mi)
- Nationality:
  - 42,3% Indian
  - 17% Emirati
  - 13,3% Pakistani
  - 7,5% Bangladeshi
  - 9,1% Other Arab
  - 10,8% Western
- National citizens: 21,9%
- Foreign citizens: 78,1%

- Birthrate (2005): 16,78 /d/hw/1 000 habitants
- Mortality (2005): 4,26 deaths/1 000 habitantes
- Life expectancy: 78,3 years
- Illiteracy: Taxa de analfabetismo: 9%

•The huge construction proyects developed in Dubai city in these times had make the necesity of needed more employers in this sector that the citizens of the city. More than 80% of Dubai citizens are expatriated or non citizens . This aim has generated the necesity of more workers, comming from India

OUR PROPOSAL:

- The Tower as a symbol of the multicultural and plural city of Dubai, generating spaces that allows the use of the exterior spaces. At the same time, we propose several programs that contribute to favored the daily life of the Dubai citizens



5 CLIMATIC PARAMETERS

2008

MARCH
AVERAGE AND TOTAL TEMPERATURES
T: 24,3 TM: 30,7 Tm: 18,7 SLP: 1011,8 H: 48,2 PP: 0 VV: 8,6 V: 12,6 VM: 23,1

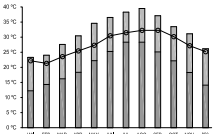
JUN
AVERAGE AND TOTAL TEMPERATURES
T: 33,2 TM: 38,6 Tm: 28,2 SLP: - H: 46,7 PP: 0 VV: 6,6 V: 15,3 VM: 25,2

SEPTEMBER
AVERAGE AND TOTAL TEMPERATURES
T: 33,5 TM: 38,9 Tm: 29,6 SLP: - H: 50,2 PP: 0 VV: 7,9 V: 14,7 VM: 26,2

DECEMBER
AVERAGE AND TOTAL TEMPERATURES
T: 20,4 TM: 24,8 Tm: 15,9 SLP: 1018 H: 60,5 PP: 25,88 VV: 9,2 V: 11,8 VM: 19,8

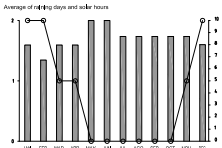
Average temperature (°C)
TM Average Maximun temperatur (°C)
Tm Average Minimun temperatur (°C)
SLP Atmospheric Pressure at sea level (mb)
H Relative Humedity (%)
PP Total rainfall (precipitation and snowfall) (mm)
VV visibility, average (Km)
V Wind velocity, average (Km/h)
VM wind velocity, maximun average (Km/h)

Temperature averages: highs, lowest and watter temperatures



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DEC
Highests temperatures	23	24	27	30	34	36	36	39	37	33	31	26
lowest temperatures	12	14	16	18	22	25	28	28	25	22	18	14
watter	22	21	23	25	27	30	31	32	32	30	27	25

Average of raining days and solar hours

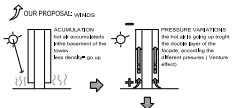


	JAN	FEB	MAR	APR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DEC
solar hours	2	2	1	1	0	0	0	0	0	1	2	
raining days	8	7	8	8	10	10	9	9	9	9	9	8

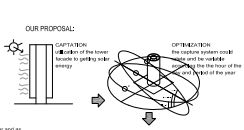
OUR PROPOSAL: ANNUAL RAININGS



OUR PROPOSAL: WINDS



OUR PROPOSAL:



6 VEGETATION

The desertic vegetation its characterized by have been developmet their own ways of conserving and utilizate the watter. Their seeds can remind in the ground during several years, until the rainings comes and the vegetation spring out again.
Other plants, for example, have developed another kind of strategies: having big roots that could get to watter fonts at deep distances. Another possibility is extending their roots to get the humidity or occasionally rainings. Usually, the desert plants leaves are very small in order to conservate the watter because its transpiration area its very reduced.

