

Personalized Vehicle  
for  
The Sophisticates  
(5th Mitsubishi Motors International Design Competition)





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## **The 5th MITSUBISHI MOTORS INTERNATIONAL DESIGN COMPETITION**

- The idea behind taking a car design competition as a student project is to make efforts to do work as that of international standards.
- By placing the design in comparison to international design community, there are lots of things to be learned and gained.



## “Personalized car for the Sophisticates”

Vehicles for adults who have established their own sense of value: these vehicles should be both attractive and exciting to drive.

Moreover, their unique qualities should help foster a personal bond with their owners; a bond which only grows stronger with time. The core target market is couples in their 50's.

(Please note: designers should envision vehicles that can be developed five years from now)

*In addition, entrants must reflect the following required elements in their designs:*

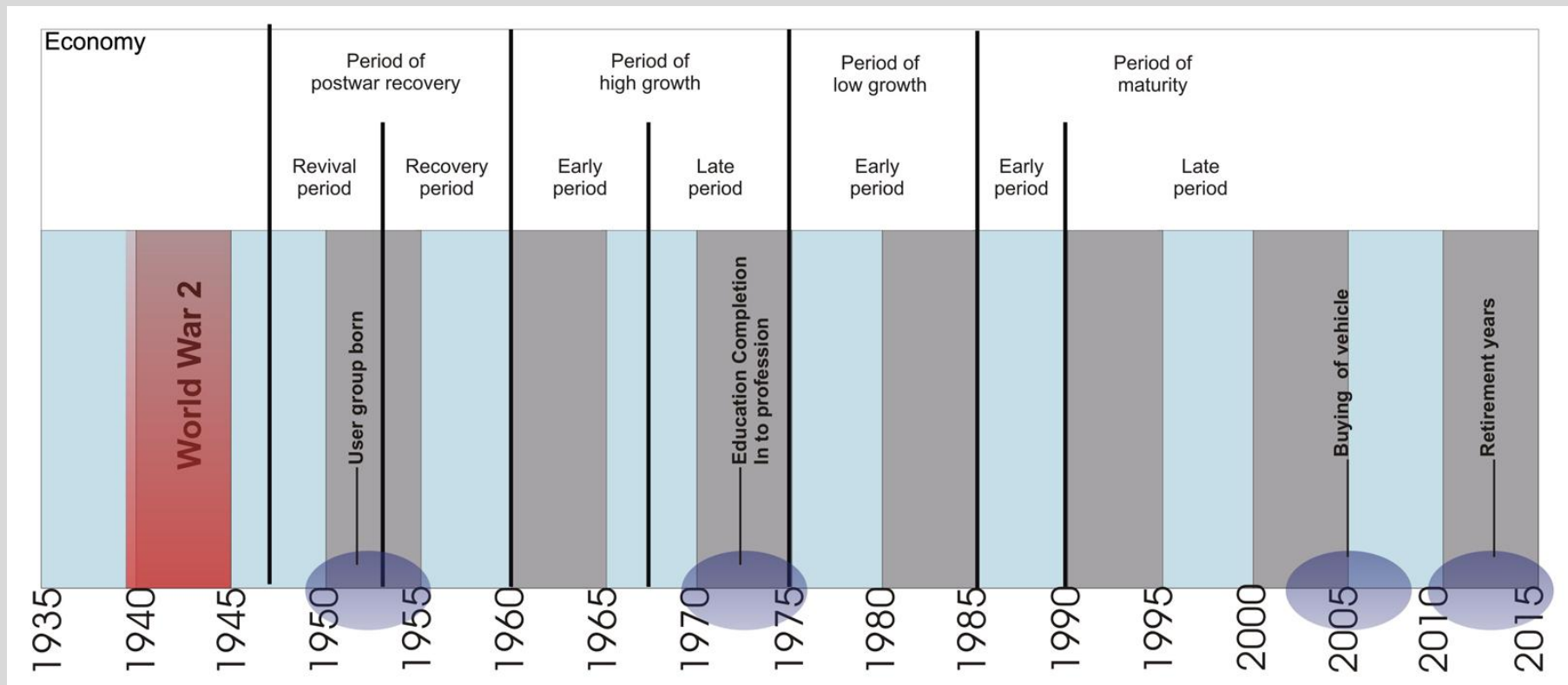
- *Japanese Modern designs (designs should reflect your interpretation of the term "Japanese Modern").*
- *Environmentally conscious designs.*
- *Universal designs (designs suitable for a wide range of individuals).*

While designing the car for the users of different country it is very important to study and understand the following factors thoroughly along with the user Group.

- Economical growth
- Recession
- History of that country
- Transportation
- Architecture
- Culture
- Social life and life style

As in the theme the user group is mentioned clearly the user survey and data collection follows a definite direction. Efforts were made to study the user in very much structured manner so that users need, aspiration, perceptions becomes clear.

## *Growth of user group along with the Japanese economy.*



- As user group age is above 50 years, this is the immediate generation after World War 2 called as *"New Breed"*.
- Study of their previous generation becomes important because that was the generation who suffered World War 2 and they lifted Japan out of it.



## Generation before WW2 :

- They achieved previously unheard of economic development, and rapidly raised people's standard of living.
- They combined goals of the nations with the company goals.
- They were not very eager to relate their own experiences to the children.
- They were too busy working to improve their standard of living to spend time at home talking with their children about the traumas and miseries of the past.
- Instead of reliving the painful past with their children, the young Japanese parents of the 1960's began working hard to achieve the middle-class life.



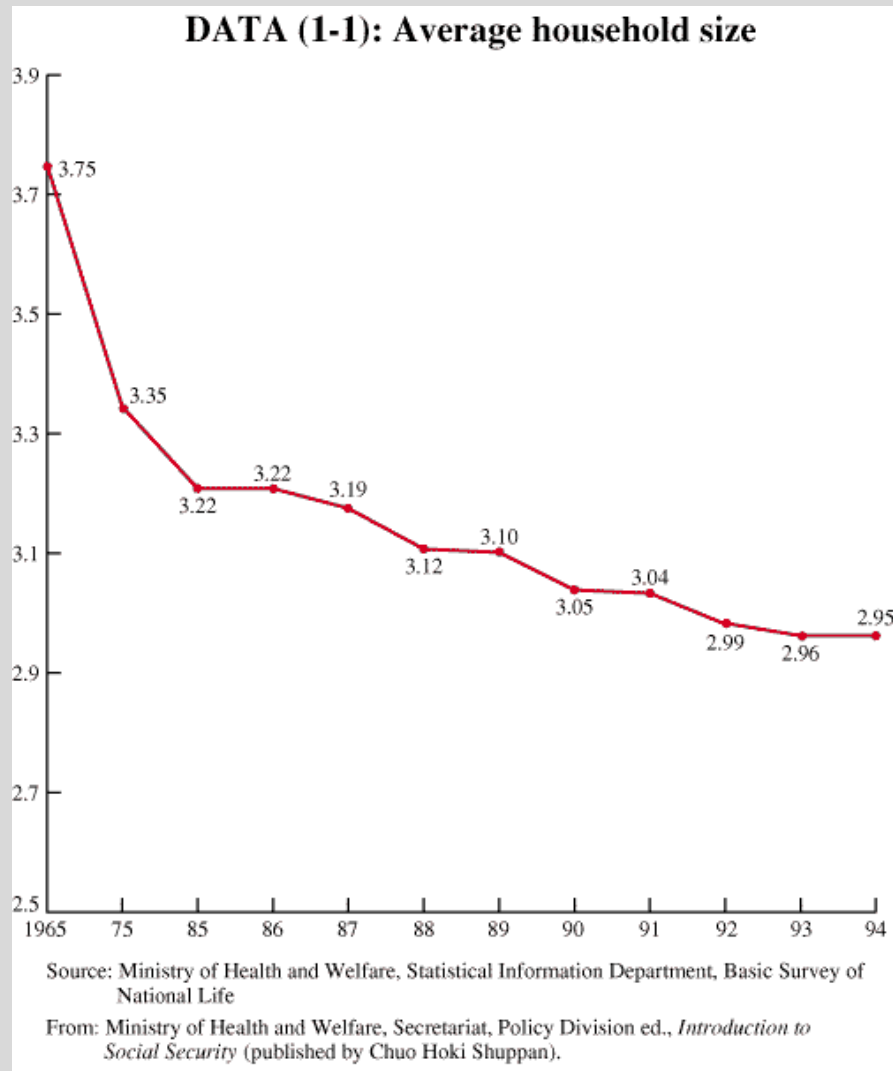
User group ( The new breed ) after WW2

The new breed generation grew in

- Urbanization
- Nuclear family
- Higher education
- Affluence environment
- Mass communication environment
- Different social life than their previous generation



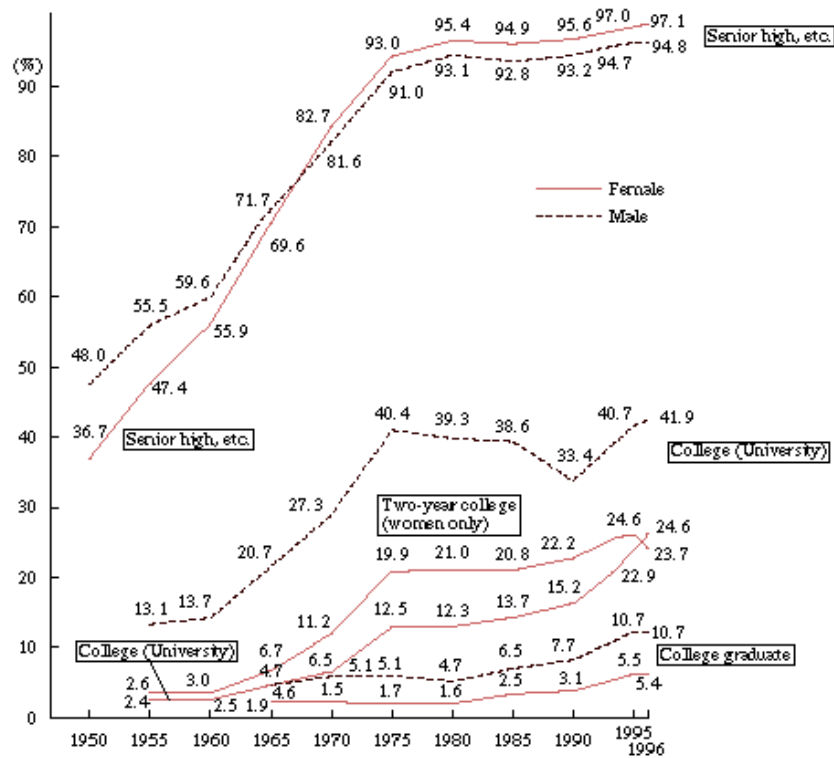
- In the 1960s the Japanese moved from rural areas to urban centers in large numbers.



- Japan became a country with a full mass communications network. The television broadcasting served as a vehicle for introducing new lifestyles incorporating new products and services into the TV programs especially the TV dramas and drama serials.
- the New Breed generation became the first generation in Japan willing to pay for information that would help them increase their enjoyment through the consumption of goods and services.

- As parents became more affluent, they wanted to give their children more education. New Breed continued their education at institutions of higher learning.

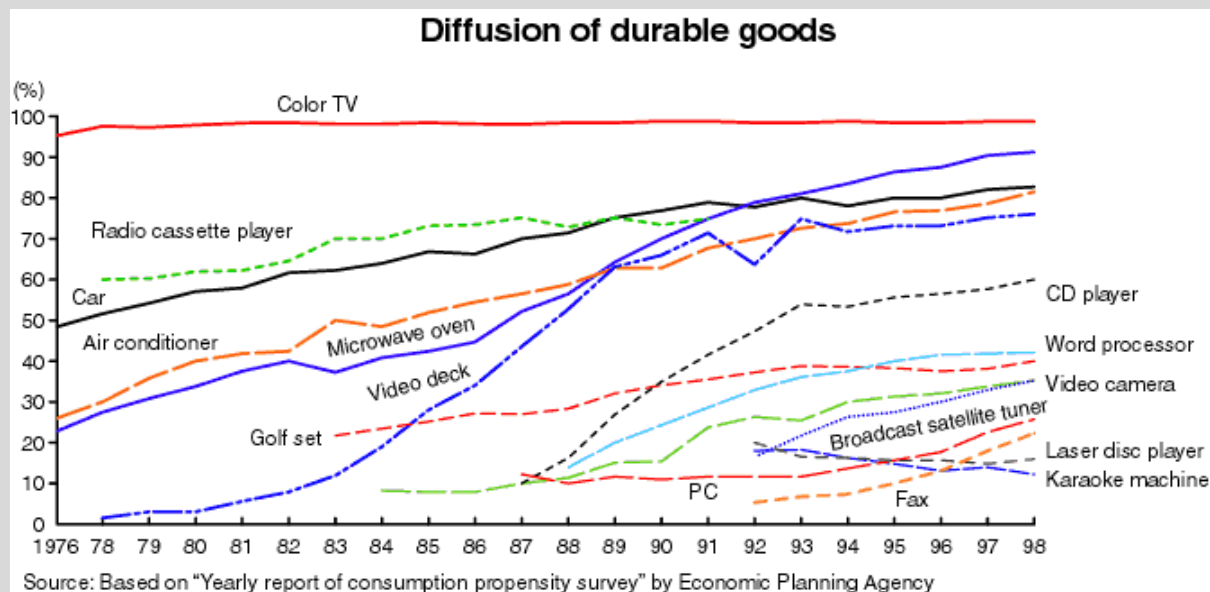
DATA 7: Students continuing education by gender



From "Basic survey of schools" by Ministry of Education

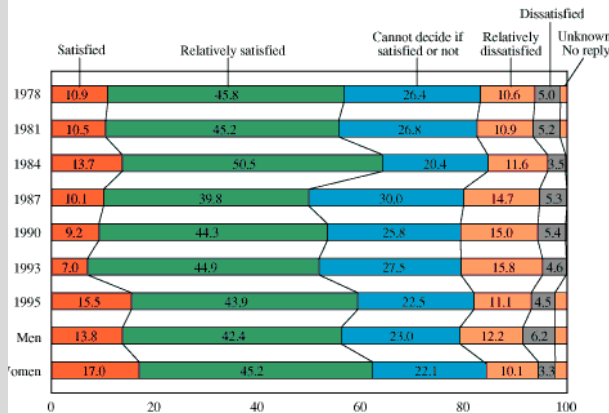
- Accustomed to the comfortable life created by Japan's economic boom, the young adults felt free to live the life the way they wished.
- Their parents did not try very hard to discuss with them the social values and norms of traditional Japan.
- Their parents themselves wanted to be liberated from the values and practices of the prewar Japan, the young adults grew up not learning much about the things Japanese.
- They were not impressed by the social norms and customs of traditional Japan. Some did not acquire a historical perspective.

- The young generation knew they could depend upon their parents. The parents were willing to give them what they wanted.
- The New Breed believed that life is to be enjoyed. They did not adhere to the philosophy that they should work first and then enjoy themselves.
- “Their decisions on their feelings” is a characteristic of the New Breed. The choices and decisions they make were not often based on practical reasoning or value judgments.



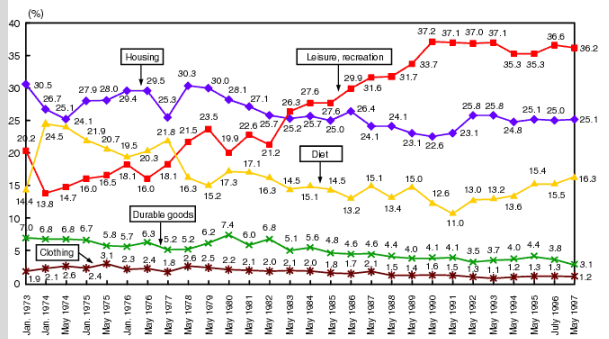
- They chose their friends on the basis of the activities, interests and opinions they shared. They saw those with many friends to be resourceful individuals. They became concerned about what their friends thought and said about them.

**DATA (36-1): 'Are you satisfied or dissatisfied with your life in general?'**

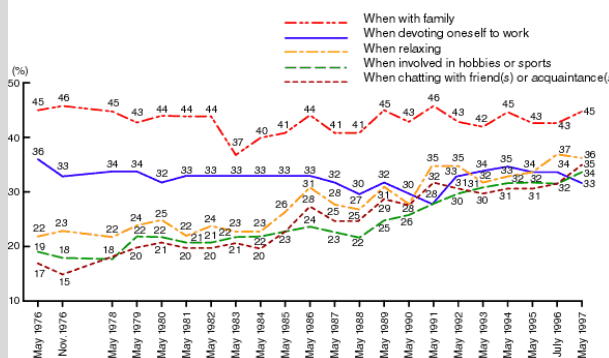


- The Japanese people have always considered socializing an important part of their lives.
- They are interested in succeeding in life. Before making decisions, they take into consideration the energy and the effort they will have to exert.
- From the mid-1980s Japanese became increasingly more interested in developing their leisure activities. They began placing greater emphasis on the quality of time they could have at their leisure.
- They purchased goods in order to eat better, cloth themselves in better and more fashionable clothes and to furnish and modernize their homes.
- They tried to reduce the time and energy they spent in doing their housework and household chores.

**DATA 9: Main interest among aspects of lifestyle**



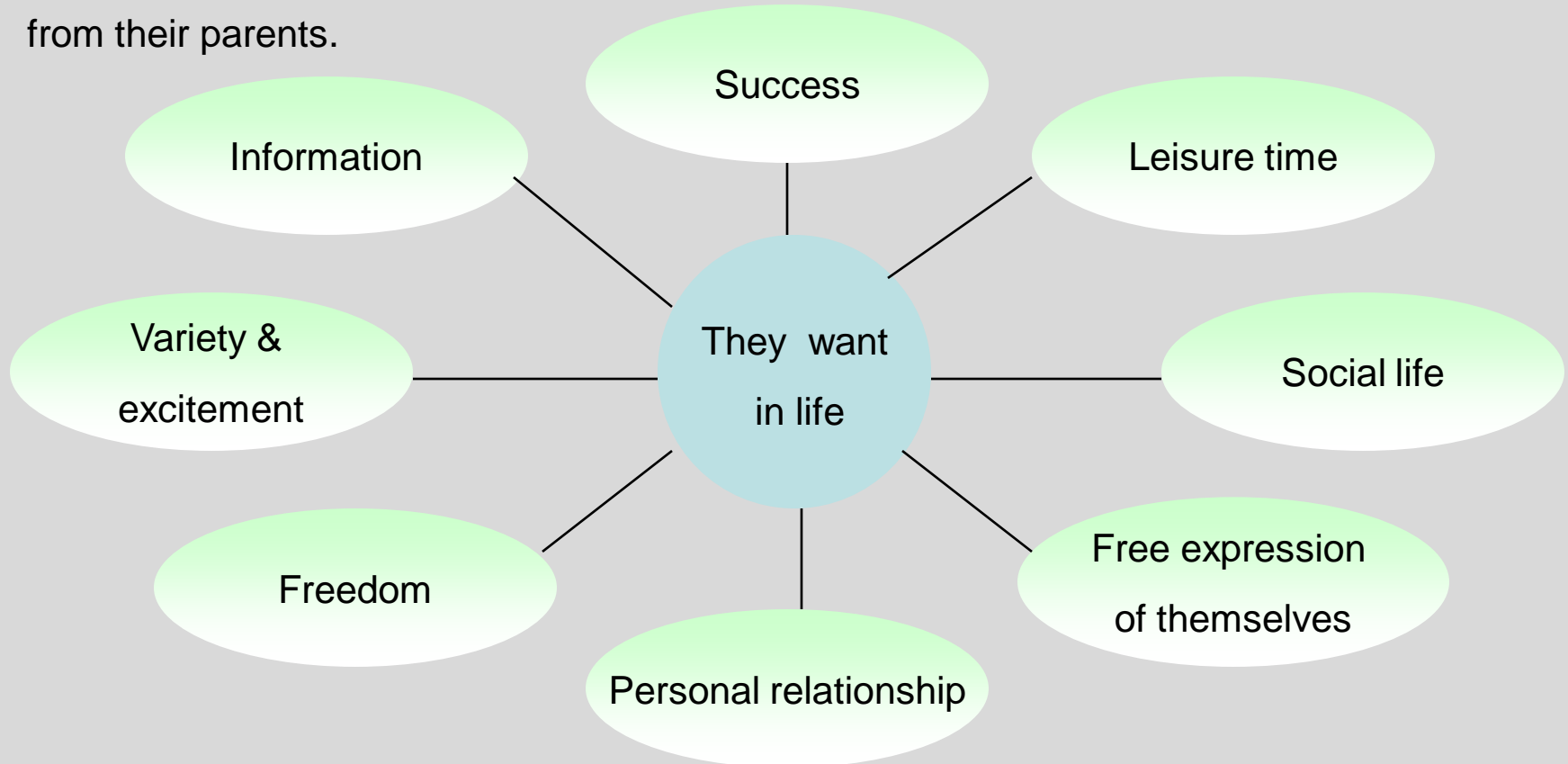
**DATA 10: Satisfying ways of spending time**





This is the first generation in Japanese history born and raised in affluence. Probably the last of the consumers who are driven to purchase better, more fashionable, more prestigious things for show.