SPECIES

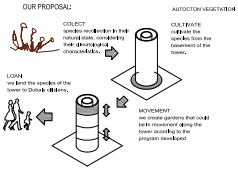

Armatocereus procera


Cactacea

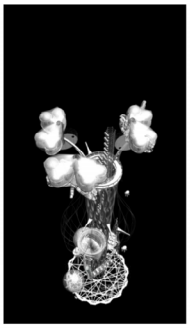

Cactus rosado

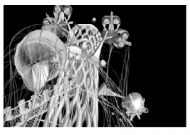

Pata de Guanaco

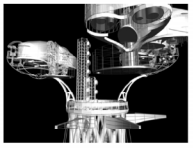
OUR PROPOSAL: AUTOCTON VEGETATION

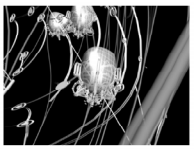


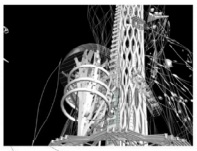
VIEWS OF THE ELEVATOR TOWER

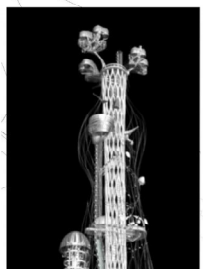


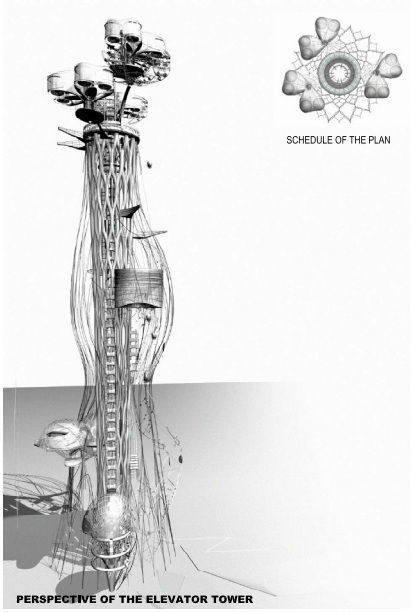








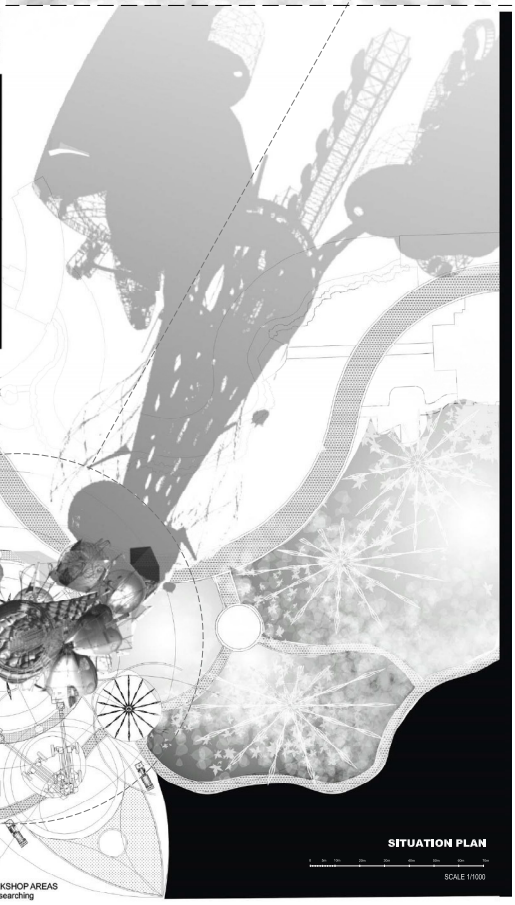




PERSPECTIVE OF THE ELEVATOR TOWER



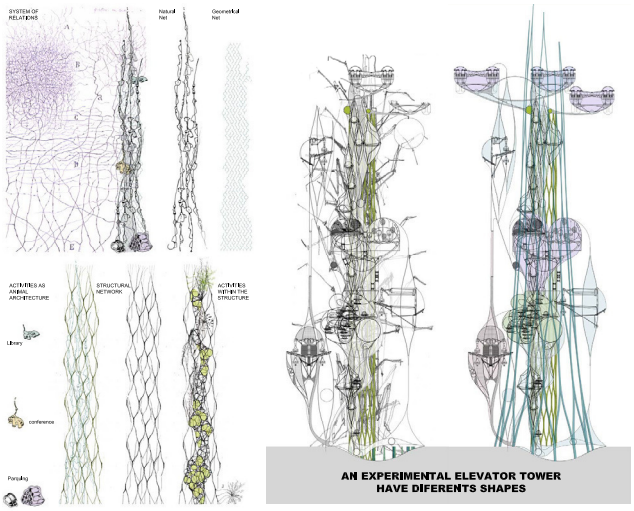
SITUATION VIEW OF THE ELEVATOR TOWER



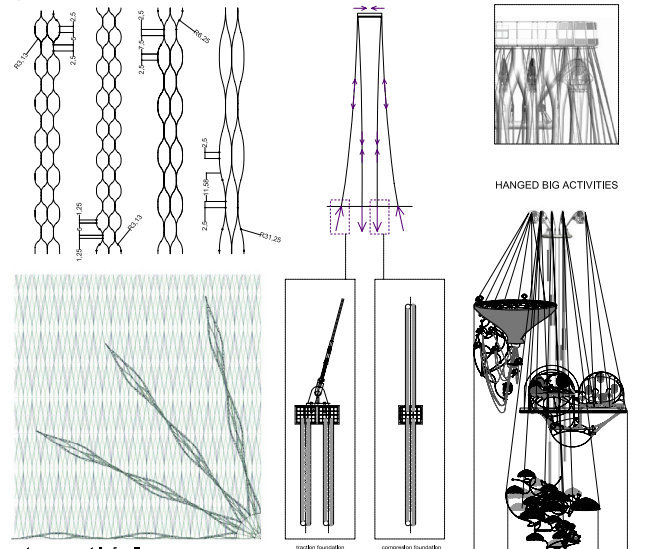


REPRESENTATIVE TOWER OF A MODERN CITY IN A CONTINUES EVOLUTION, CAN NOT BE A MILESTONE STATIC, TRADITIONAL ICON OF PERPETUAL VALUES. THE SYMBOL OF AGILITY WITH THESE FEATURES HAS TO BE A PLACE FOR INNOVATION AND CHANGING. THIS HUB HAS TO BE AN ADVANCED LABORATORY WHERE INVENTIONS OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY ARE TESTED. THIS IS A CONSTANT UPDATED TOWER . IT IS AN ALIVE TOWER.

PRODUCTION SEEDS



LOOKING FOR THE GEOMETRY



ROBERT LE RICOLAIS

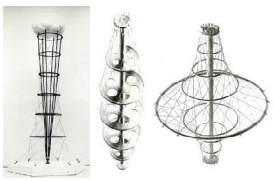
"The art of structure is how and were to put the holes. It's a good concept for building, to build with holes, to use things which are hollow, things which have no weight, which have strength but no weight.

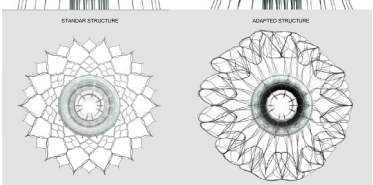
funiculair funis, rope, cable, forming
polygons poles, many, gonos, angled
revolution re, again, back, volvere, roll

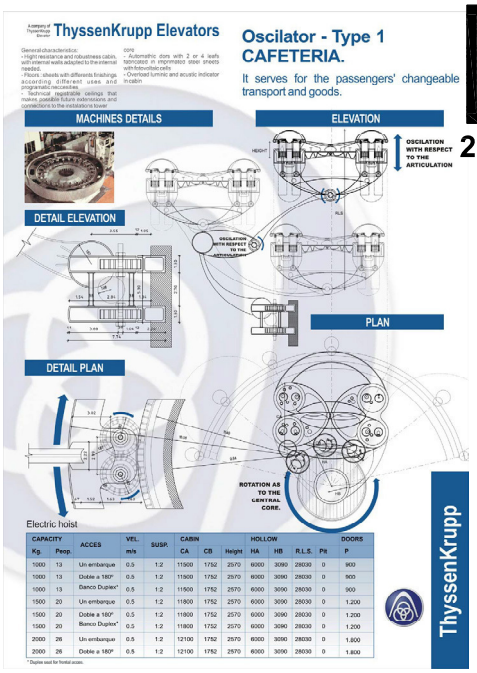
The idea of the **Funicular Polygon of Revolution** [FPR] system was to see how could weave cables and generate a tension network following a minimal surface, by rotating strings around circular compression diaphragms and connecting the tension network to an axial compression member.

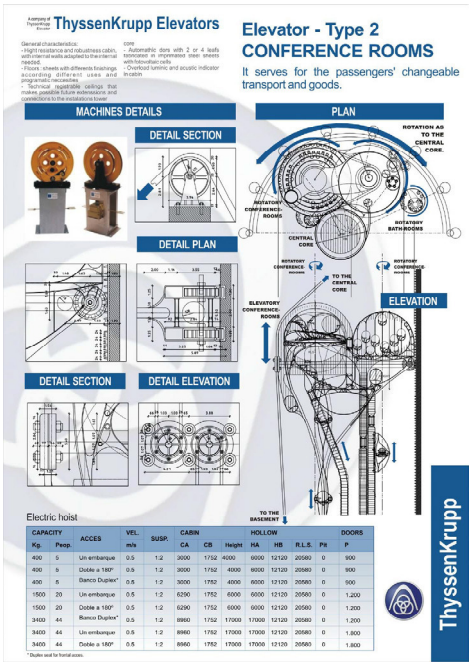
The function of the diaphragm compression members, was to maintain the **undeformability** of the network, by a closed configuration of the forces.
The great tensile forces can be simulated by anchorages.
The main compression part of the structure was a straight internal tube.