Accustomed to the comfortable life created by Japan's postwar economic boom, they feel free to live life the way they wish. They are untraditional, unimpressed by the social values and norms of traditional Japan. They have a value system and an approach to life very different from their parents.



- They adapted to catering to authority and to harmonize with others.
- They tend to place themselves in their own exclusive and closed communities. Accordingly, they have introverted personalities and they pay serious attention to harmony and cooperativeness in the group.
- They feel comfortable with familiar people in the communities they belong to.
- They have more interest in human feelings and emotions than scientific or logical concerns.
- In terms of book read, literary books rate more highly than scientific books, compared with westerners.
- They tend to pay attention to precise details rather than the big picture. They are better at developing transistors than space development projects.
- Japan is a country poor in natural resources but rich in hard-working and diligent people.

## Valuable product:

- They want to feel luxurious. If they have some valuable product, they can feel as if they were so rich. Memories attached to the product also make the product valuable.
- They want pleasure, fun, long use of the product and they see quality and look of the product. They use the product , until it breaks, about for 10 years. They buy new product periodically.
- They handle their product carefully and professional people check products periodically. (especially, cars) Futuristic product must be very much functional.





### Leisure activities:

- Golf, watching TV, fishing, drive, trip (trip is the most popular). Mainly they spend time in hobbies, some part time and social work.
- They go out to eat at a restaurant, or go for a trip. Elders feel excited when they change their daily environment and when do some good activity and spend time with family and friends.
- Couple in 50's tend to do shopping together, they go out for small parties. If son/daughter is married: Most of them don't live with their married children. Unmarried: About half of them live with their unmarried children. Unmarried children go out with parents.

### **Cars preferred:**

- Toyota and Honda are the most preferred manufacturers in Japan.
- They prefer functional cars, low displacement car (small cars), car with large space. (Sedan/medium size)
- They own one or two cars. In styling they like round, not sharp design They prefer white color because it can be seen in the night, so safe.



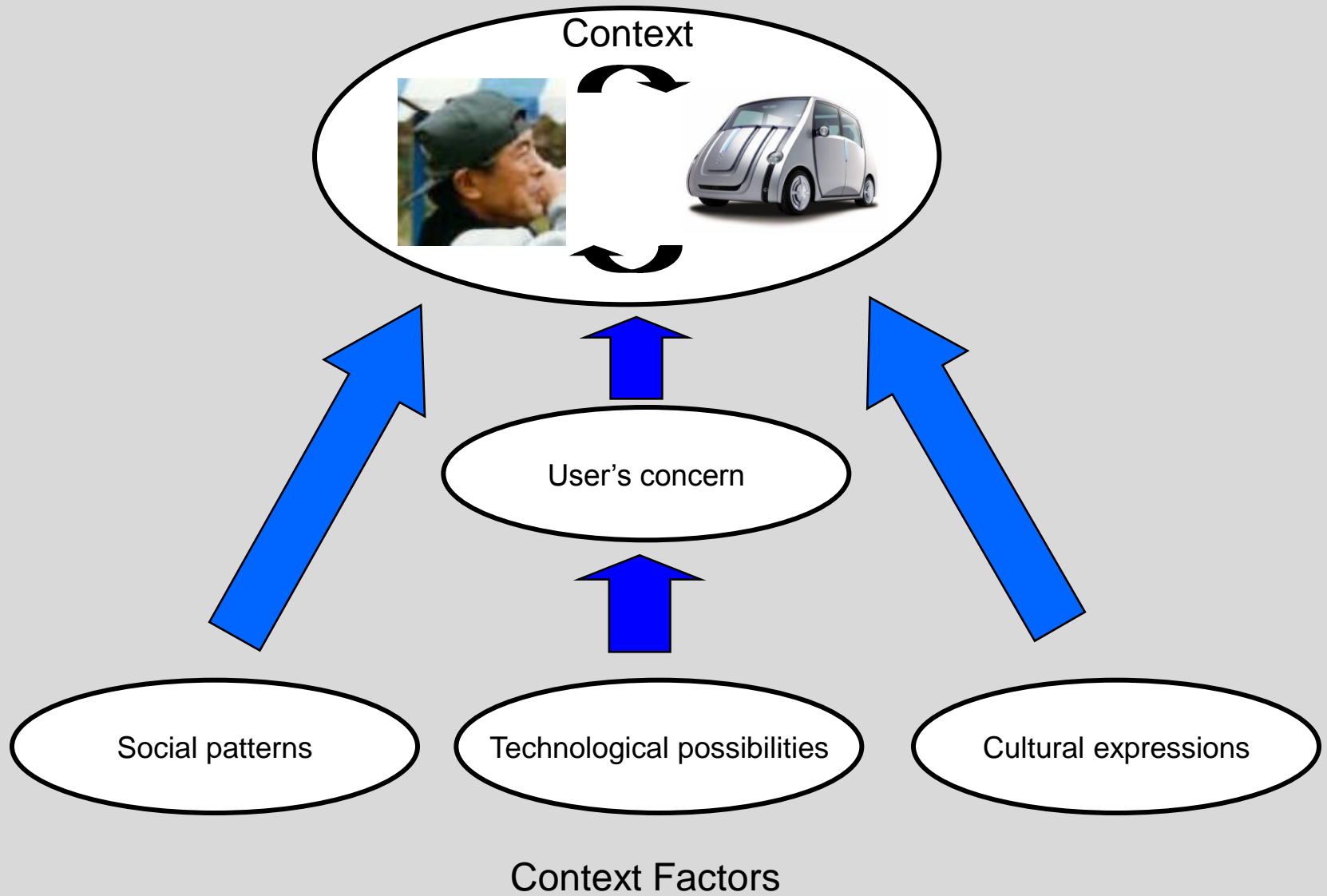
## User-product attachment

How to create a sustainable bond between user and product ?

- Characteristics of the product should be multi-interpretable in meaning, appearance and structure.
- Using appealing, friendly shapes and colours, applying materials that age with dignity, and communicate these soft and emotion values of products.
- The memories – to persons, events, or places - a product evokes most strongly determines attachment, followed by the enjoyment it provides and its monetary value.
- The user-car bond gets closer when the car is personalized during use or exploration.

## User-product attachment

- The product-user-relationship should be prolonged and intensified by broadening and personalizing the bond between user and product. More important than just altering the physical conditions of the car, an alteration of the perception of the car and all its aspects is called for.
- Apart from stating the technological objectives, emotional design guidelines are also important.
- The car should be open to interpretation and change by the user.
- For communication with the environment on a more personal level the car should be able to change with this environment.





- Miniature
- Discipline
- Hi Tech
- Quality
- Automobiles
- Sky scrappers
- Compact
- Tea ceremony
- Garden
- Buddhism



- In 1899, the first automobile was brought into Japan and by 1902 they were producing their own. Although the Japanese manufactured cars, the majority were used commercially or for public transportation.
- Private ownership didn't really get popular until the 1960's. Three reasons made this possible: rapid financial growth brought on by economic development; smaller, more fuel efficient cars targeting private owners; road improvements.

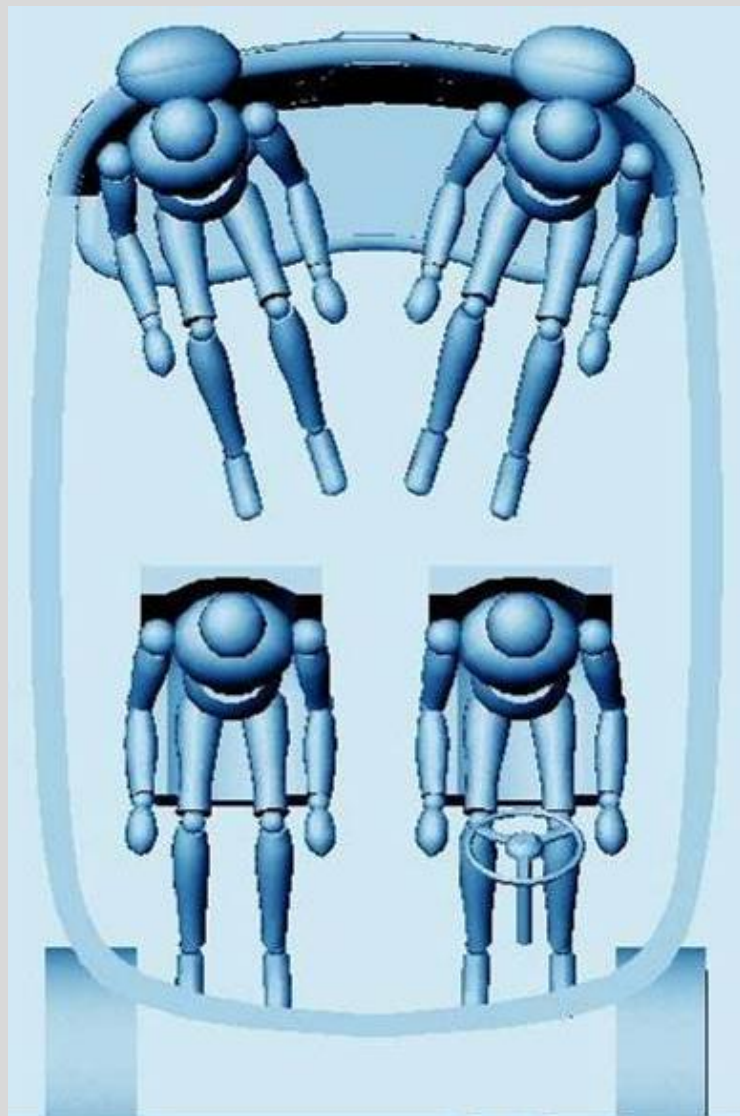


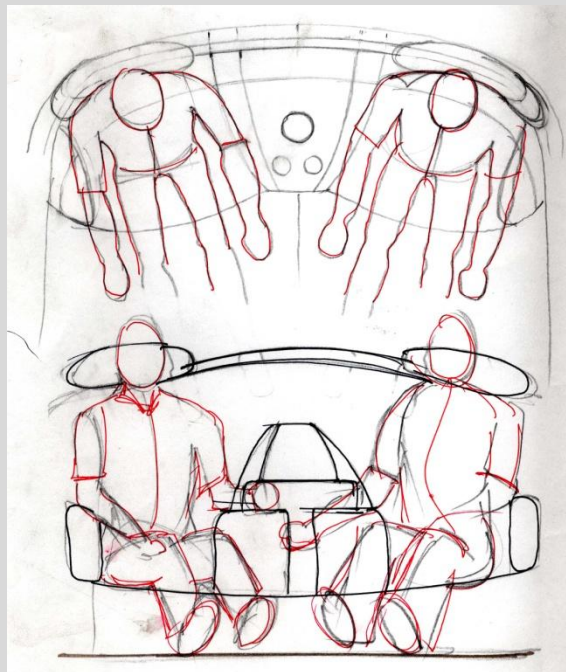
- **Leisure time:** They believe life is to be enjoyed.  
*Arrangement for food, drinks, tea etc.*  
*Space to store shopping material.*  
*Openness wherever required.*  
*Feeling of pleasant and calm atmosphere.*
- **Personal relationship:** They value their friends above everyone else. They have strong peer orientation. They want peer recognition. And yet they shy away from committing themselves too deeply in relationships.  
*Friends interaction in the car.( Space for peer)*  
*Attractive vehicle to get recognized.*
- **Social life:** They want to form friendship with a large number of friends. They want friends with whom they can enjoy a wide variety of activities.  
*Space for tea ceremony, for drinks.*  
*Vehicle can be used for picnic.*
- **Freedom:** They don't like to look far ahead into the future, preferring to prolong a carefree lifestyle and put off social obligations and responsibilities (marriages, children, etc.)  
*Exterior should reflect the freedom.*  
*Space for exploration inside – to act freely.*  
*Interior space rearrangement.*  
*Flexibility of inside elements.*

- **Family:** Most of the Japanese above 50 years of the age are living without their children with them. Their son/daughters are not living with them but they live in nearby area mostly.  
*This car could be means to get the family together.*  
*It will help in building stronger family bonds.*
- **Variety and excitement:** They want to make each day exciting.  
*Space –rearrangement –discovering space on their own.*  
*Focus point center of car rather than driver's position (Flexible focus point)*  
*Changing inside environment with mood.*
- **Information:** They want large quantities of information in order to enjoy life. They are willing to pay premium prices for information that helps them purchase goods and services in order to enhance greater pleasure in life.  
*GPS, Internet connectivity, Space for DVD screen.*  
*Space for small book library and magazine.*
- **Success:** They try to minimize risks and failures through shrewd calculations.  
*Automation for doors, inside elements.*
- **Affluent life style:** They grew and enjoyed affluent lifestyle.  
*Comfort to maximum level.*  
*Gadgets and technology use.*

## Inside out design

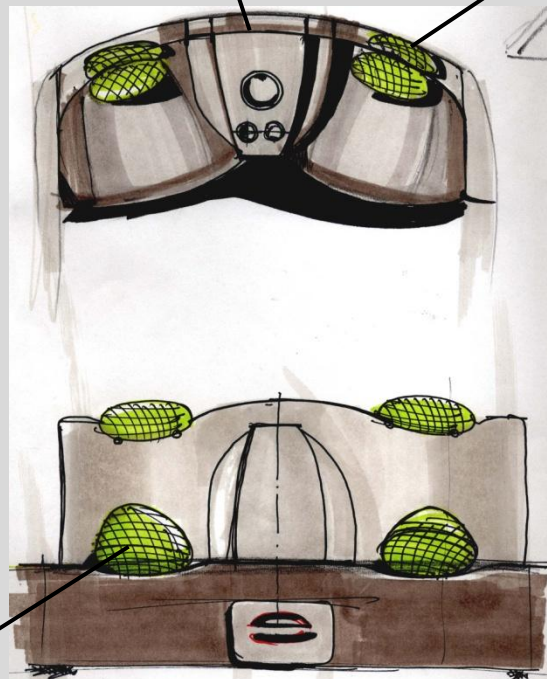
The design follows **Inside out principle** which in turn ensures package space is maximized.





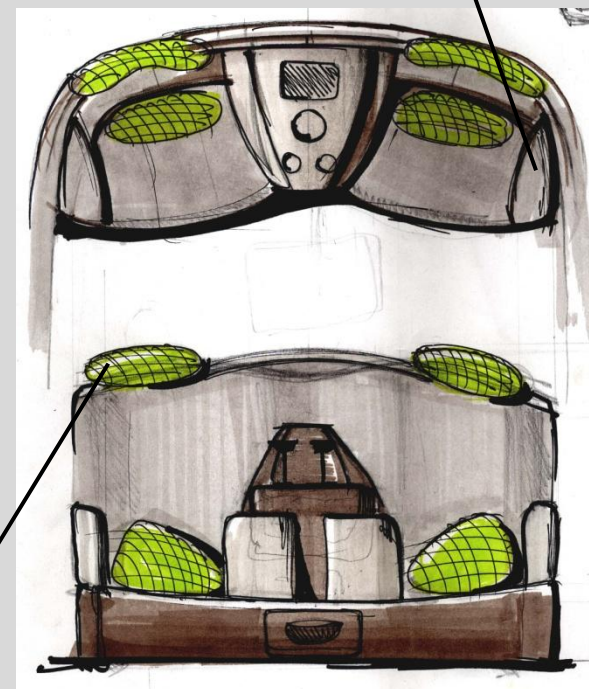
Refrigerating unit and hand rests, table are combined.

Making the rear seat curved, lots of self exploration of different postures is possible.



Side hand rests comes out of the door whenever needed.

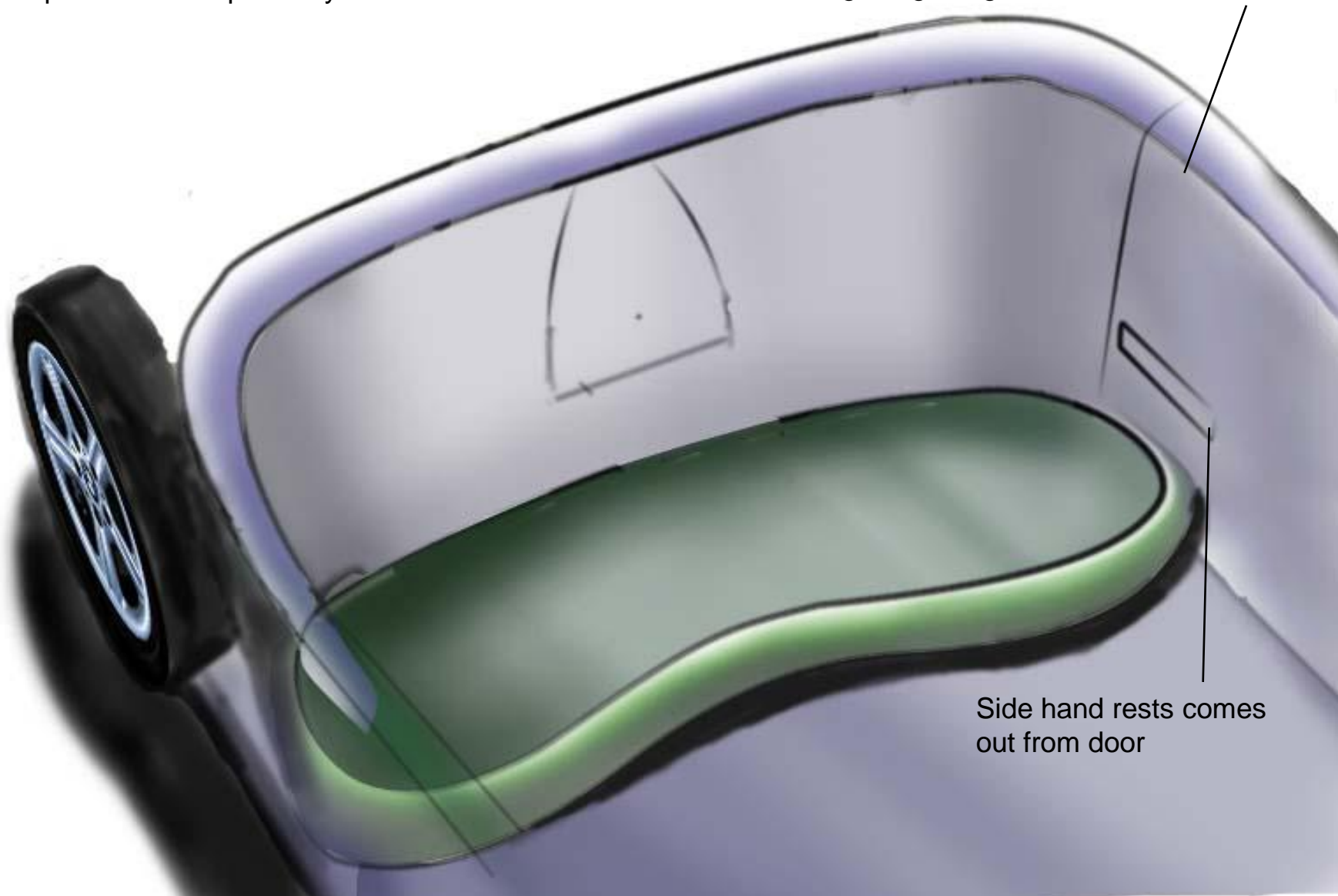
The back rest pillow can be moved anywhere.