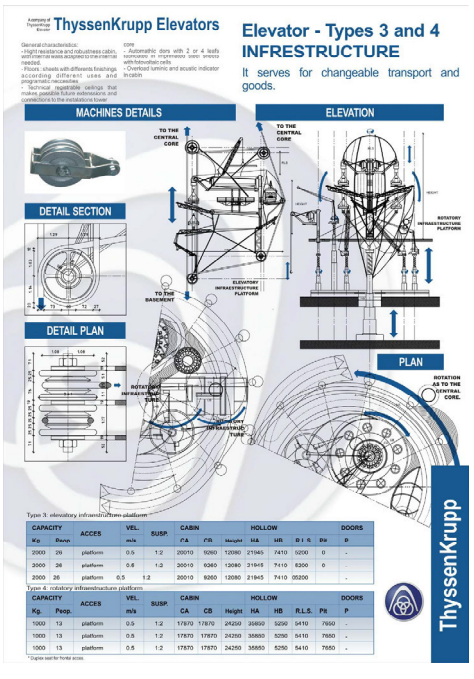
It seems that in search for structures two opposed attitudes are possible: to star with a "block" and work by means of excisions or, on the contrary, to start with a germinal cell in order to arrive at the definitive form by means of addition, as in some arrangement of repetitive elements."