The head resting pillow can be moved according to seating position

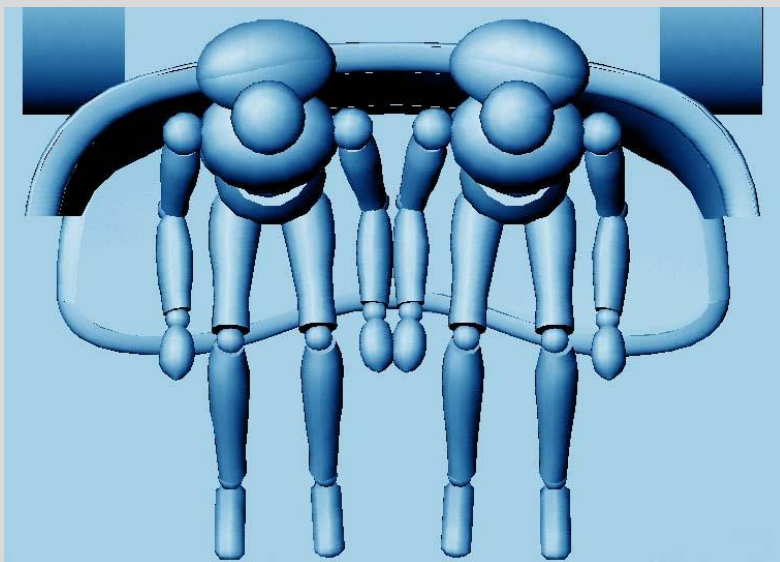
Simple and self exploratory rear seat

Rear door follows the same curve as that of the rear seat becoming integrating element of the seat

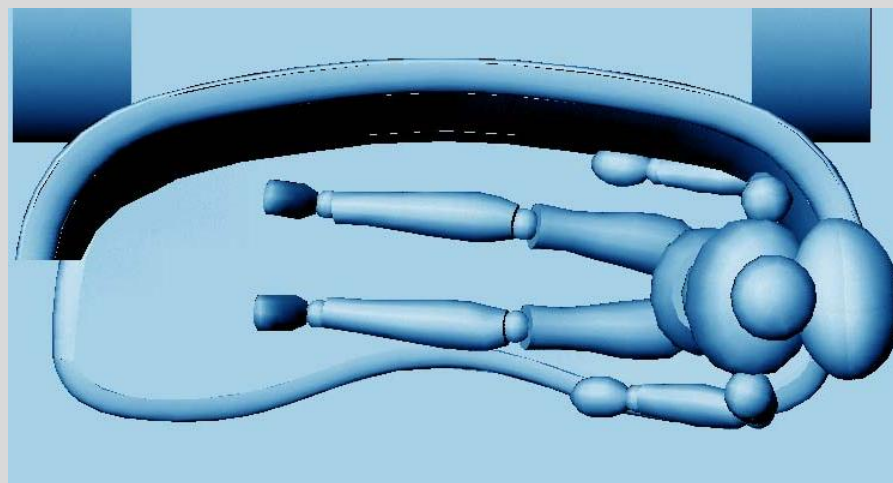


Side hand rests comes out from door

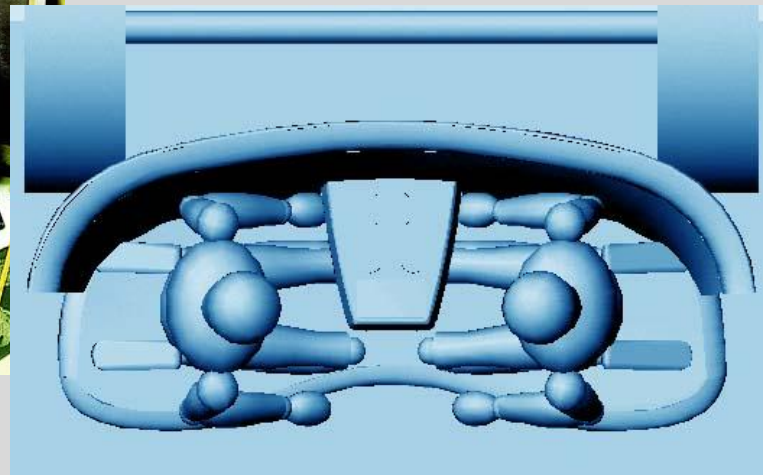
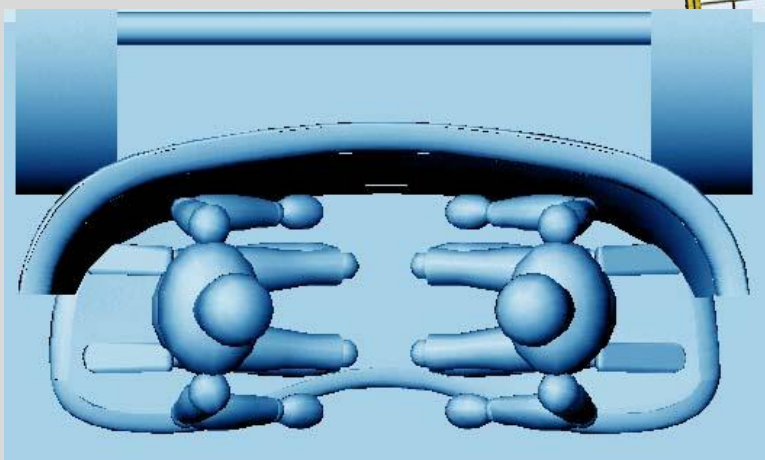
Closeness at rear seat.



Comfort for single

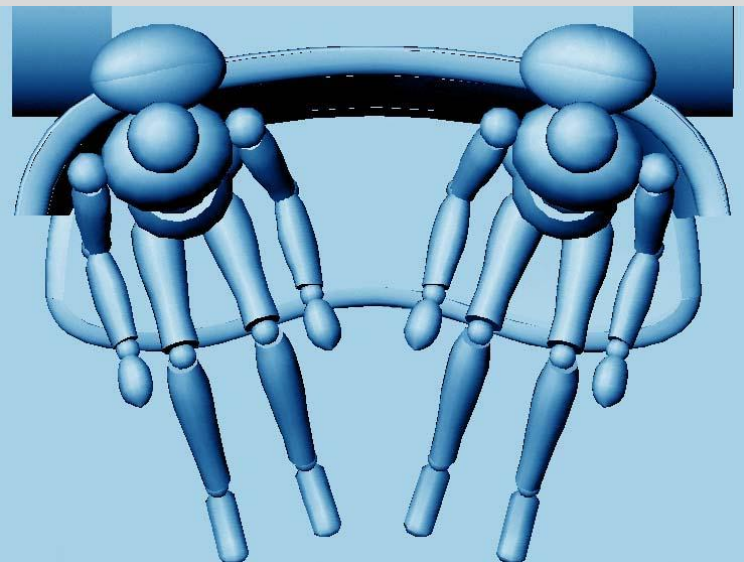


Typical Japanese seating





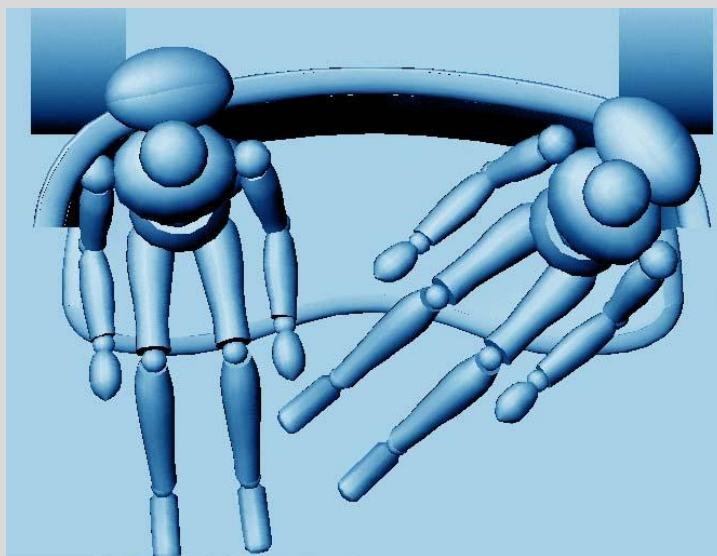
Comfortable seating at two ends.



Comfortable seating at two ends with drinks table in between.



Asymmetric comfortable seating

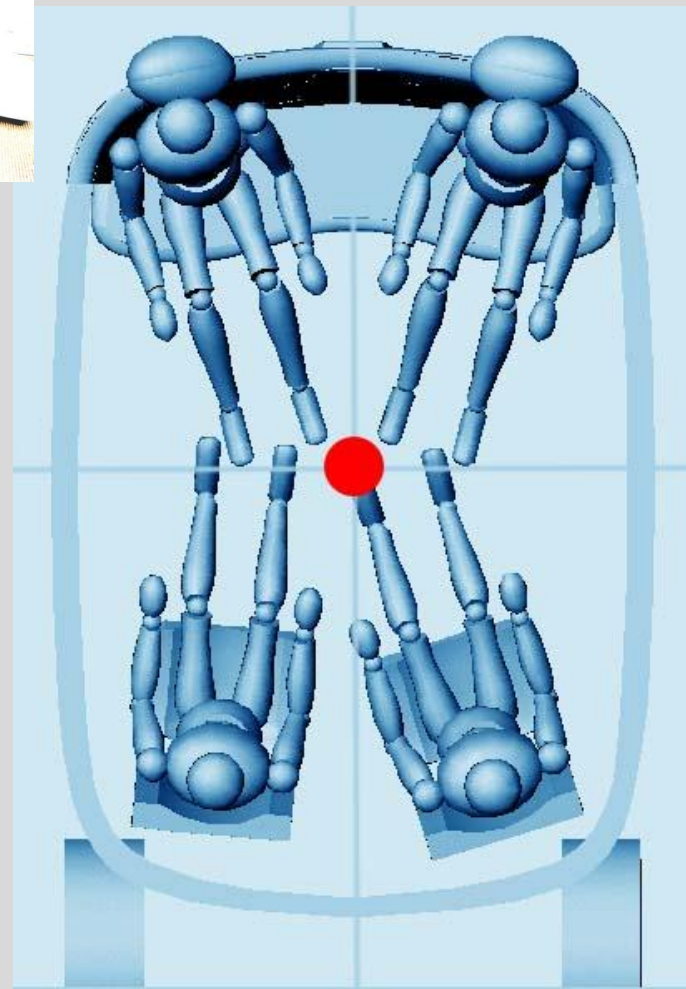
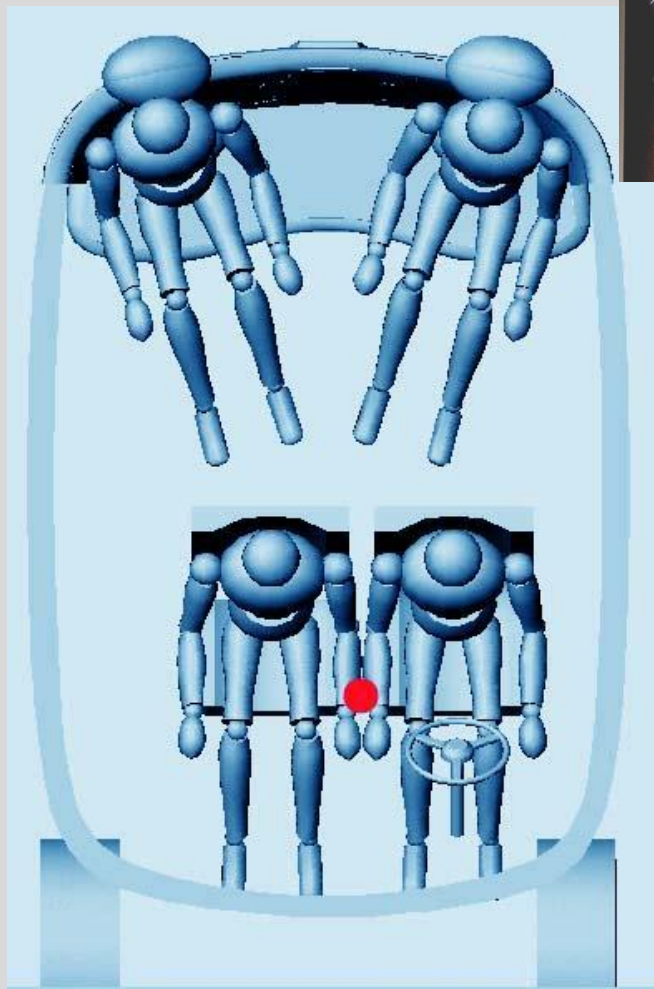


Focus points in car

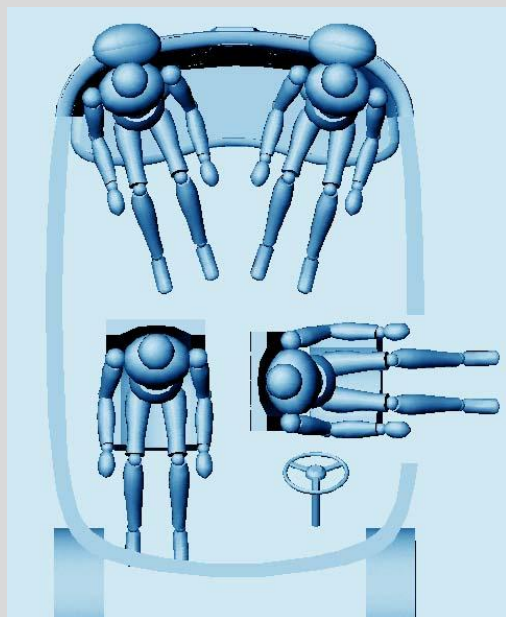
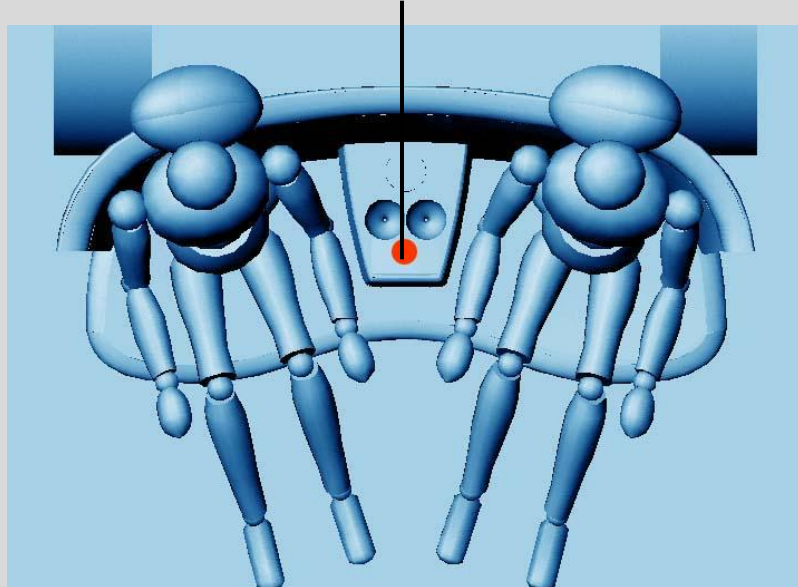
Focus point at front end which will have close interaction between husband and wife.



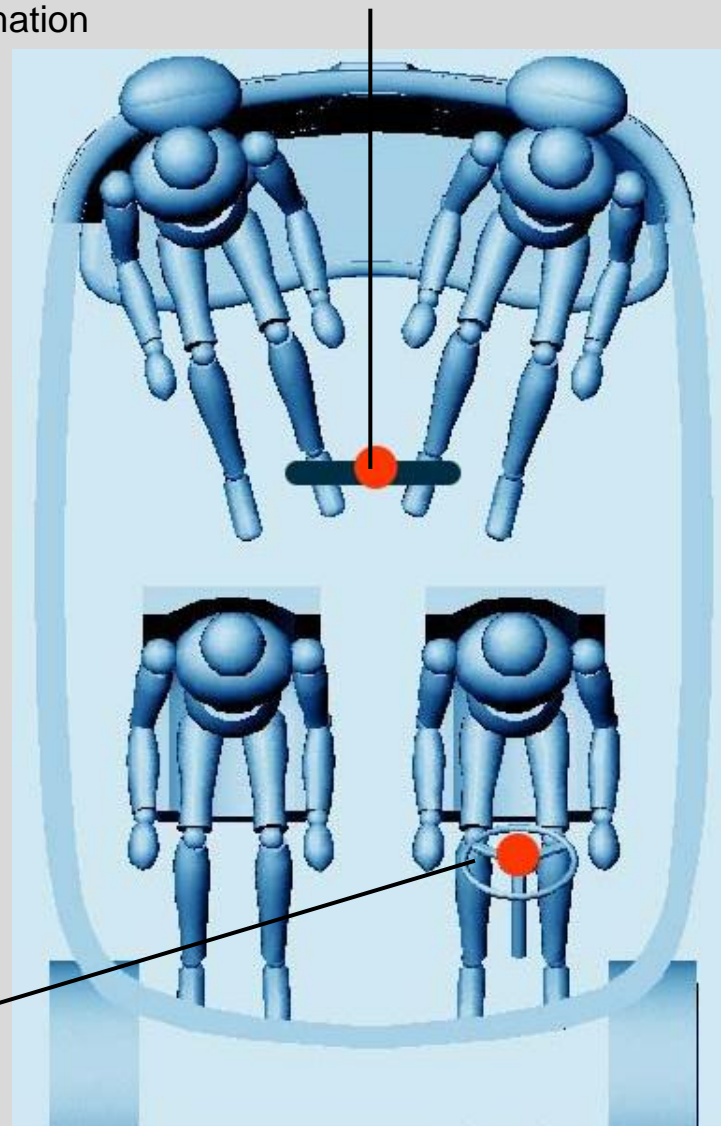
Focus point at the center which will provide maximum interaction not only among passengers but also between passengers and car



Focus points at rear seating

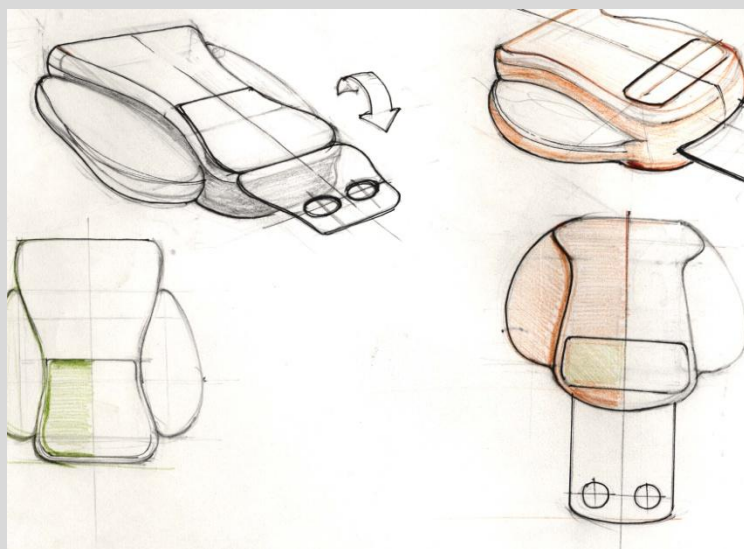
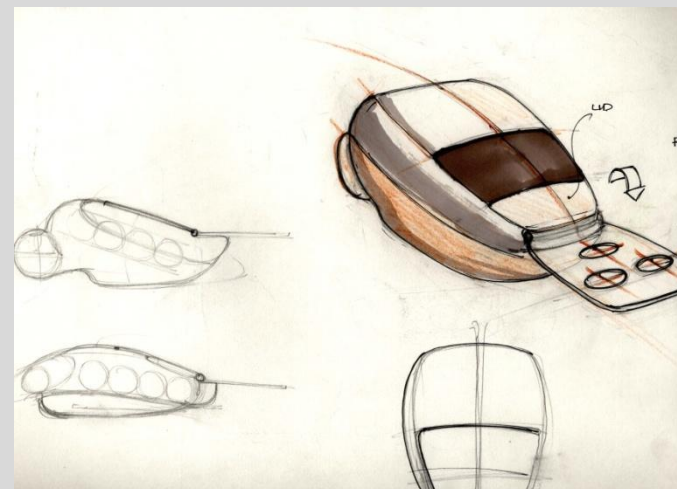
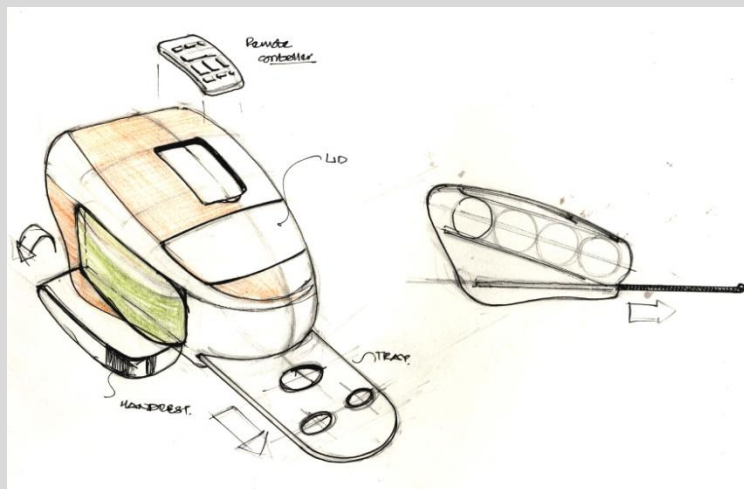