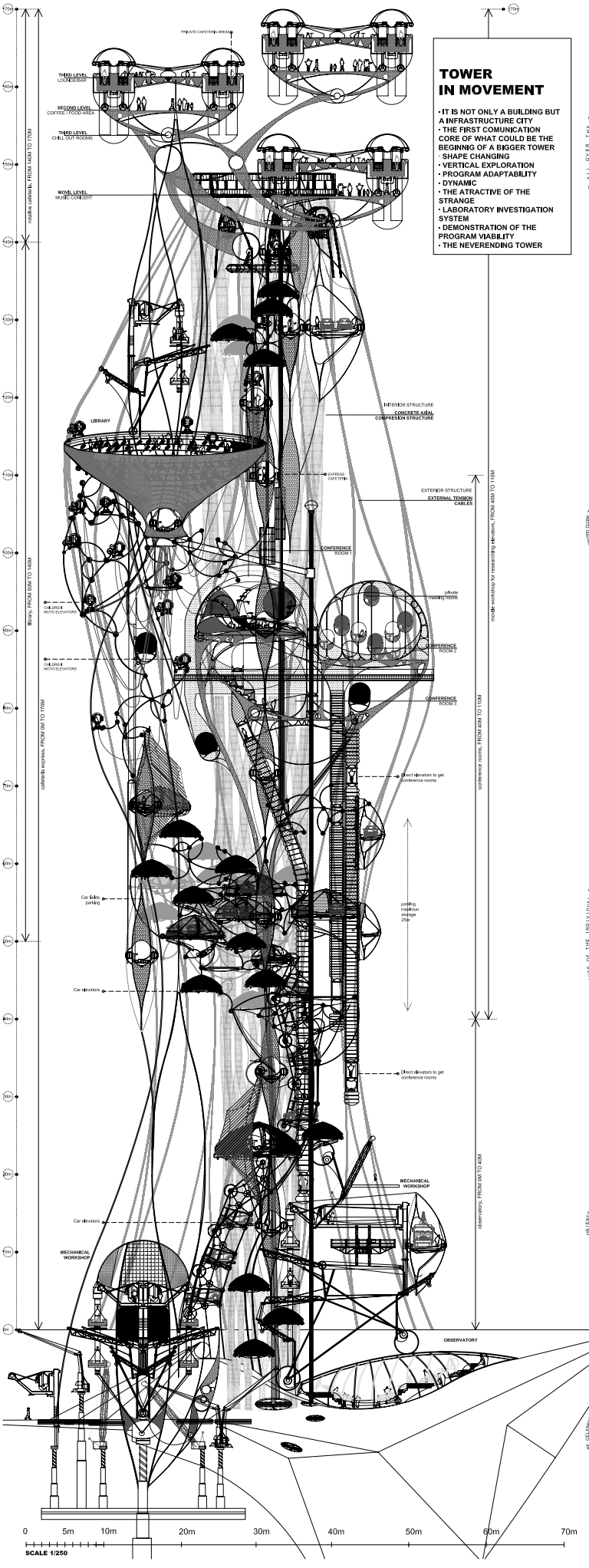


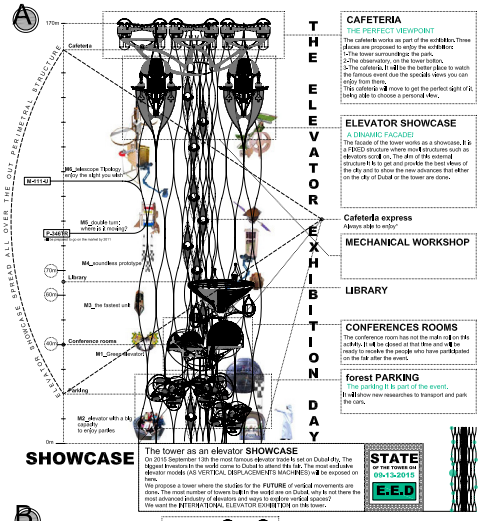


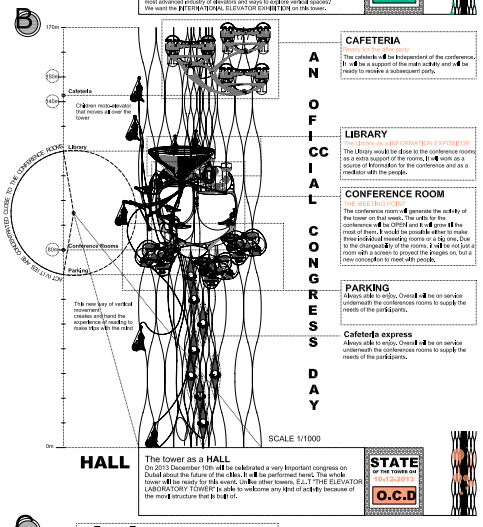


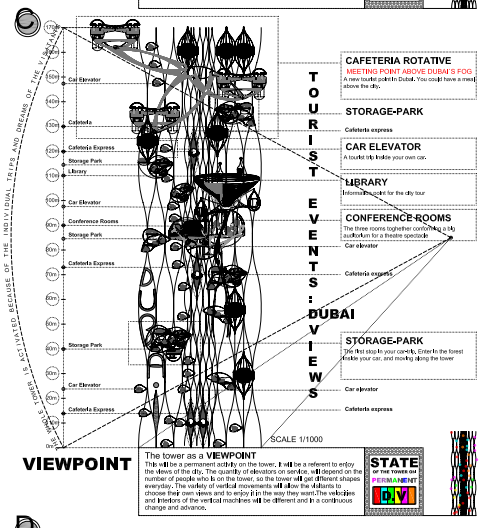
TOWER IN MOVEMENT

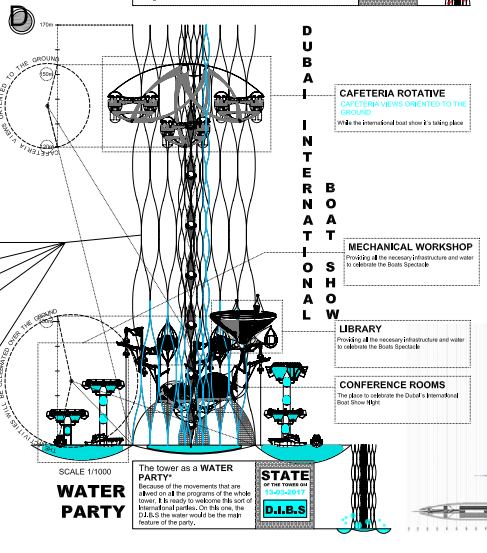
- IT IS NOT ONLY A BUILDING BUT A INFRASTRUCTURE CITY
- THE FIRST COMUNICATION CORE OF WHAT COULD BE THE BEGINNIG OF A BIGGER TOWER
- SHAPE CHANGING
- VERTICAL EXPLORATION
- PROGRAM ADAPTABILITY
- DYNAMIC
- THE ATRACTIVE OF THE STRANGE
- LABORATORY INVESTIGATION SYSTEM
- DEMONSTRATION OF THE PROGRAM VIABILITY
- THE NEVERENDING TOWER