Focus points again at middle for entertainment or for information

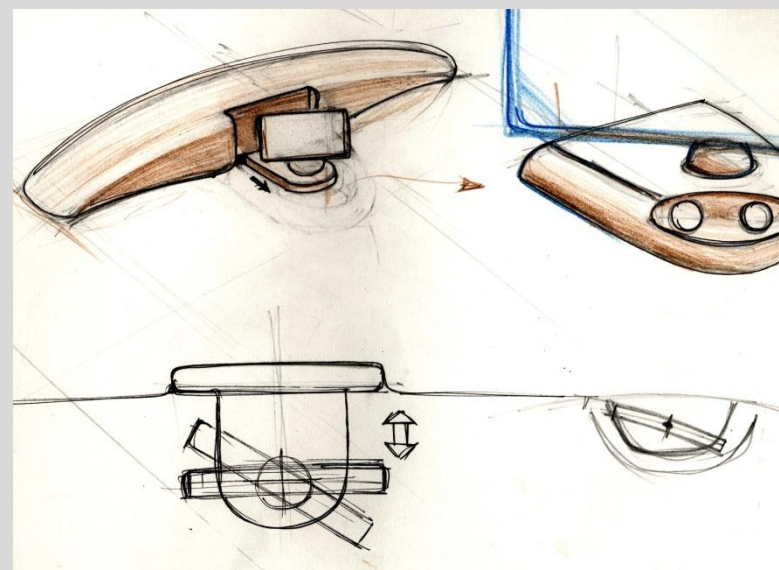
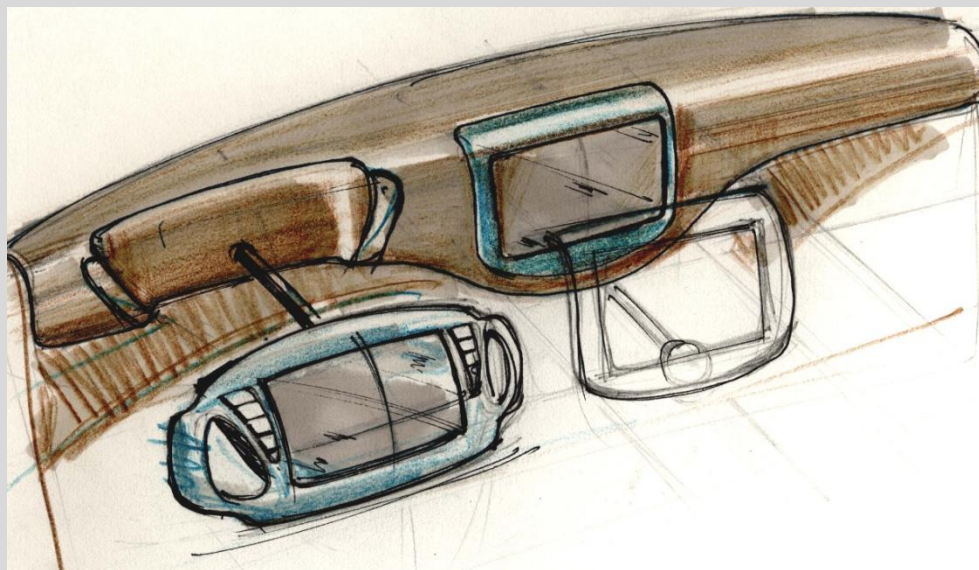
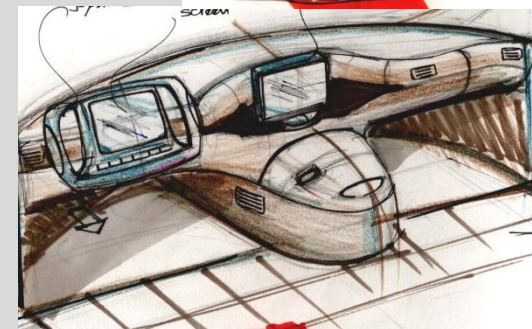
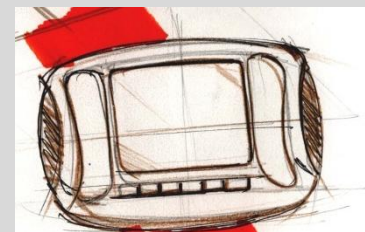
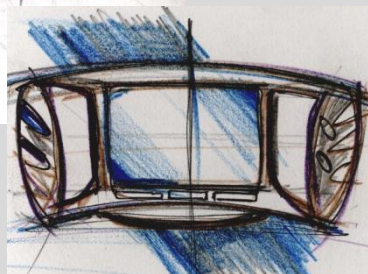
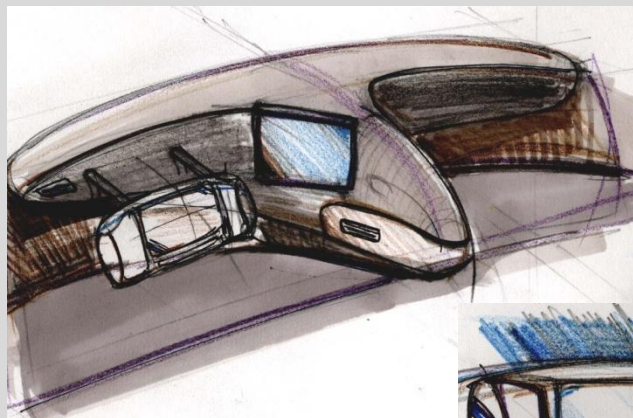


Focus points at driver's position

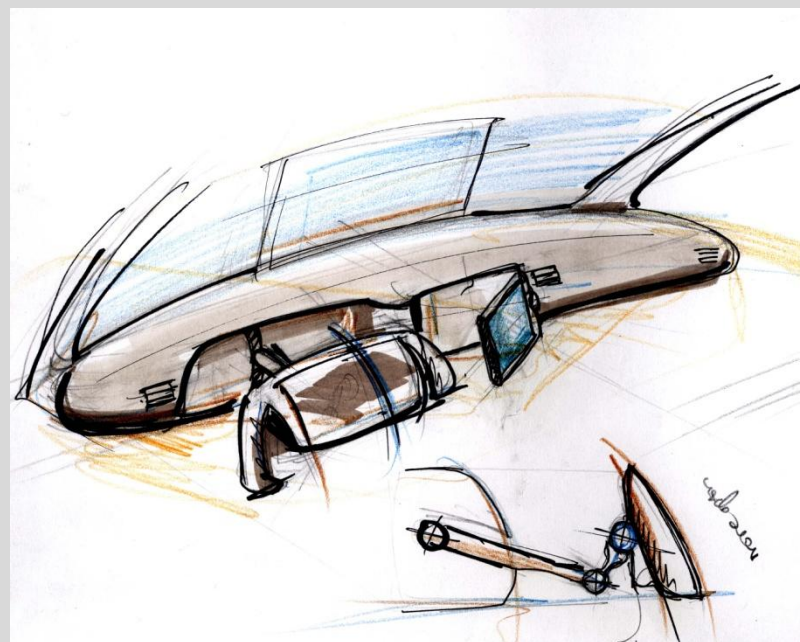
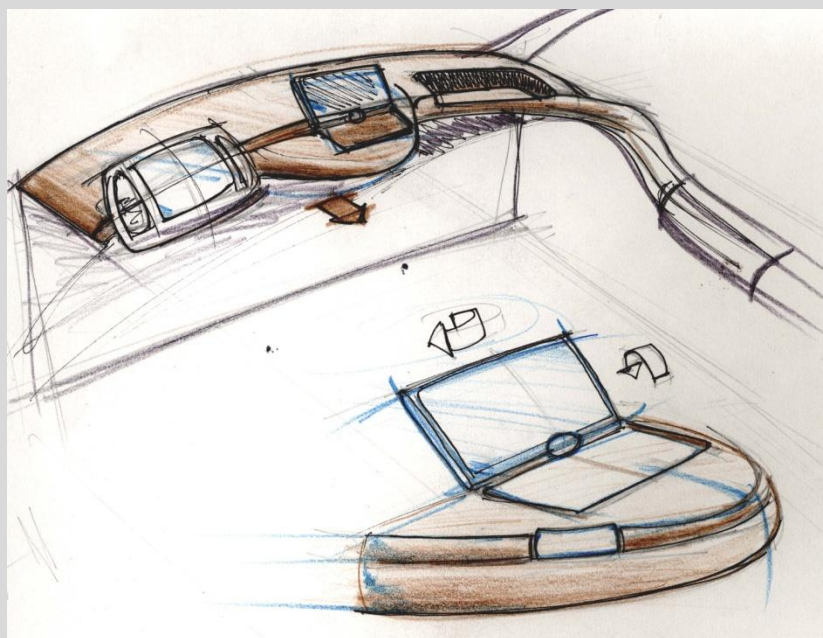
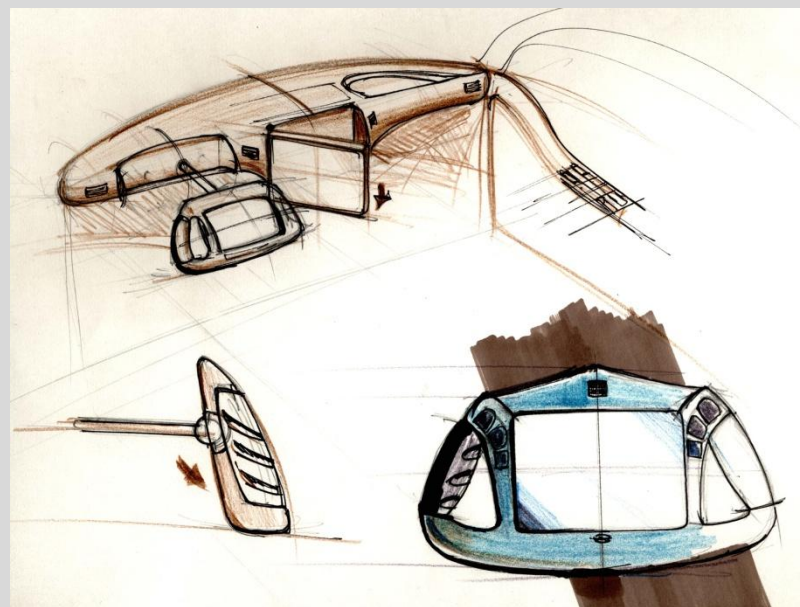
Refrigerating unit cum table

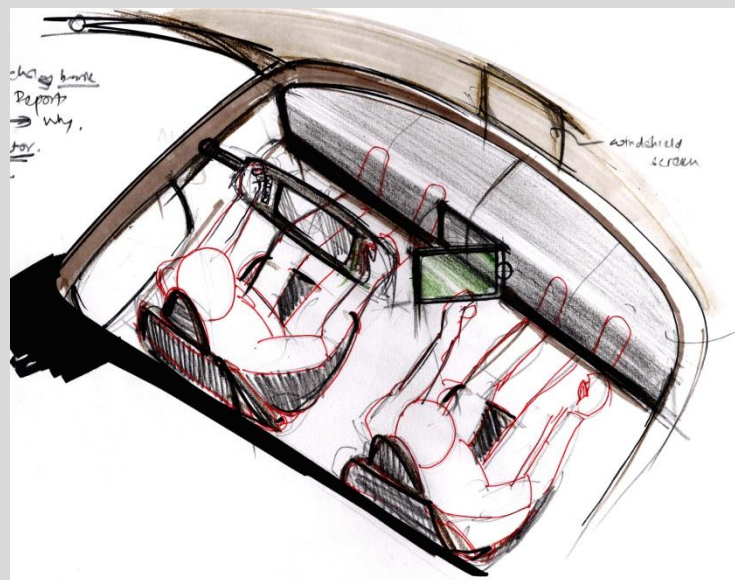
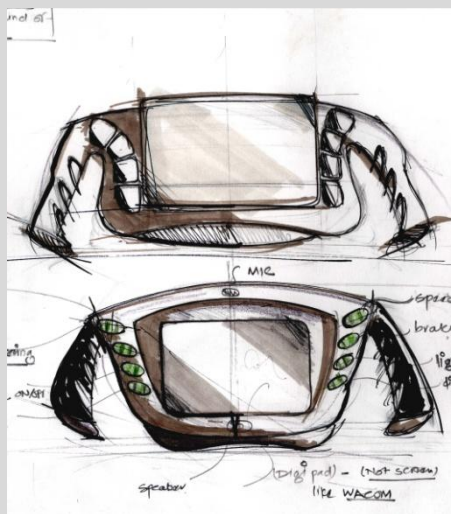
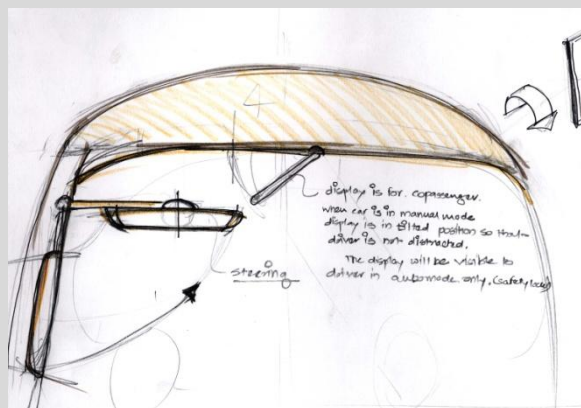
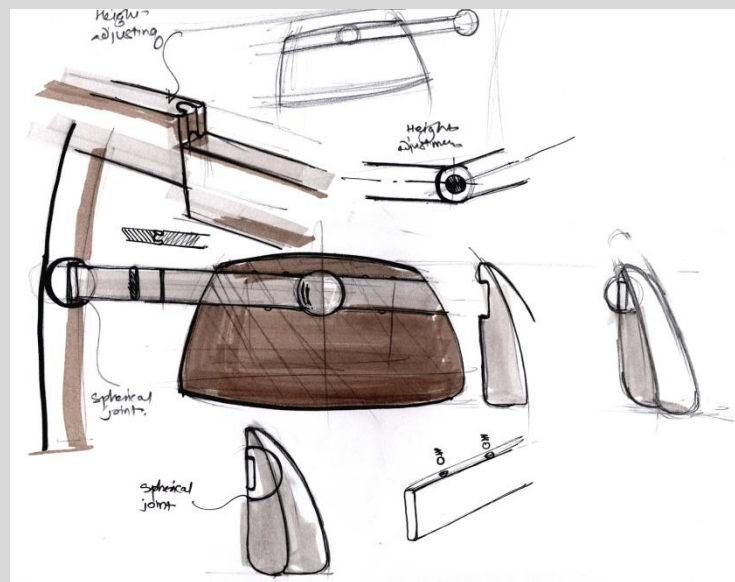
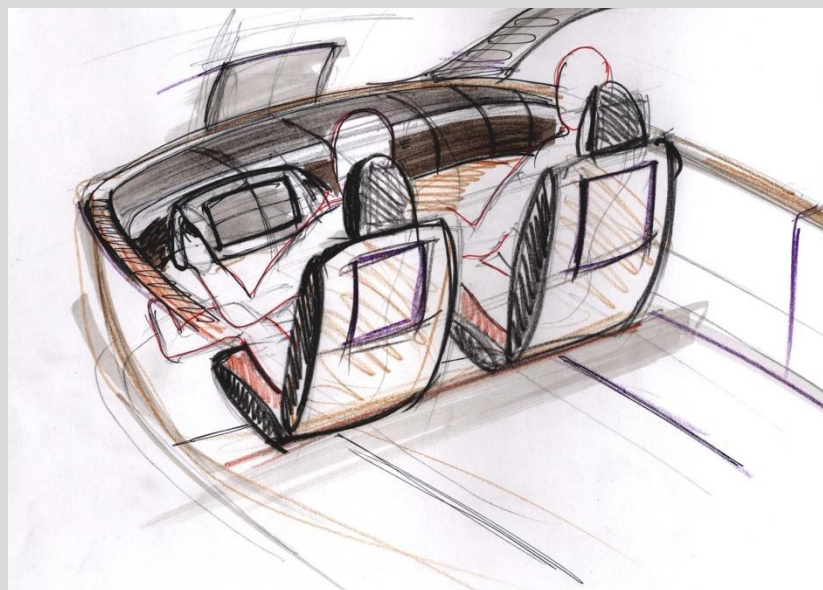


Dash board and joystick



Dash board and joystick







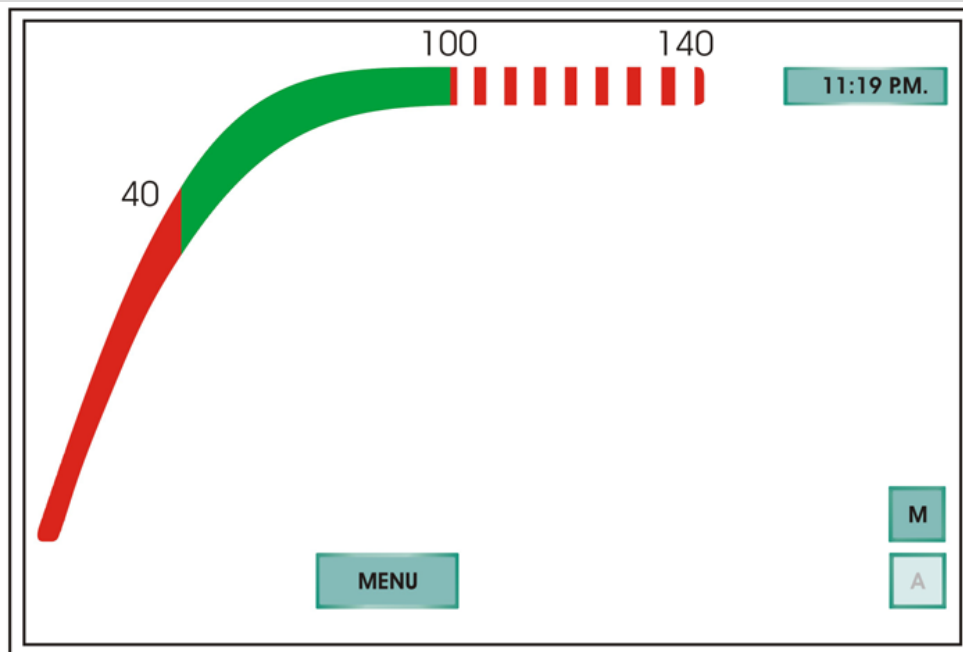
Simple and space maximizing dashboard



Rotatable and side ways and forward/backward adjusting seats.



## Default screen



- Screen can be incorporated with wind shield or it will be on joystick or will be separately mounted on dashboard.
- No invasive information.
- Only warnings will pop as and when emergency occurs.
- All other information will be available on request.
- The must function will always remain on the screen.

Speed slow down

The display features a speedometer at the top with a green arc indicating the current speed range and a red arc below it. The speedometer has numerical markers at 40, 100, and 140. To the right of the speedometer is a digital clock showing 11:19 P.M. Below the speedometer is a camera view of a car on a road. To the right of the camera view is a map with various landmarks and a blue circle indicating the current location. At the bottom of the display are several control buttons: 'Change View', 'MENU', a zoom-in button (+), a touch control button (hand icon), a zoom-out button (-), and buttons labeled 'M' and 'A'.

WARNINGS

100

140

11:19 P.M.

40

YOU CAN TRAVEL 20KM ONLY  
GO TO CHARGING STATION

BATTERY DOWN

LOW TYRE PRESSURE



Change View

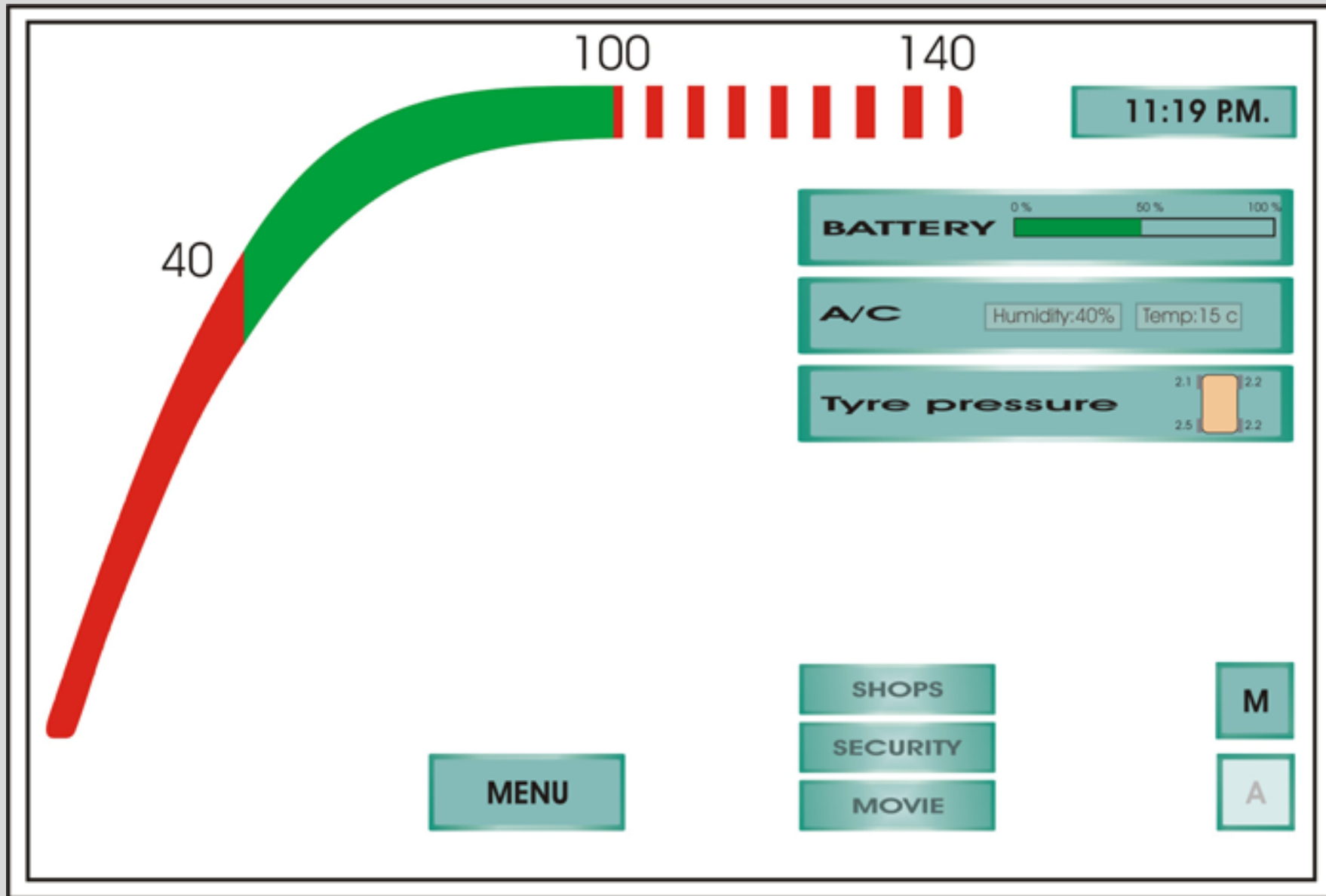
MENU

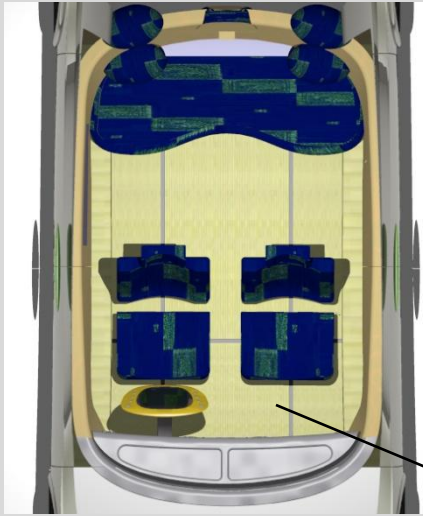


M

A

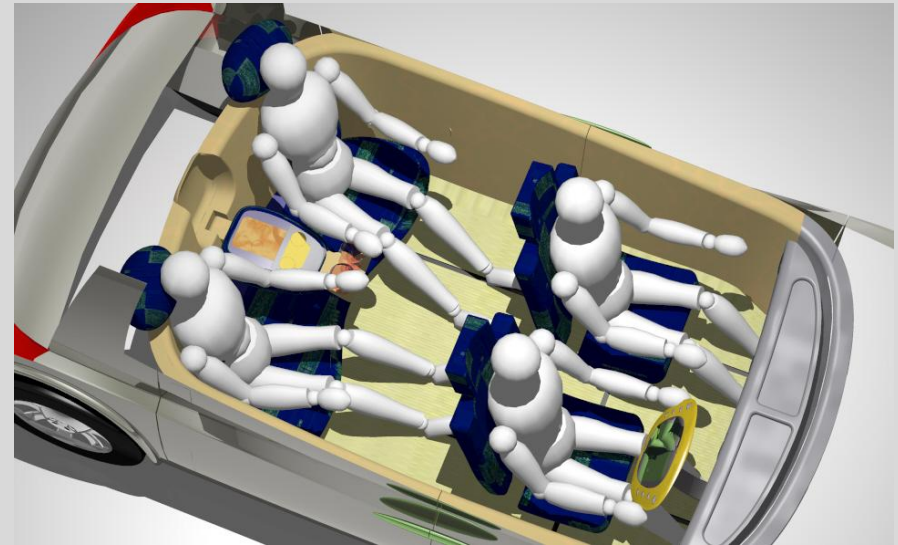
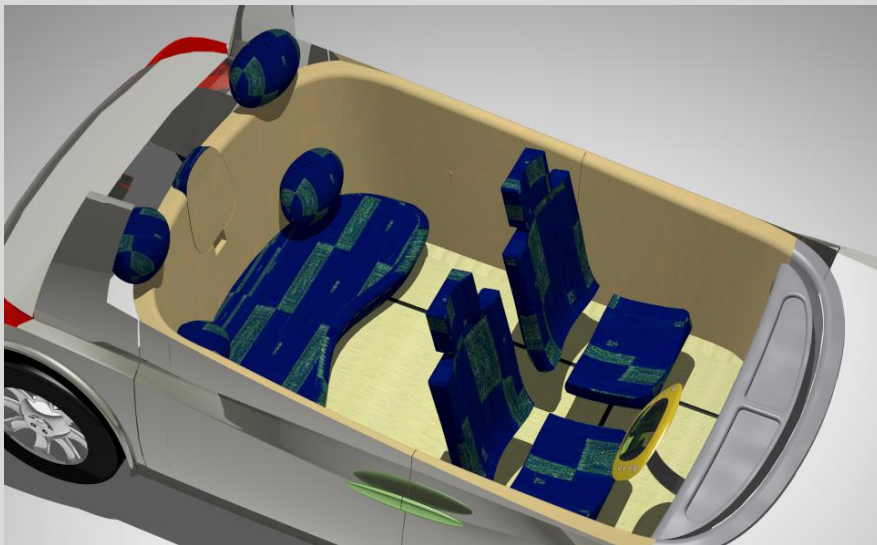
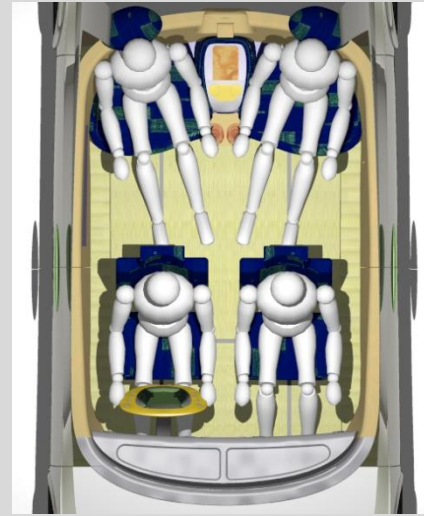
MENU

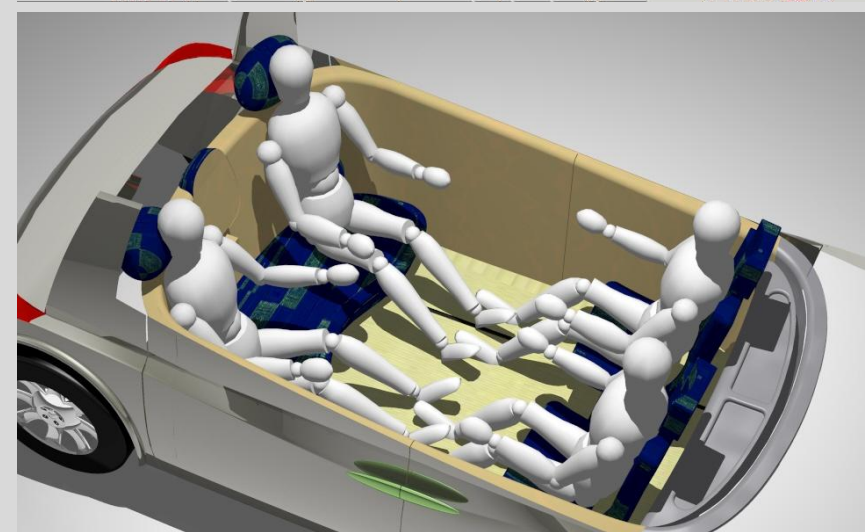
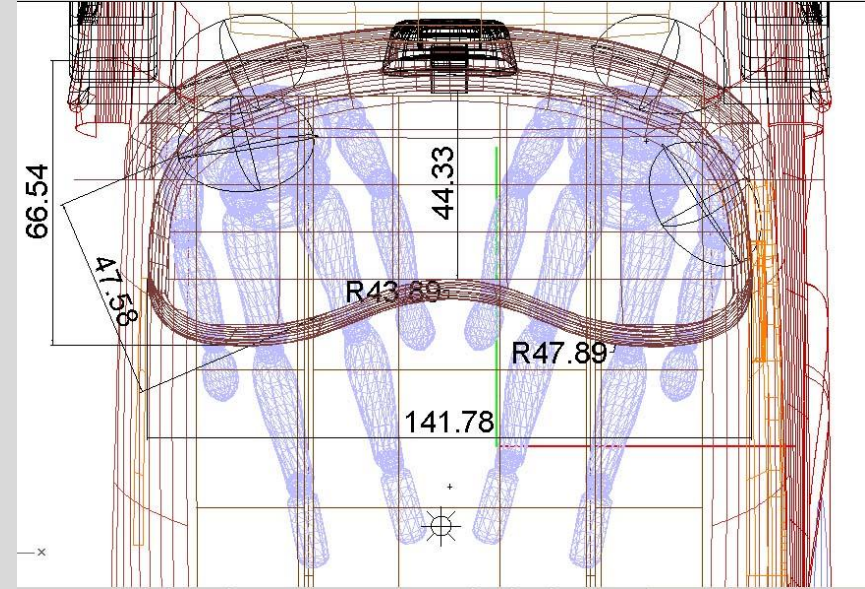
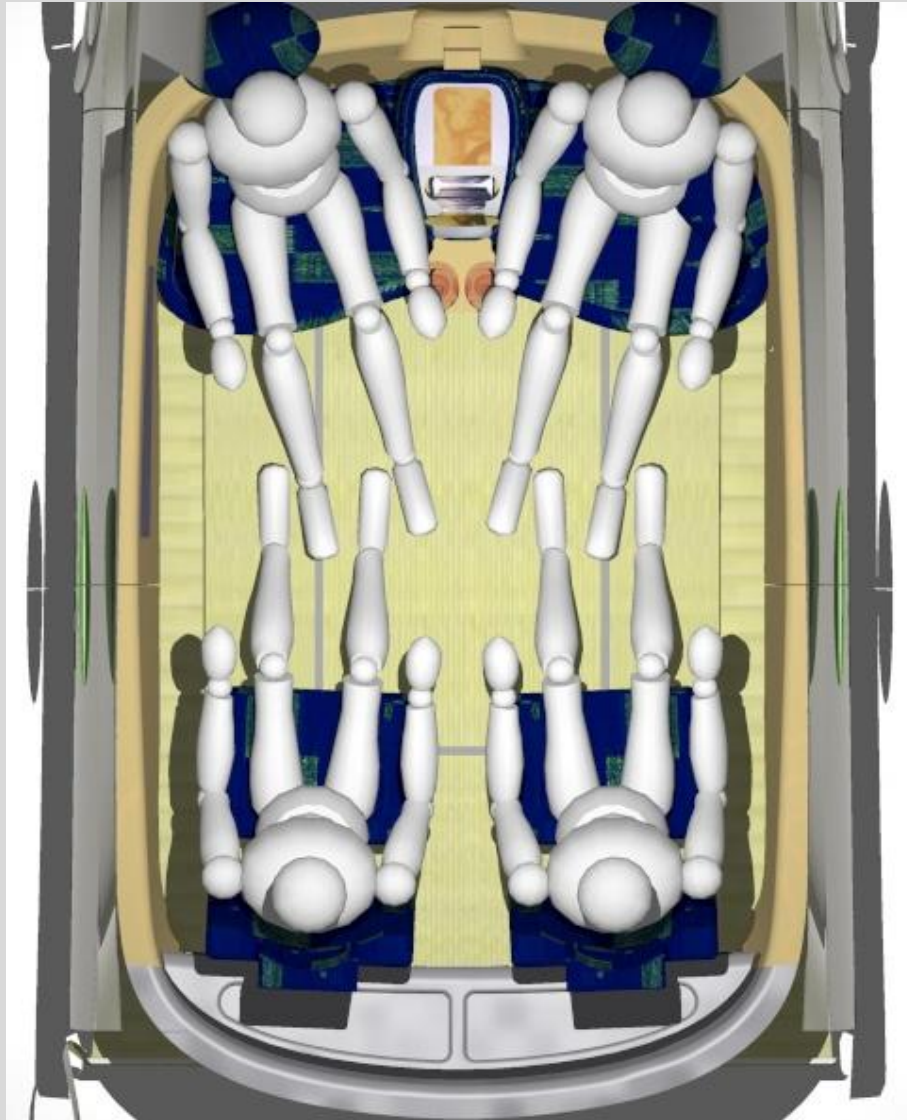


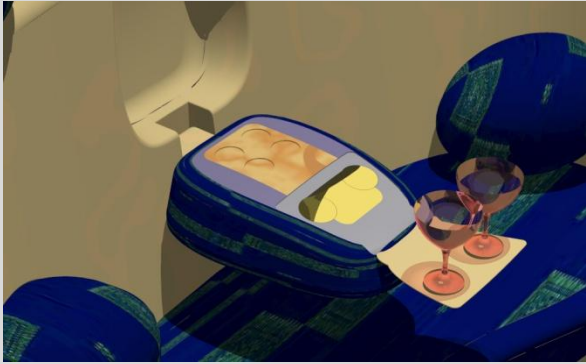


The interior gives feeling of the home comfort and also environment as that of the home. The interior space is not rectangular like traditional car has. It has made curved (circular) enveloping kind so that there is better interaction among the passengers and also between the interior space and the passengers

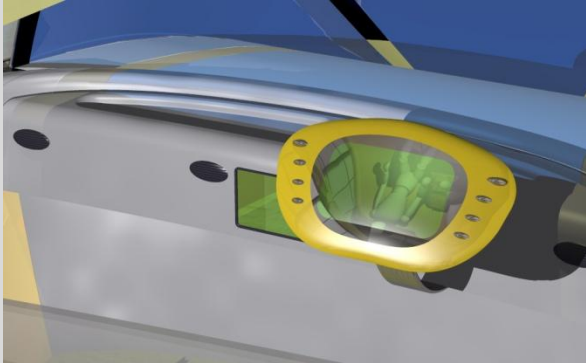
Tatami inspired flooring





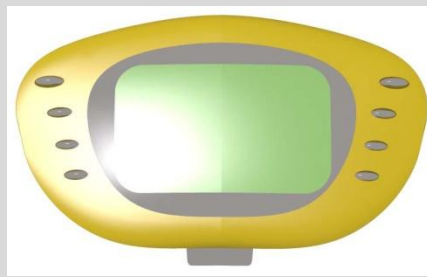
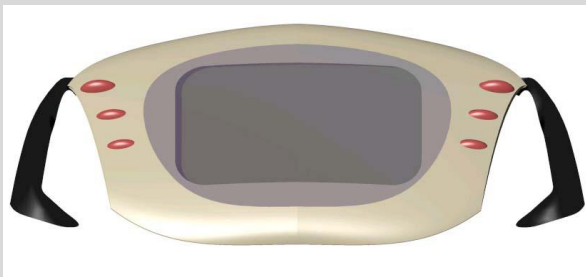


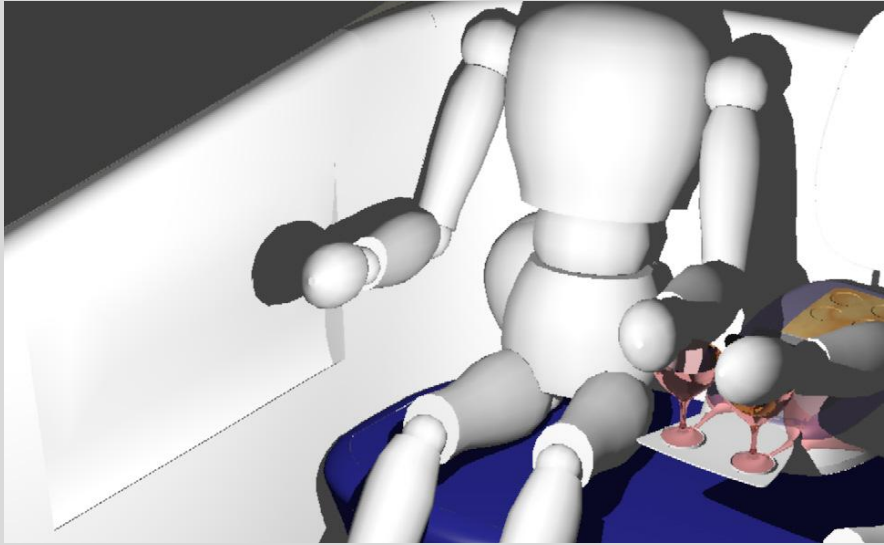
The rear refrigerator cum table can be used for exchange of tea (May be tea ceremony) or to have glass of beer. The refrigerator can be kept in seat when not in use. This will gives ample space for comfort.



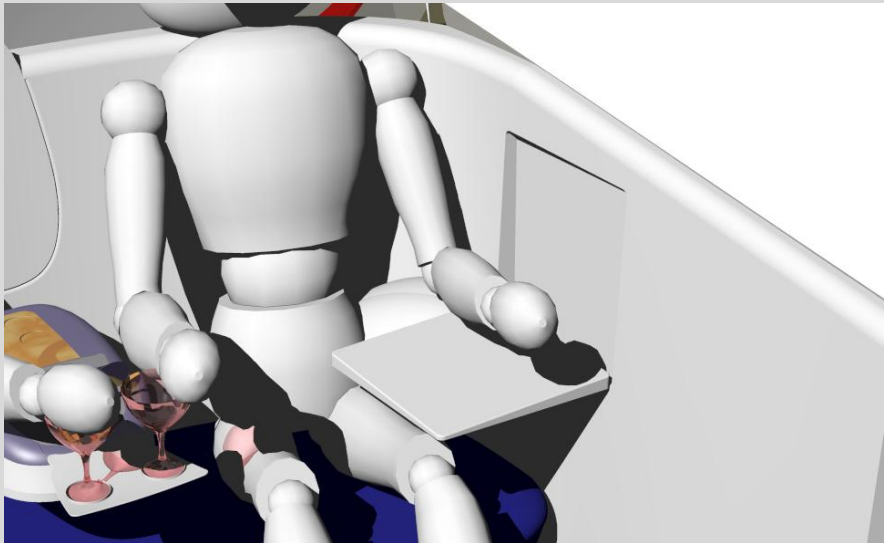
The steering is a joystick. It can be pulled out from the bottom of the dashboard when needed. When space is required inside the joystick can be pushed down.

The device has a touch screen .The driver can have information from the system whenever needed by selecting from touch pad. The steering left right, lights etc must functions are incorporated in the joystick.