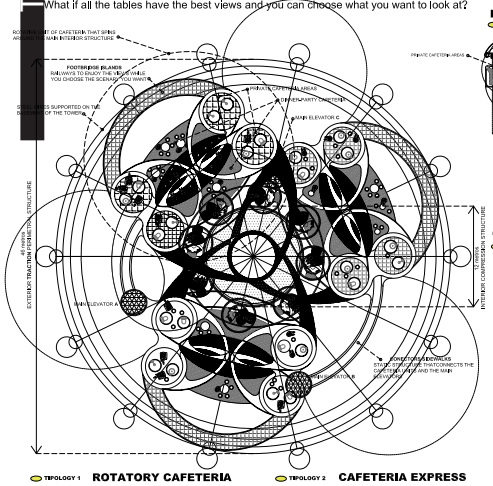




VIEWPOINT CAFETERIA

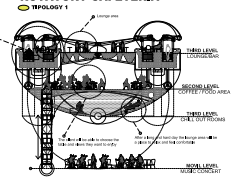
A MOVILE STRUCTURE WHICH ALLOWS TO ENJOY THE BEST VIEWS!

What if all the tables have the best views and you can choose what you want to look at?



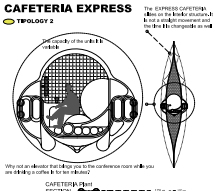
ROTATORY CAFETERIA

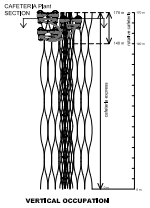
TIPOLOGY 1



CAFETERIA EXPRESS

TIPOLOGY 2





TIPOLOGY 1 **ROTATORY CAFETERIA** TIPOLOGY 2 **CAFETERIA EXPRESS**

OUR CHANCES AND ADVANTAGES:

WHAT IF... YOU CAN CHOOSE YOUR FAVORITE VIEWS OF DUBAI FROM YOUR OWN TABLE?

We propose a cafeteria express elevator. Everyone has a favorite dubai's views and with this system, you will select your perfect view while you're having a meal in the cafeteria downstairs. The elevator will go around wherever you select the view you would like to enjoy.

WHAT IF... YOU COULD ENJOY A QUIET MEAL OR A BIG EVENT MEAL IN THE SAME CAFETERIA?

In the cafeteria you could select the kind of meeting that you want: from a quite dinner for two to a big CHILDREN Event.
Depending on your selection, the elevator will move and take you next to the requested area/s.

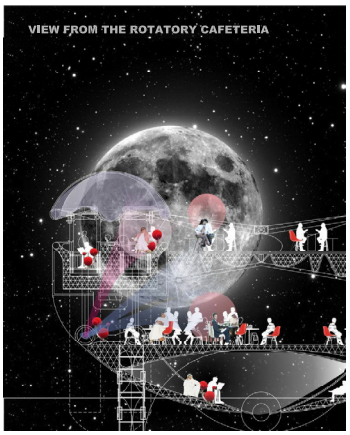
WHAT IF... YOU CAN HAVE A TEA WHILE YOU ARE GOING UP IN THE TOWER?

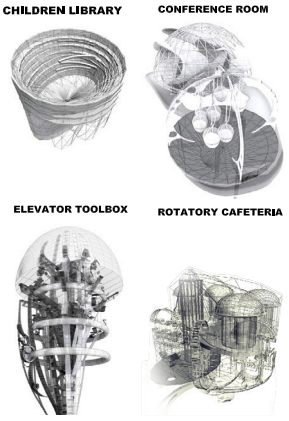
We propose several lifts cafeterias elevators where you can enjoy a meal or a drink in the way up to the tower. Depending on your mood or time to the tower, all the cooks in the tower will do the perfect moment to have a meal with the best Dubai's views.

WHAT IF... THE ELEVATOR ROUTE IS THE ONE THAT YOU SELECT ? YOU CAN CHOOSE THE TIME THAT YOPU WANT TO ENJOY THE TRIP

Depending on your time and preferences, you could select the route of your cafeteria express elevator and the duration of the liquid furthermore, you could use the cafeteria express elevator to go from one program to another in the ELTower.

VERTICAL OCCUPATION

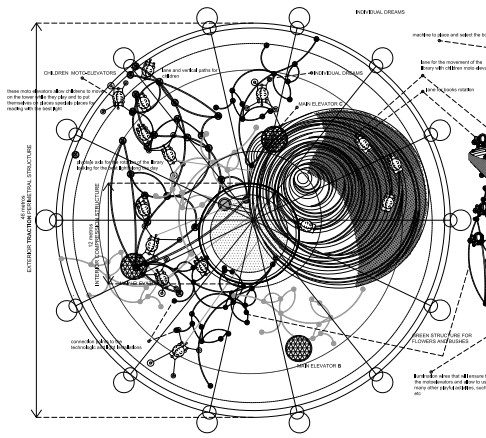




CULTURAL AREA: LIBRARY

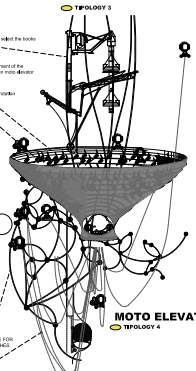
A LIBRARY THAT MOVES FOLLOWING THE SUN LIGHT

What if the library is always where the light and enviroment is NATURAL? = do not waste energy!