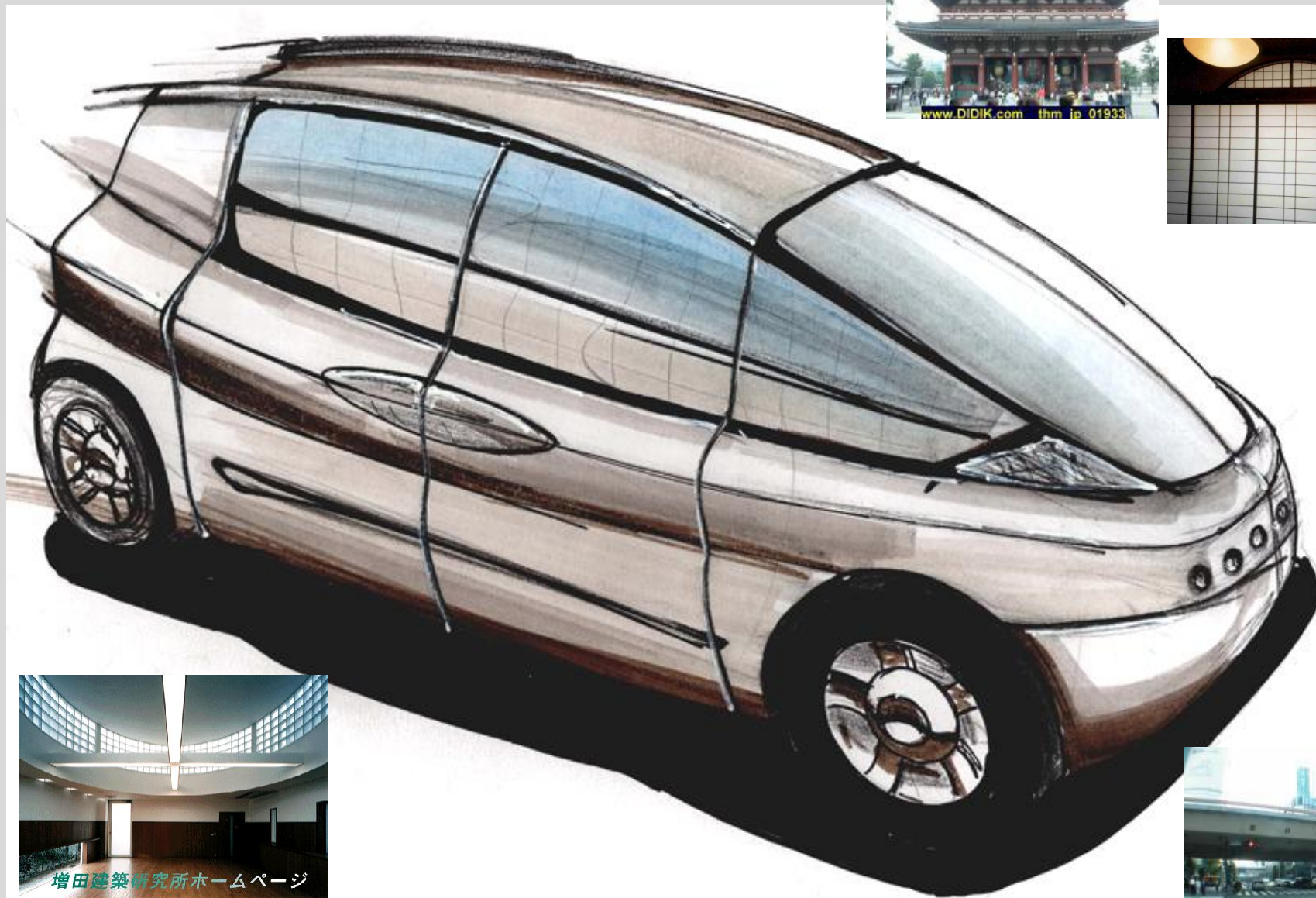
The storage for magazine , newspapers or small belongings.

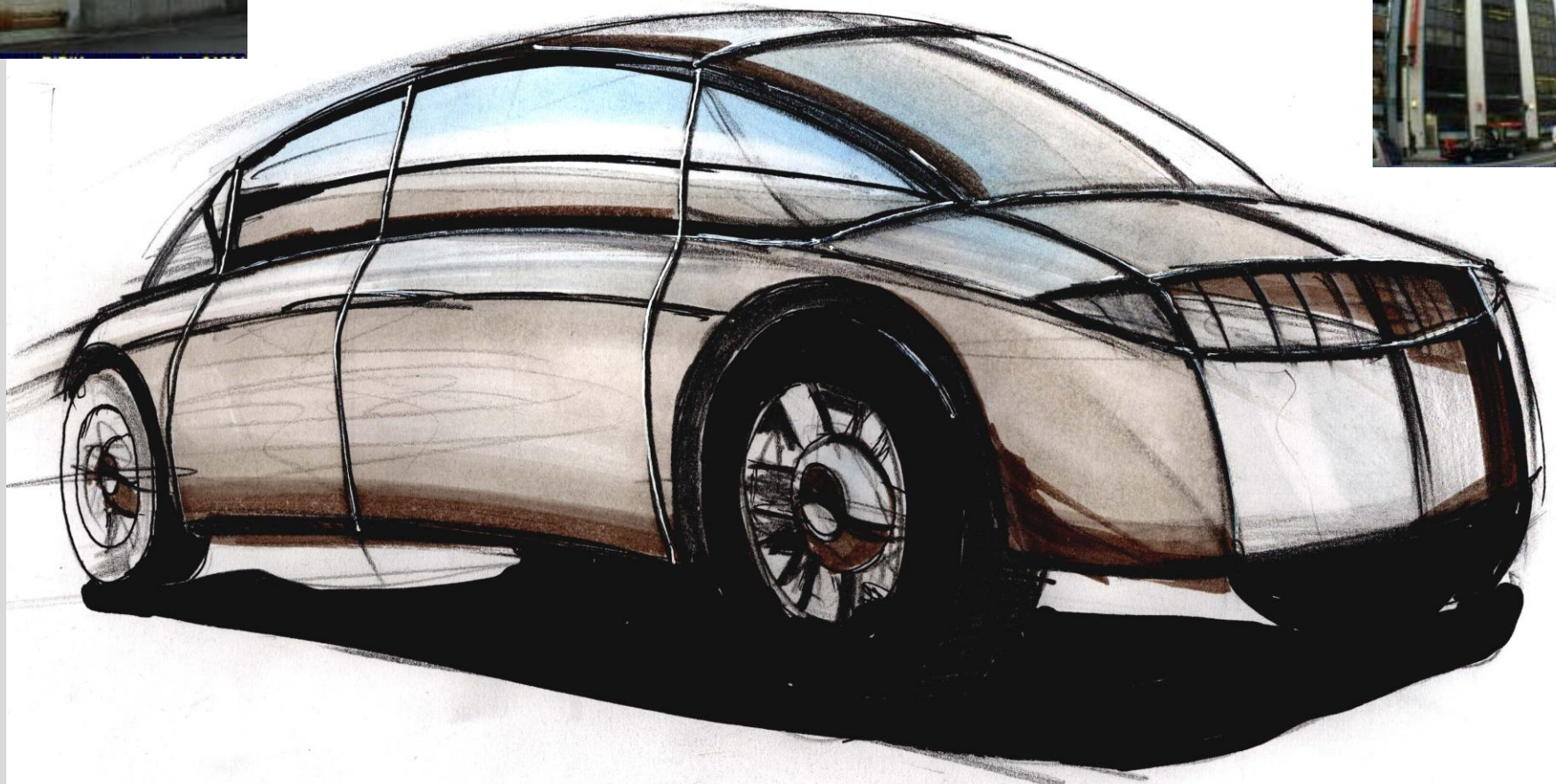


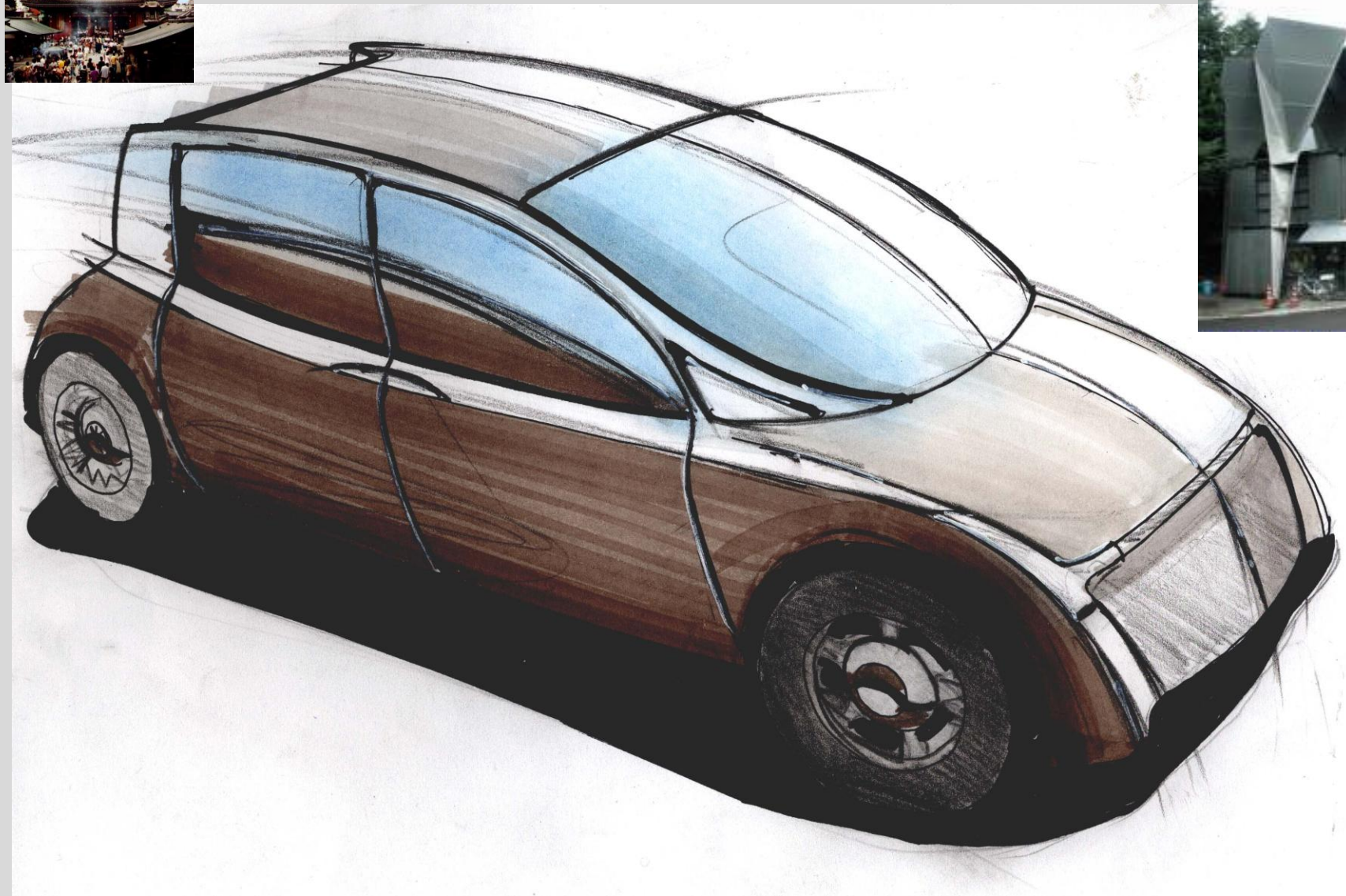
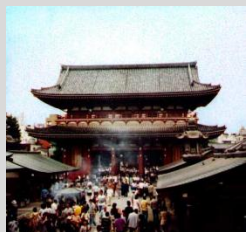
The supporting table flip opens from the door. It can be used as writing table, for food serving purposes.



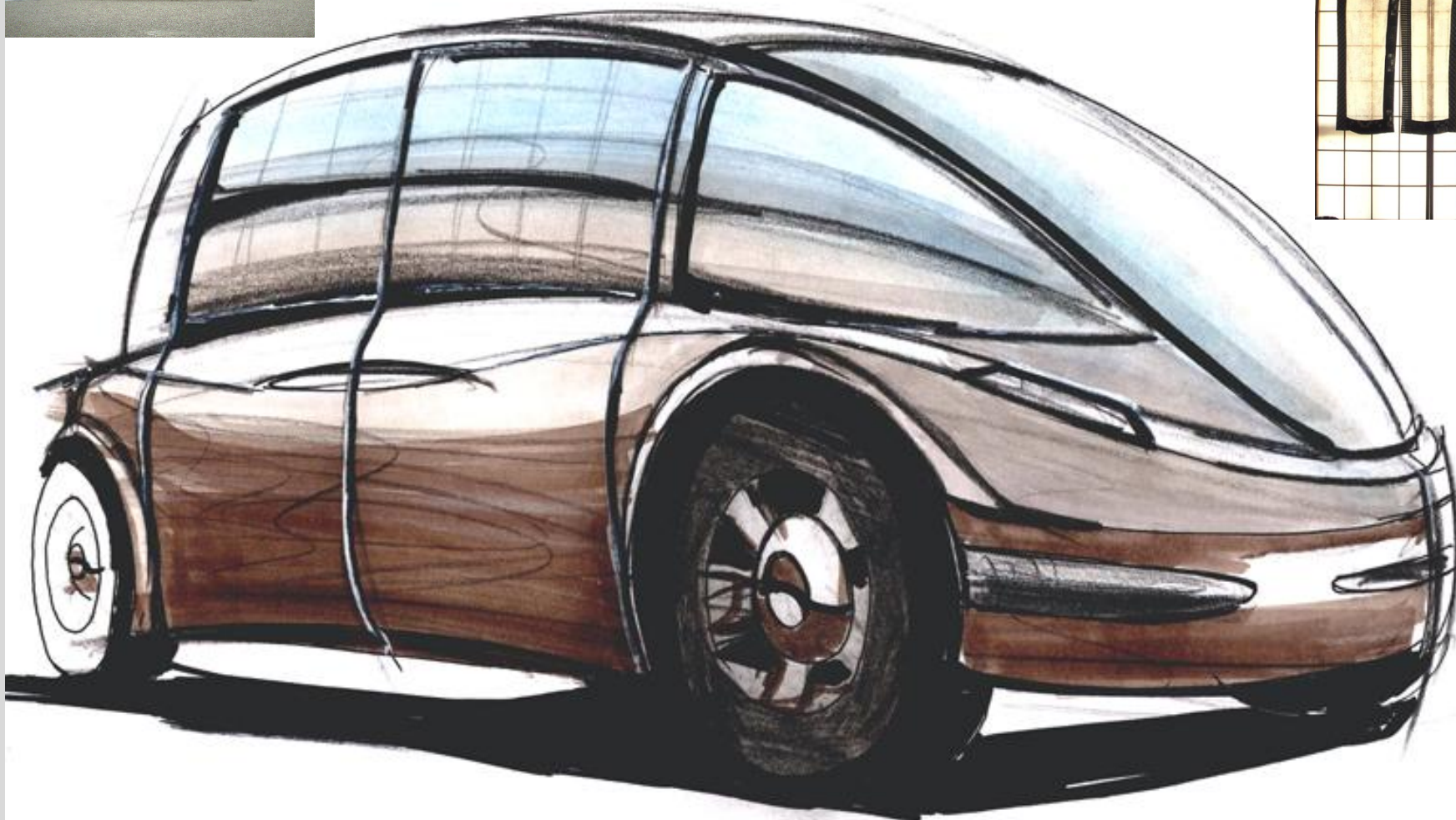
Concept 1



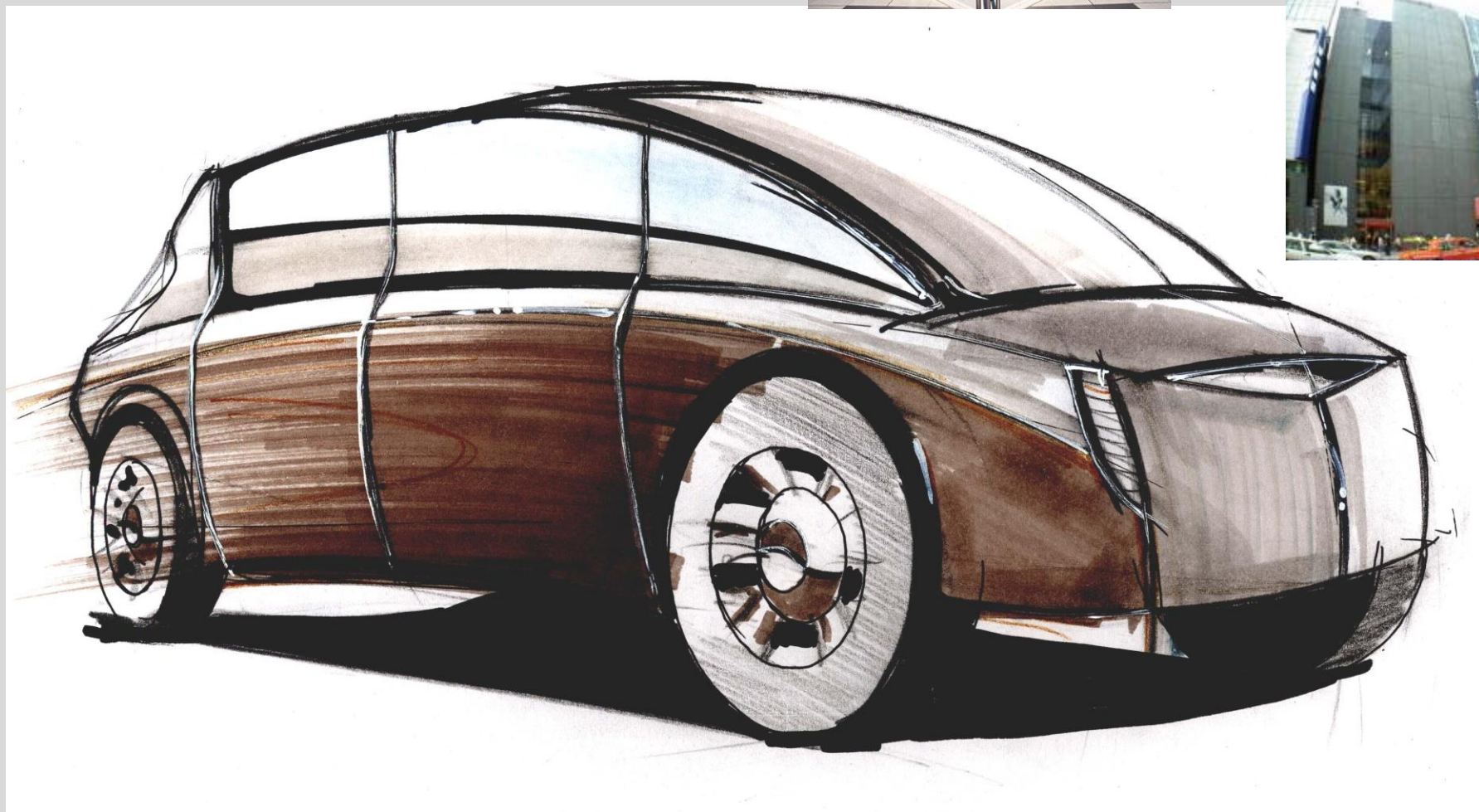
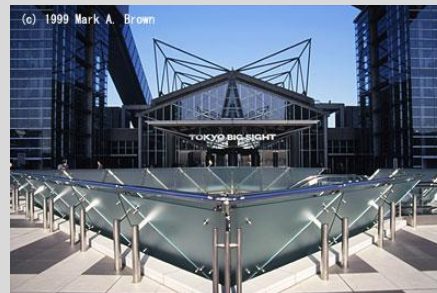