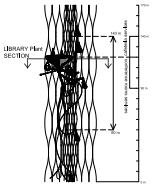
CHILDREN LIBRARY

TIPOLOGY 3



MOTO ELEVATORS

TIPOLOGY 4



TIPOLOGY 5 **ROTATORY LIBRARY** TIPOLOGY 4 **KYDS ELEVATORS**

OUR CHANCES AND ADVANTAGES:

WHAT IF... THE LIBARY COULD ROTATE AUTOMATICALLY LOOKING FOR THE PERFECT NATURAL SUNLIGHT?

We propose a library that could move in order to get the perfect natural light for the readers. Depending on the weather conditions, the time of the day and temperature, the library can turn or rotate as it likes, to avoid light sensors. The options are endless.

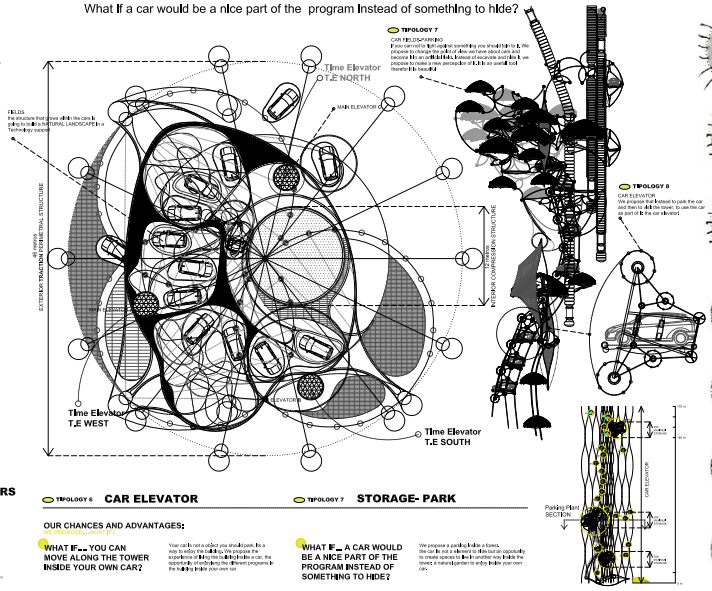
WHAT IF... YOU COULD SELECT YOUR BOOK AND READ IT INSIDE YOUR CABIN, IN THE PART OF THE TOWER THAT YOU SELECT?

With our catch system, the reader could select the best place for the book along all the tower. We your reading is finished, or whenever you want, you could go back to the library inside your personal cabin.

PROGRAMS IN AN AUTO & PARKING

A "GREEN" WAY TO ENJOY AND LOOK AT THE CARS

What if a car would be a nice part of the program instead of something to hide?



CAR ELEVATOR

TIPOLOGY 6

STORAGE- PARK

TIPOLOGY 7

OUR CHANCES AND ADVANTAGES:

WHAT IF... YOU CAN MOVE ALONG THE TOWER INSIDE YOUR OWN CAR?

Your car is not a object you should park. In a way to enjoy the building, We propose the experience of living the building inside a car, the opportunity of exploring the different programs in the building inside your own car

WHAT IF... A CAR WOULD BE A NICE PART OF THE PROGRAM INSTEAD OF SOMETHING TO HIDE?

We propose a parking inside a forest, the car is not a element to hide but an opportunity to create space to live in another way inside the towers a natural garden to enjoy inside your own car.