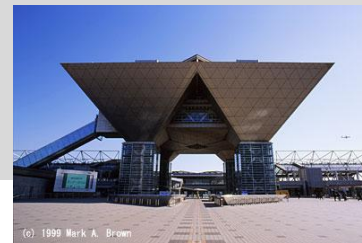
*Concept 4*



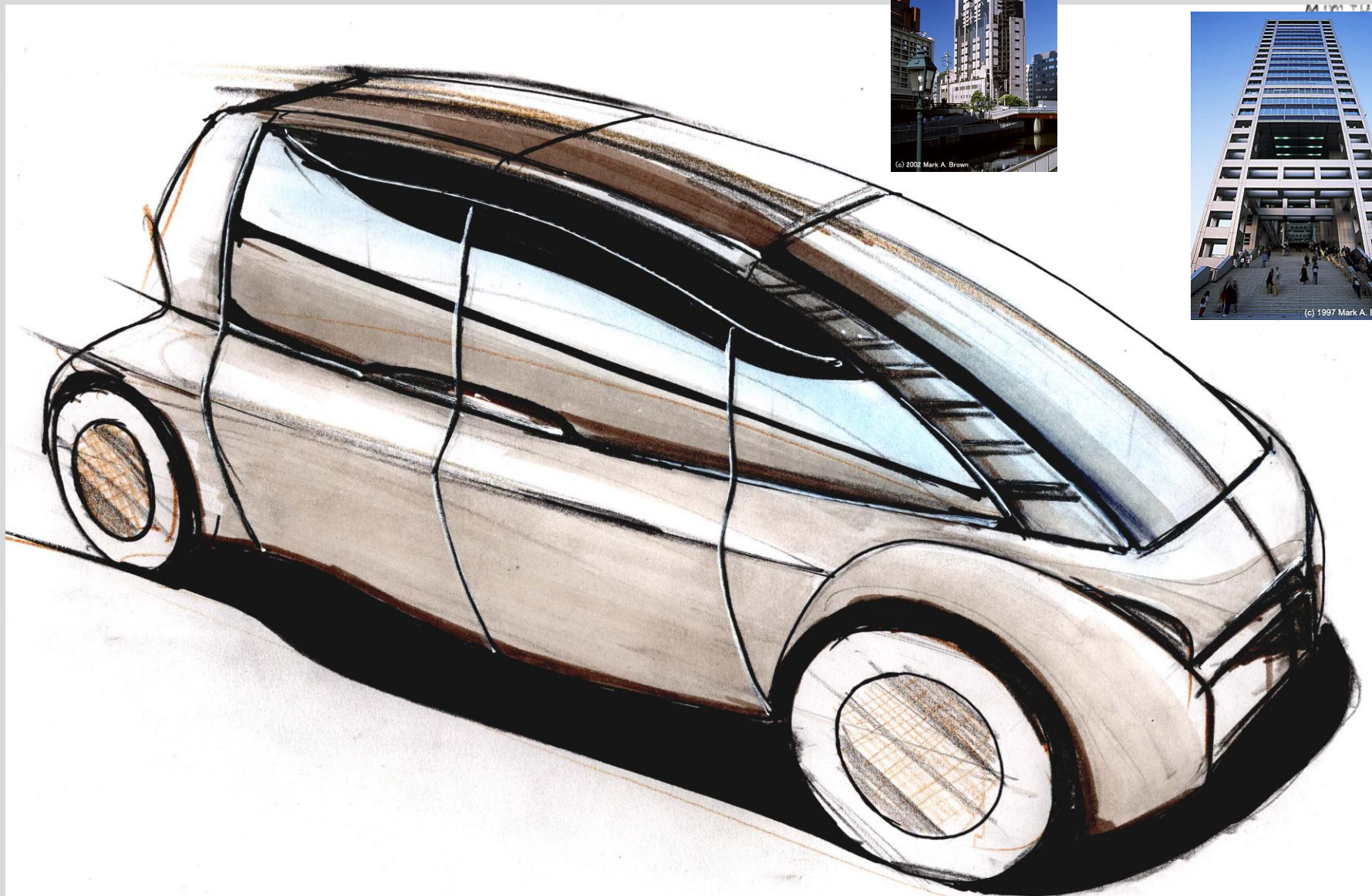
*Concept 5*



*Concept 6*



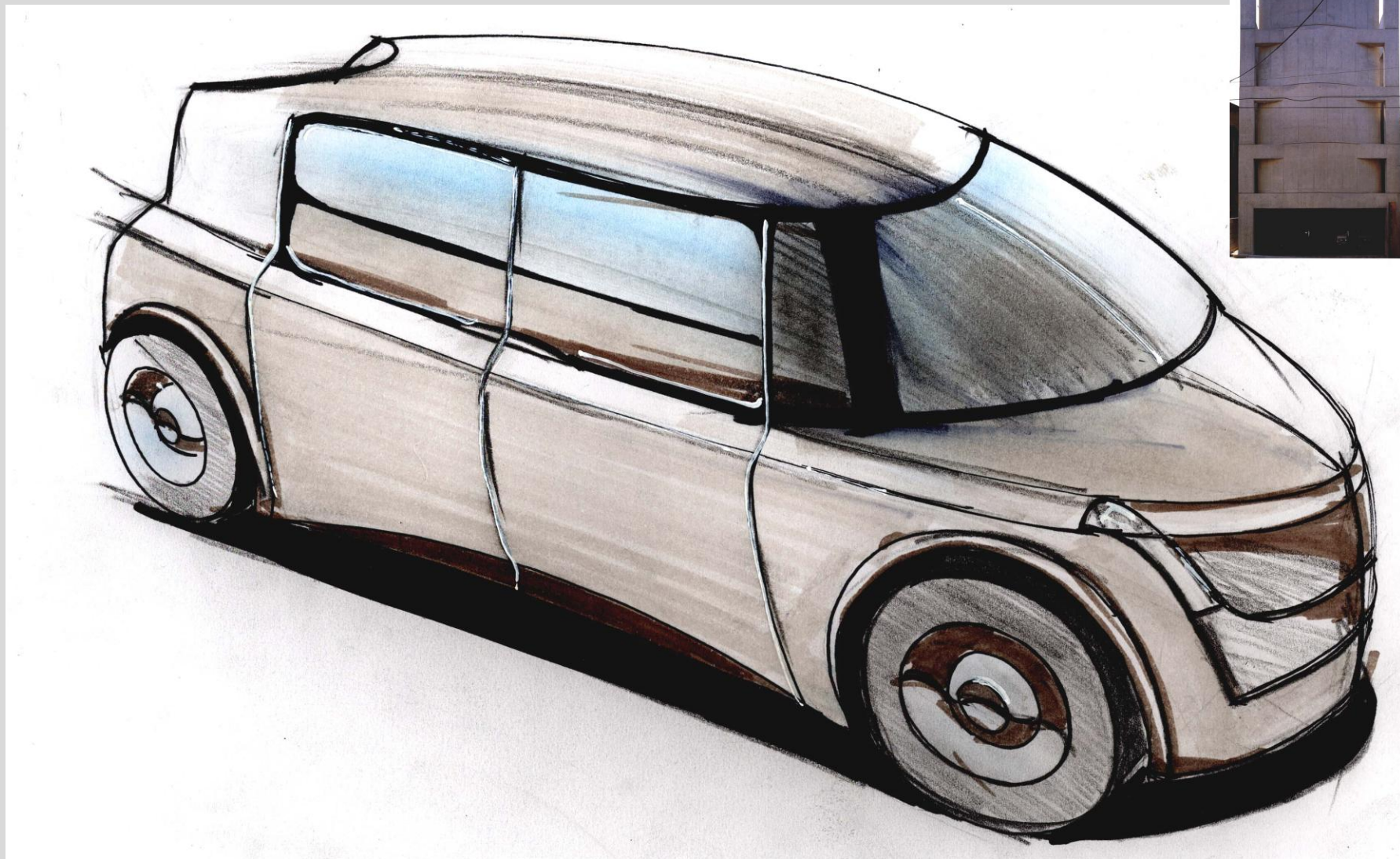
Concept 7



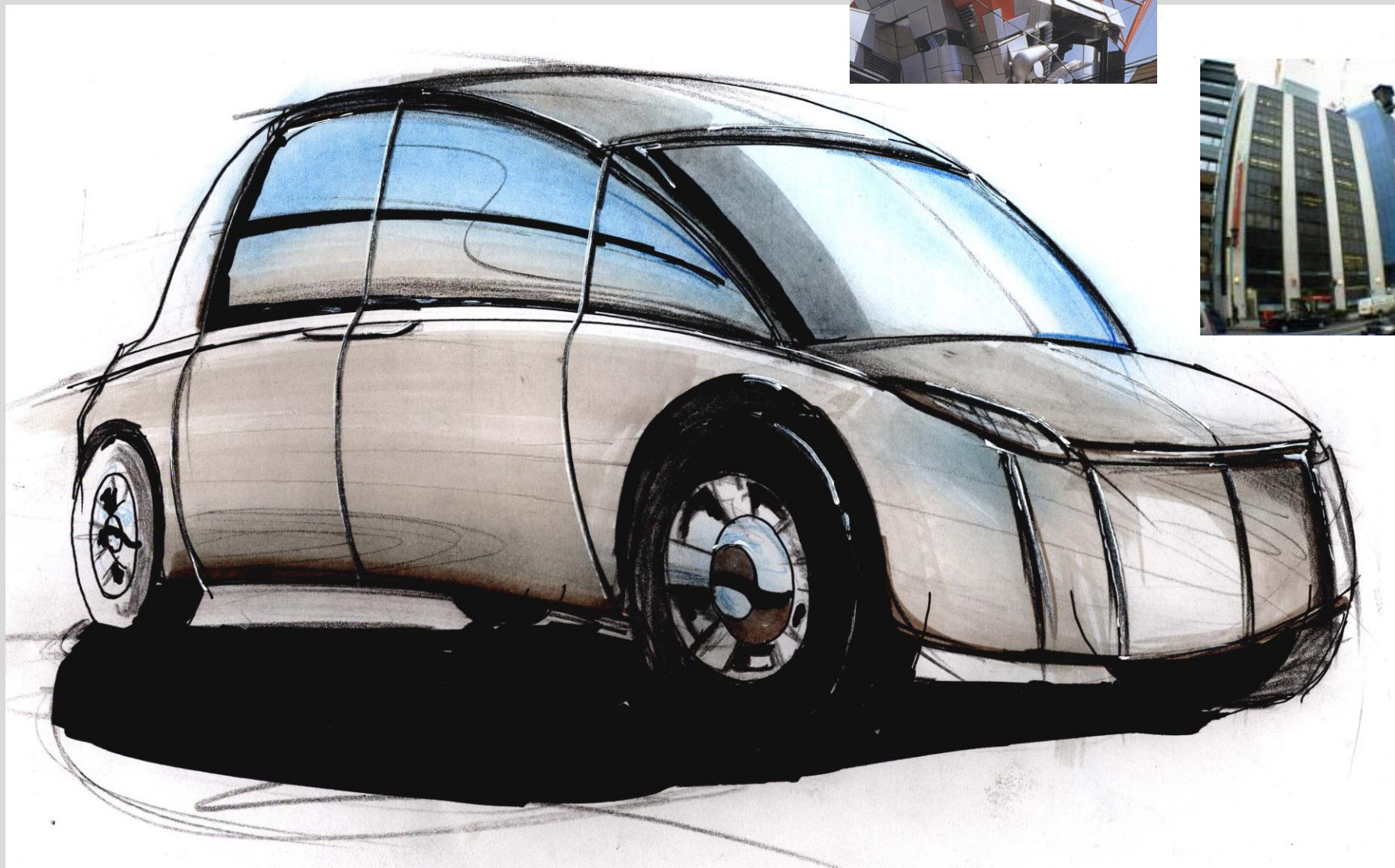
(c) 2002 Mark A. Brown



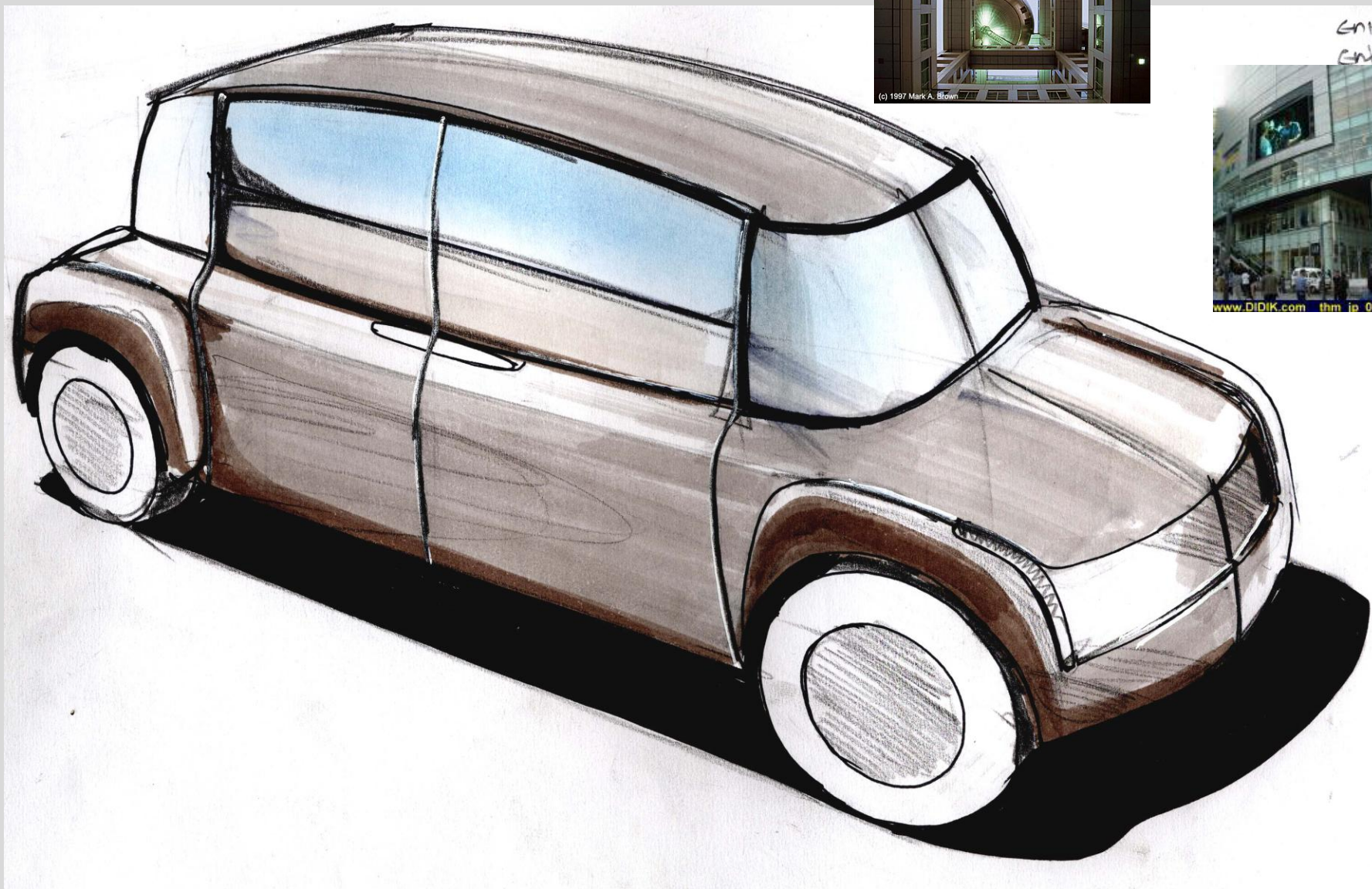
(c) 1997 Mark A. Brown







Concept 10



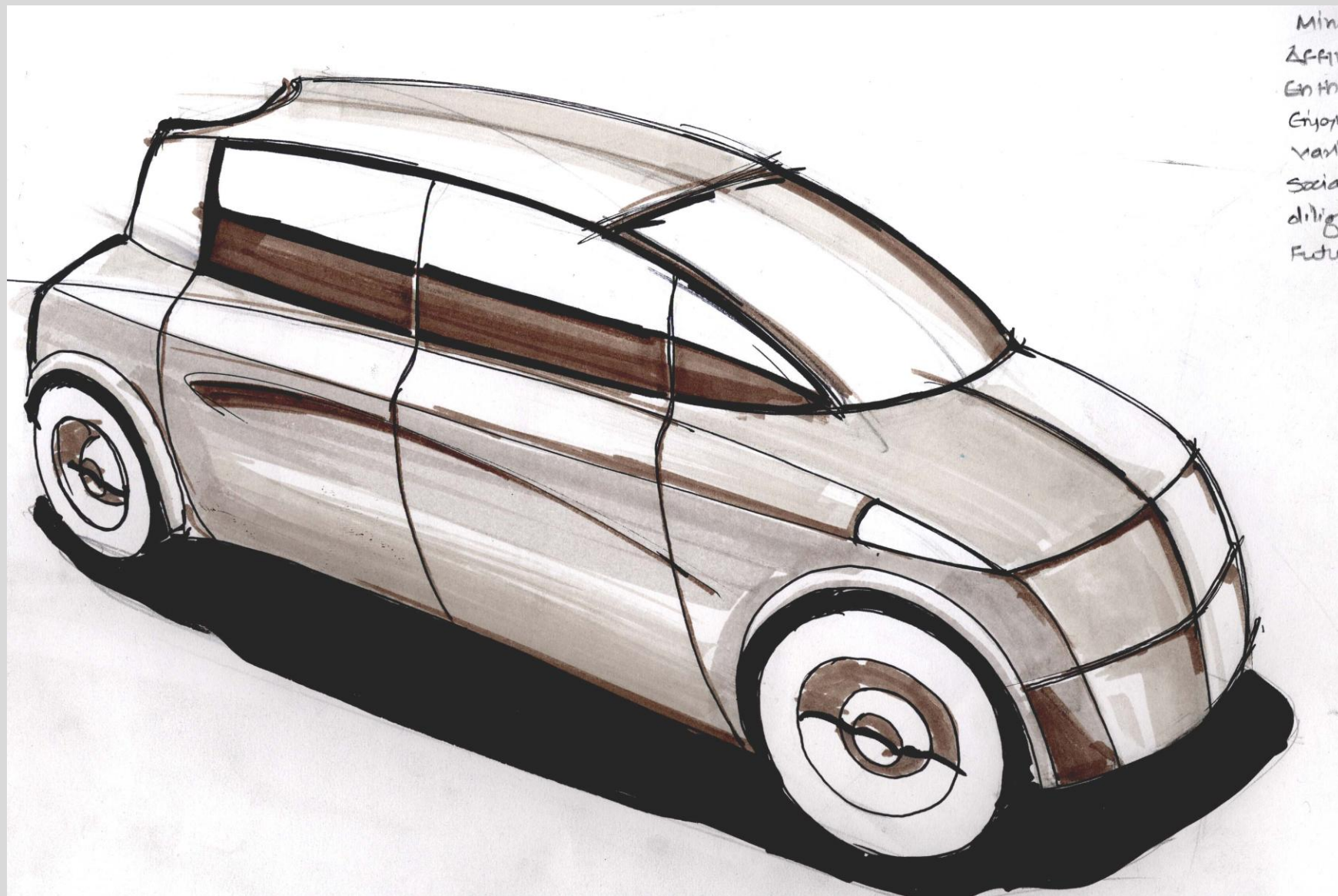
(c) 1997 Mark A. Brown



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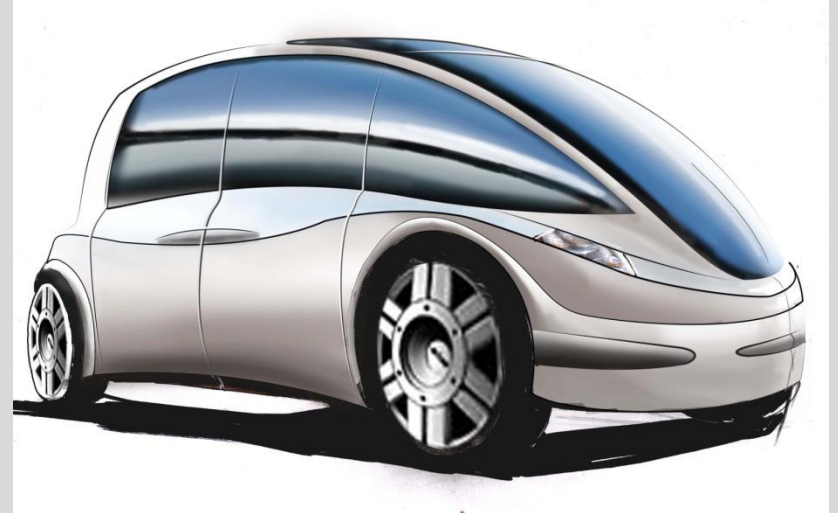
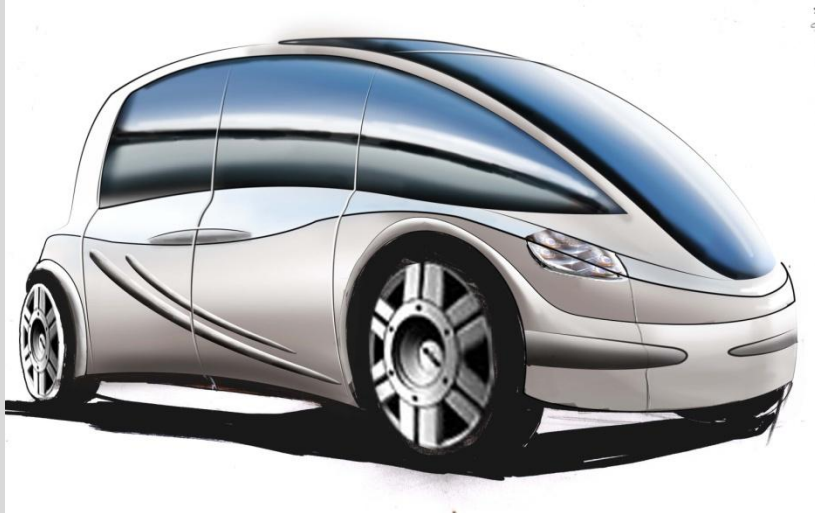
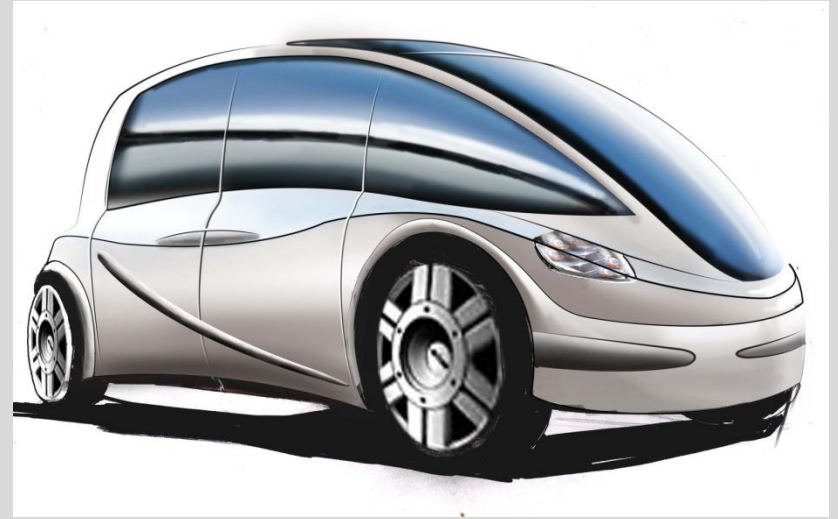
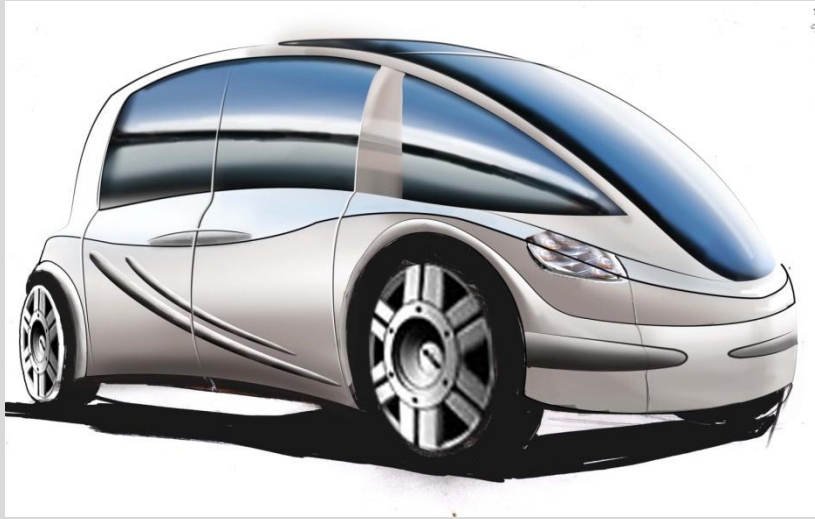
Concept 11



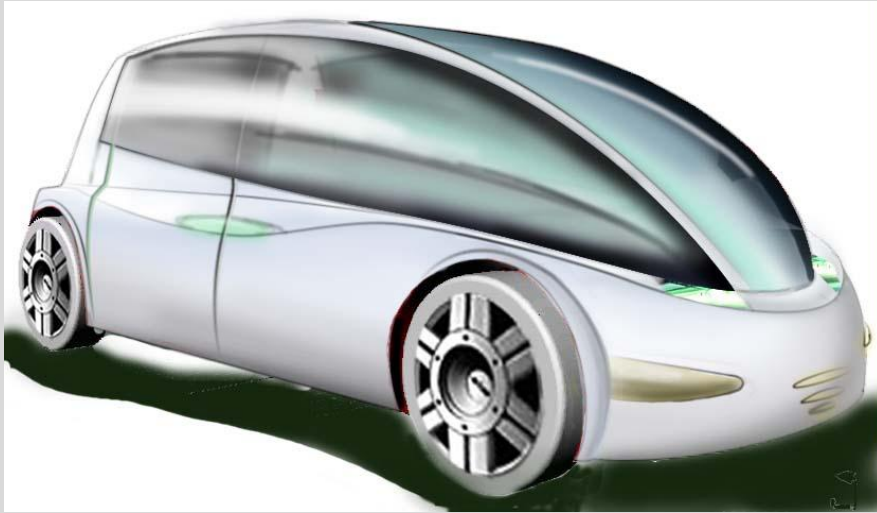
Mini  
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Enthu  
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Futu

<b>Characteristics/Concepts</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
Freedom	8	7	6	7	6	5	6	6	5	4	7
Excitement	7	7	6	6	6	5	5	6	5	5	6
Free Expression	7	7	6	7	6	5	6	6	5	4	7
Introvert	4	7	7	5	7	7	5	5	7	7	5
Harmony	6	6	6	6	5	6	5	5	6	4	6
Miniature	5	7	7	7	7	5	6	6	7	6	6
Affluent	7	6	7	7	6	5	6	6	5	5	7
Enthusiasm	7	5	6	6	5	4	7	5	5	4	6
Enjoyment	6	5	6	6	5	5	7	5	5	3	6
Variety	6	6	4	7	6	6	6	4	6	3	6
Social	6	5	4	6	5	5	7	5	5	2	6
Diligent	5	6	3	5	4	3	6	4	5	4	5
Futuristic	7	6	6	8	5	3	8	7	5	3	6
<b>Summation</b>	<b>82</b>	<b>80</b>	<b>74</b>	<b>83</b>	<b>73</b>	<b>64</b>	<b>80</b>	<b>70</b>	<b>71</b>	<b>54</b>	<b>79</b>

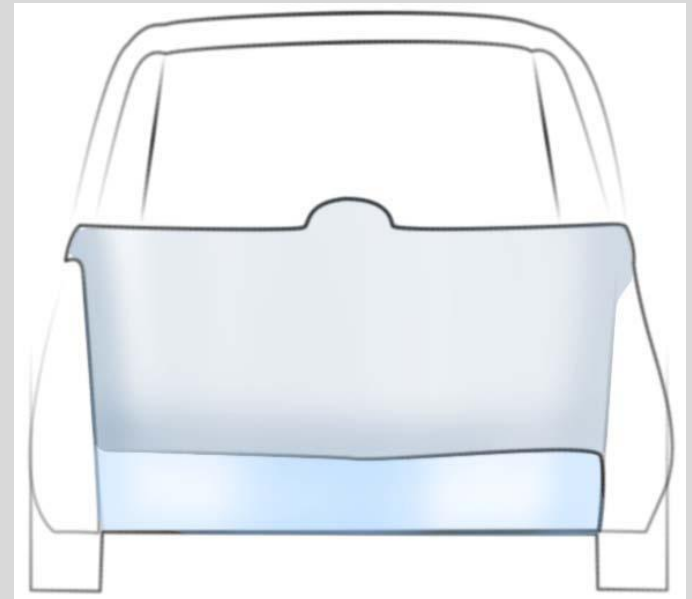
Different characteristics were defined to evaluate the final concepts. These characteristics are taken from the user profile, their need, behavior etc.

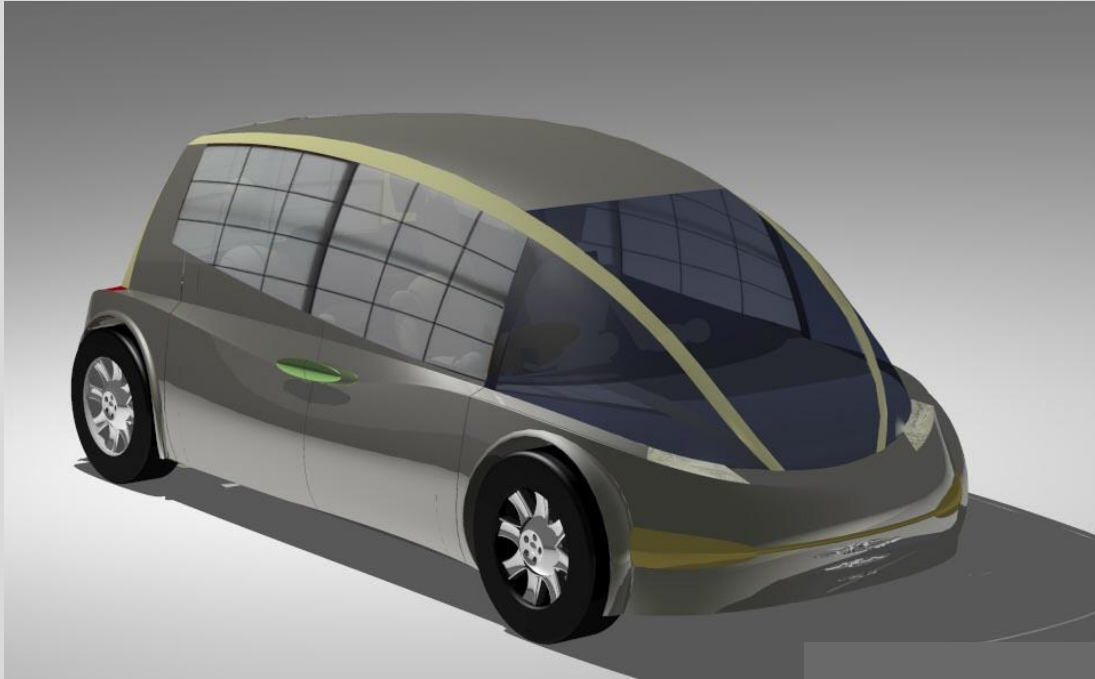


## *Refined Concept*



The exterior of the car is adopted from the Both /And principle in Japanese architecture. The ancient ability to accept two contradictory positions as the norm allows Japan to remain conservative yet to be very avante grade and to continue in traditional ways yet adapt the very latest western innovations.