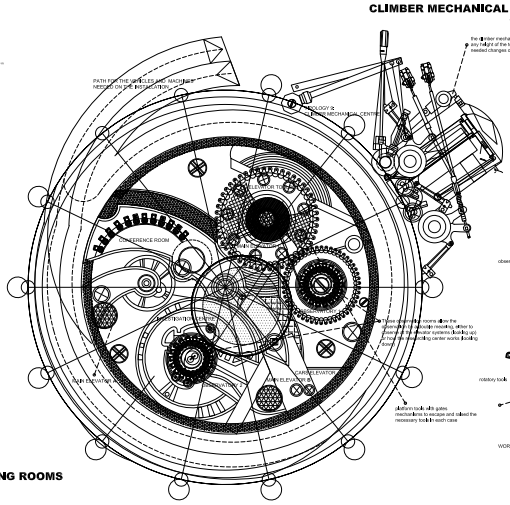
INFRASTRUTURE TECHNOLOGY

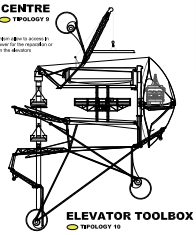
A RESEARCH AREA

A SHOWCASE TO DISPLAY THE FUTURE TECHNOLOGIES AND THE MOST ADVANCED ELEVATOR DESIGNS

CLIMBER MECHANICAL CENTRE

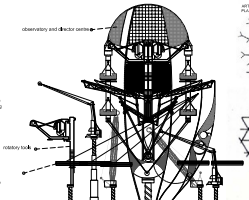
TIPOLOGY 9

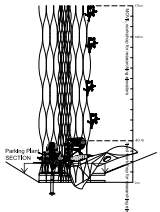




ELEVATOR TOOLBOX

TIPOLOGY 10





TIPOLOGY 8 **MECHANICAL WORKSHOP** TIPOLOGY 9 **OBSERVATORY**

OUR CHANCES AND ADVANTAGES:

WHAT IF... THE ELEVATOR INFRASTRUCTURE PERMITS THE FUTURE DEVELOPMENT OF ALL ELEVATORS TYPES?

We propose a basement hangar conforming a huge infrastructure that permits the connections and development of future elevations. The system is configurated as an open platform to investigate.

WHAT IF... YOU COULD OBSERVE THE ELEVATORS SHOW FROM THE BASEMENT OF THE TOWER?

We propose an elevators observatory direct to the basement of the tower, from where visitors could see the elevators and lifts in unfold meetings could take place.
The ELT observatory will be a new point in the Dubai skyline.

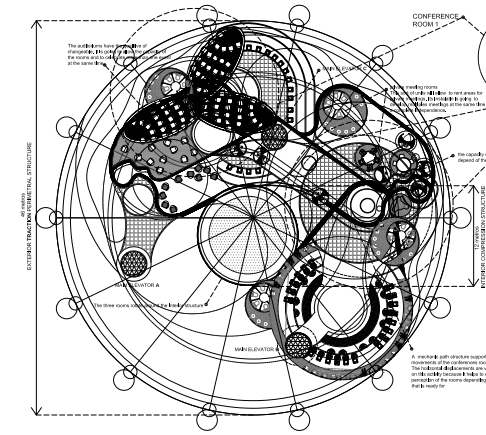
0 5m 10m 20m 30m 40m 50m 60m 70m

FLOOR PLANTS SCALE 1/300

CONFERENCE ROOM

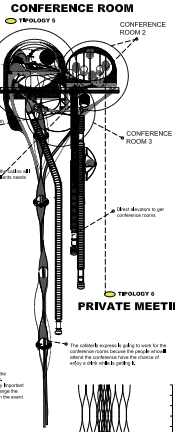
A MEETING POINT EQUIPED AND ABLE FOR ANY KIND OF EVENT

What if an ALL-PURPOSE is not only to move walls, but MOVE THE ROOMS?



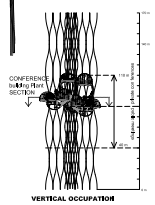
CONFERENCE ROOM

TIPOLOGY 5



PRIVATE MEETING ROOMS

TIPOLOGY 6



TIPOLOGY 5 **CONFERENCE ROOMS**

OUR CHANCES AND ADVANTAGES:

WHAT IF... YOU COULD SELECT THE KIND OF MEETING YOU NEED?

We propose a variable conference hall, configurated by three parts that could be separated or fixed together, in the conference hall you could have all the possibilities from a small reduced meeting to a big official meeting.

WHAT IF... YOU COULD CONNECT YOUR CONFERENFE HALL WITH ANOTHER PROGRAM THAT YOU NEED, INSIDE THE TOWER?

The elevatory system that we propose could connect the conference hall with another programs in cafeteria, library, etc... or another future elevators developed in the tower.

>The image of the elevator tower is a symbol of the most advanced technologies. Shows its internal mechanisms to amazed dubaities with the new possibilities that technology can bring us to live in the new skyscrapers. New systems of vertical displacement, new types of movements, and new unexplored programs. Progress in these areas will be tested in the tower in view of all citizens as a major research center capable of generating a new and surprising landscape.