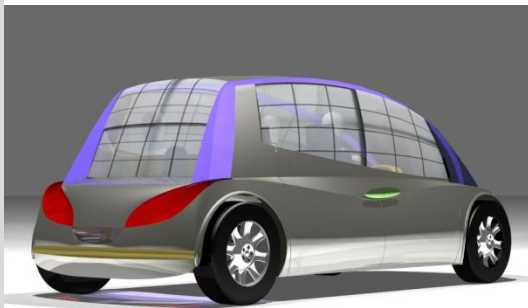
The front portion is much like European but the rear is classic Japanese with traditional looking forms. The big size windows run from front to rear are inspired from the Japanese partition (or Shoji screen) and sky scrappers which will allow the free interaction between environment and the interior in turn the user (Opening up spaces).

The side surfaces just below the windows are inspired from the Japanese shrine. It also gives the feeling of visual continuity from front end to rear. The head lamps and tail lamps are connected with this surface. Also because of the stance of the car it looks balanced with harmony in the overall surfaces.

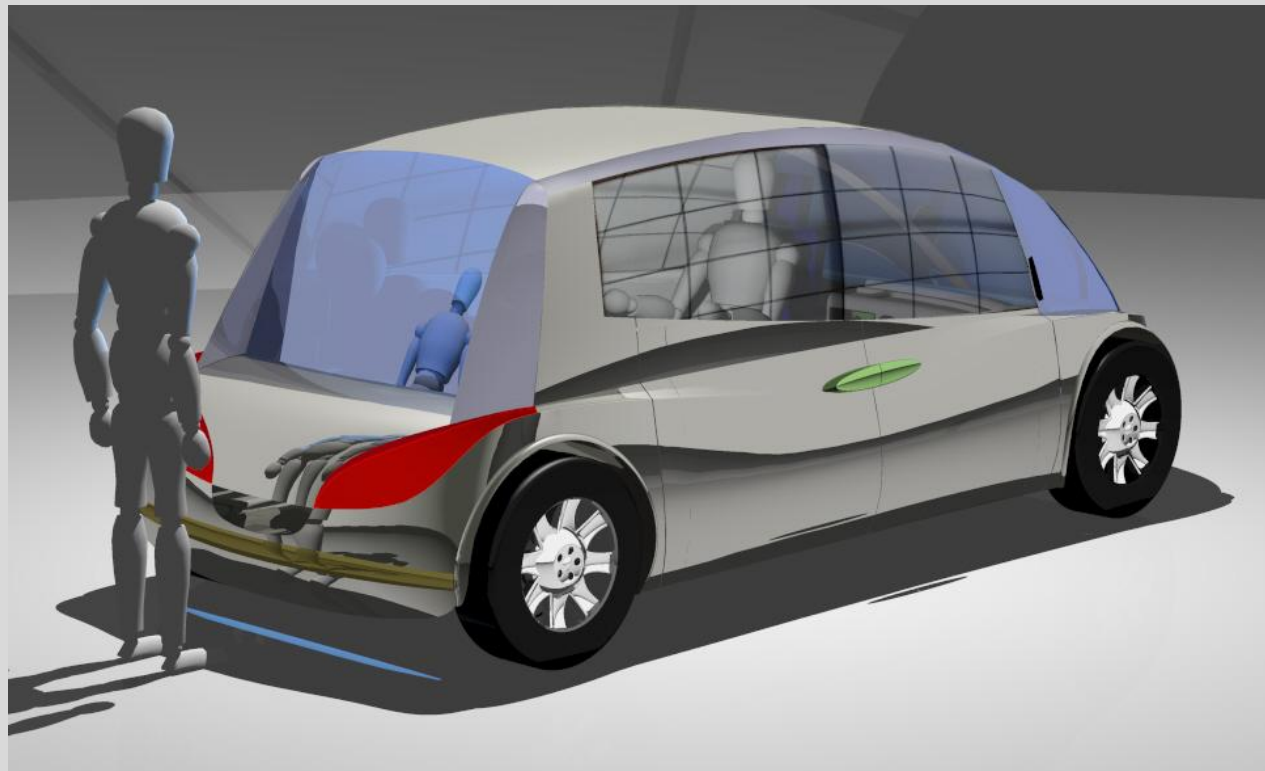


The long running transparent side members are distinct and they are used for following purpose .

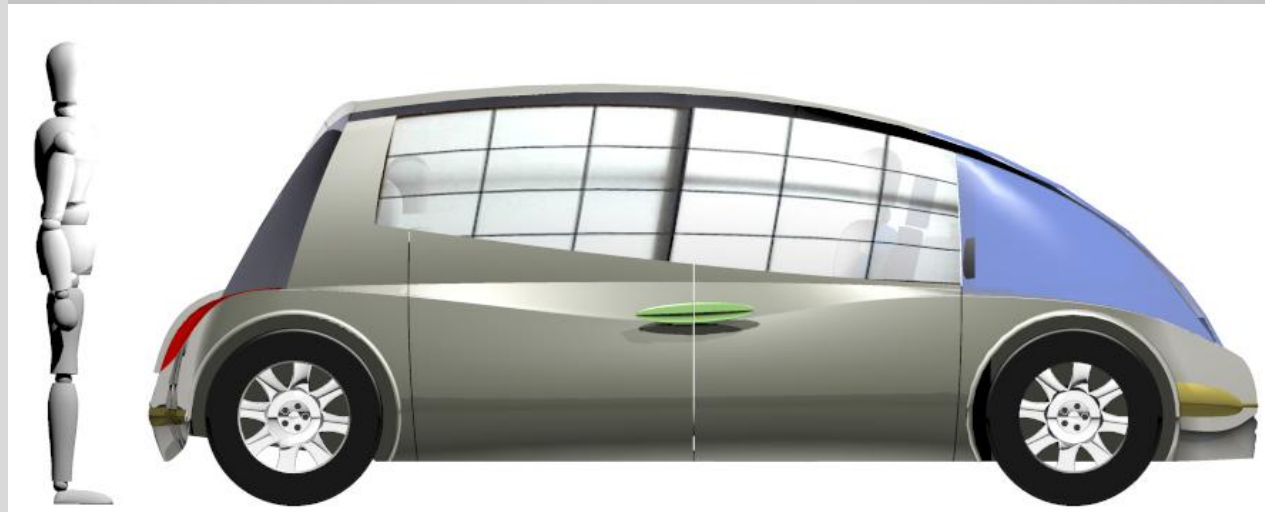
1. It gives natural light to come in side. Japanese have transparent partition between interior and exterior of house so that they can have the sunlight inside and have better interaction with the environment. Same thing can be achieved with these long running side members.
2. These members change the light of the interior space according to the mood of the passenger. The artificial intelligence system can recognize the mood of the passenger by reading its facial expressions, act in the space and accordingly it can change the light inside to make the passenger comfortable and peaceful.

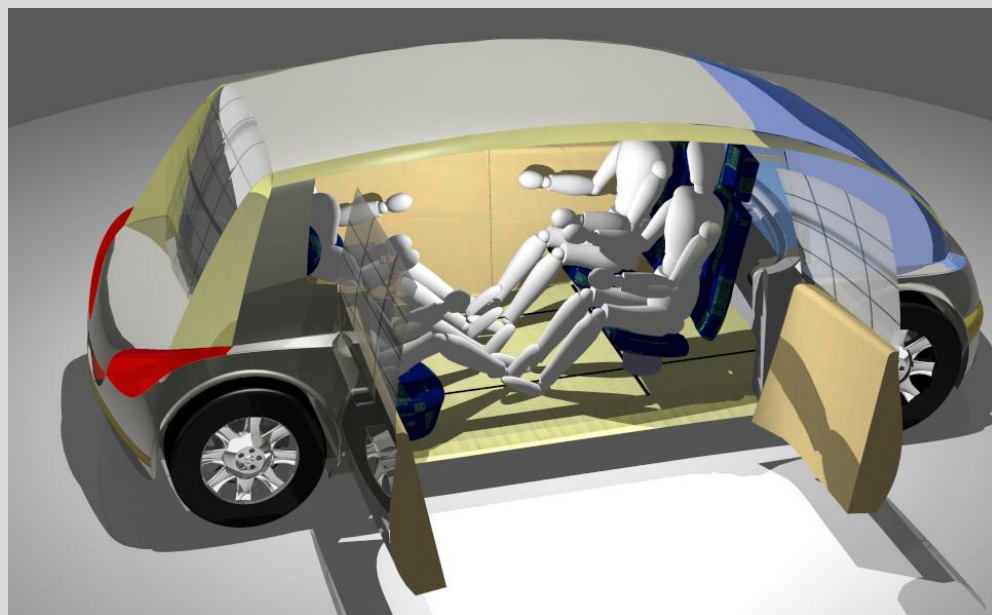
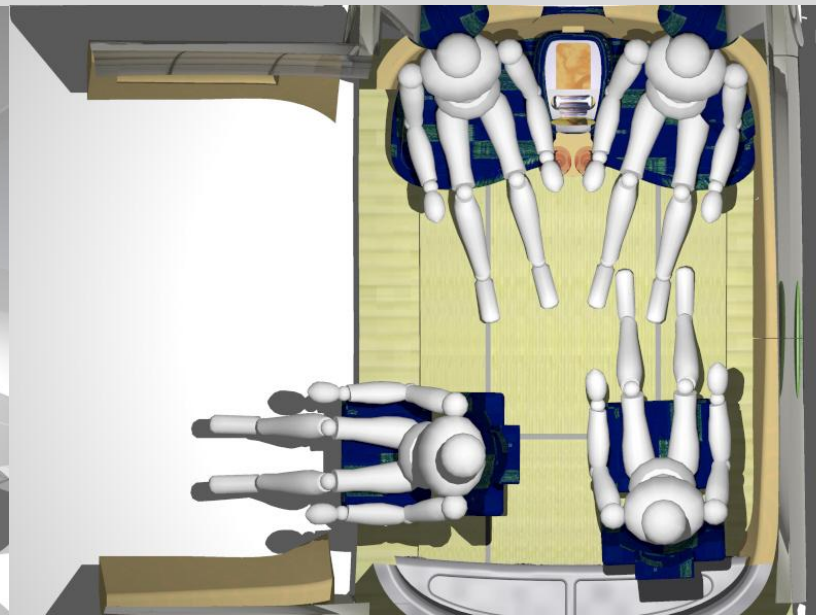






The proportion of the car according to Human body dimension





Opposite opening doors gives ample of room for access in and out . It also provides easy movement from the rear seat to ground.

