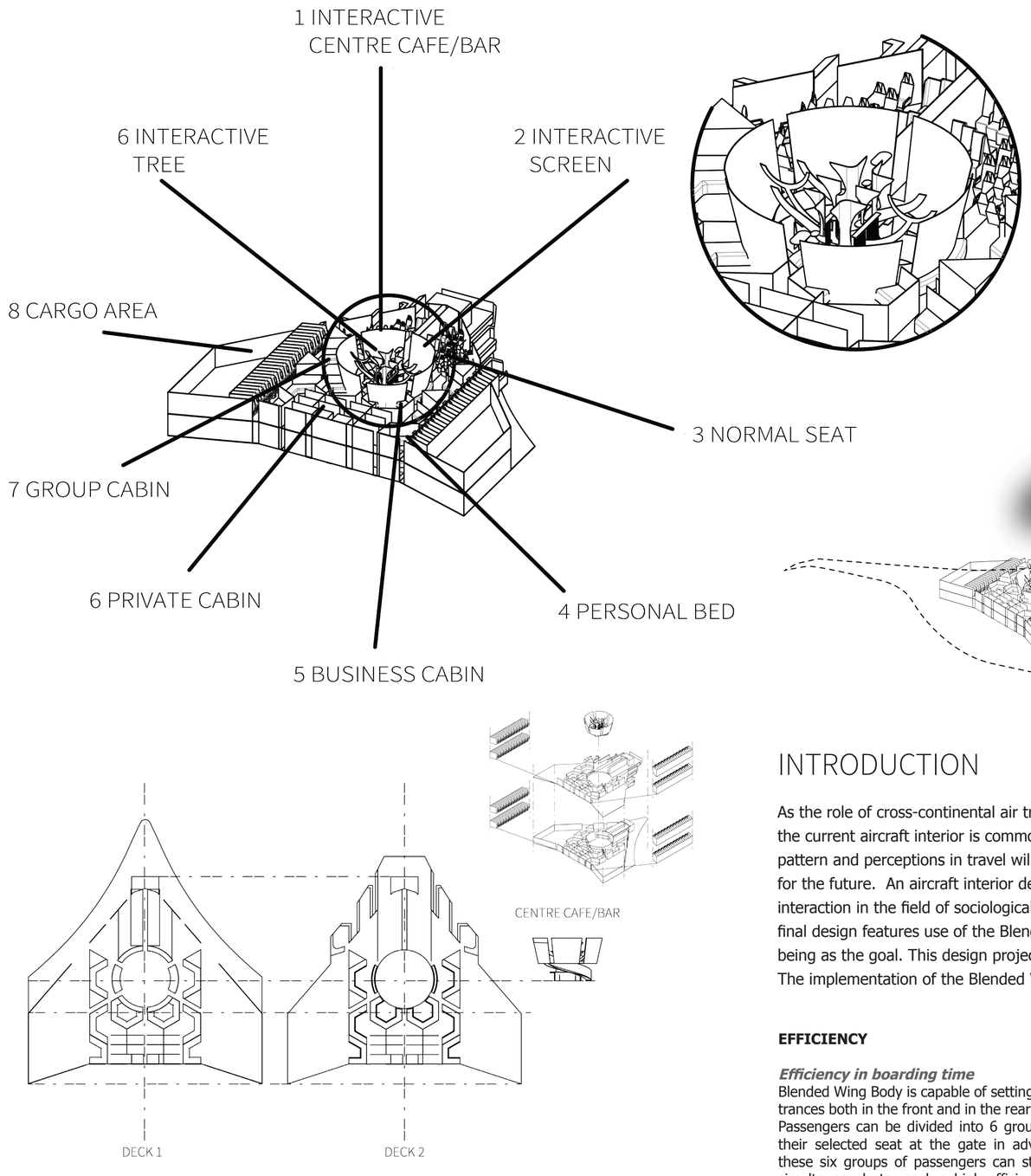
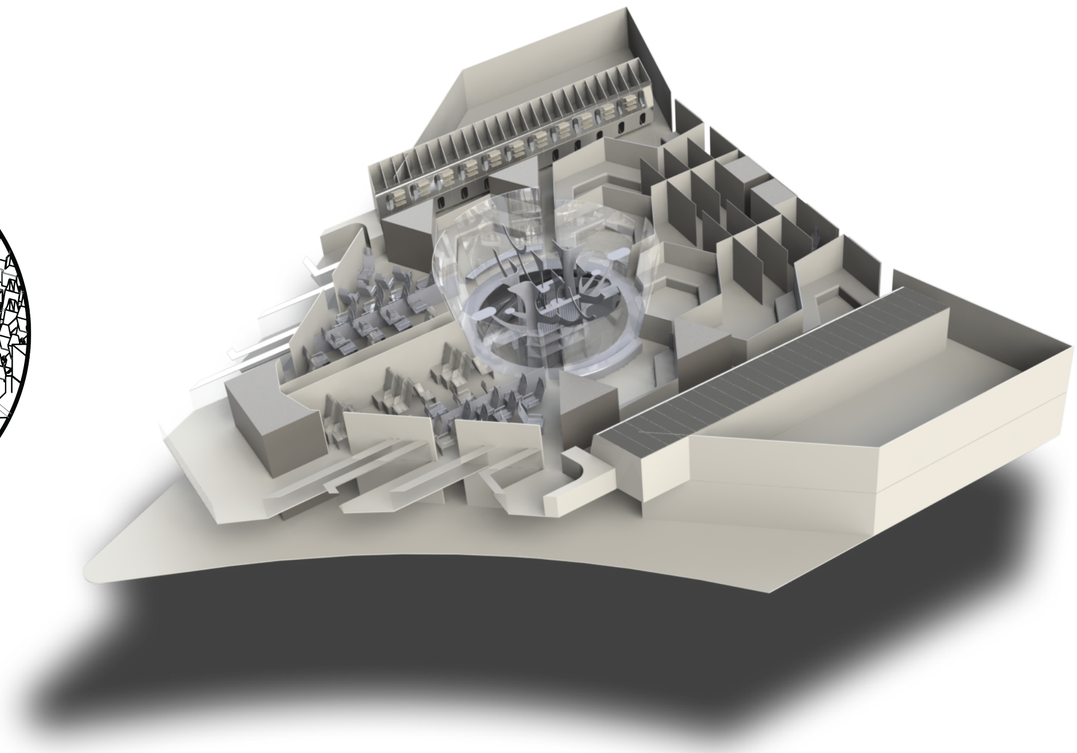




AirMEGA

INTRODUCTION

As the role of cross-continental air travel becomes increasingly crucial and common, the importance of in-flight comfort and experience also enhances. However, the current aircraft interior is commonly considered as providing an unpleasant and dreadful experience, especially in a long distance flight. Since the travel pattern and perceptions in travel will be altering considerably with regard to the rapid pace of developments in all fields, the interior design needs a fresh plan for the future. An aircraft interior design is proposed for the Blended Wing Body for year 2050 with the focus on enhancing crowd wellbeing. Research covering interaction in the field of sociological psychology in current context in combination with designing the future context in 2050 lead to a final design proposal. The final design features use of the Blended Wing Body as the platform, the wearable technology as the tool, the social interaction as the mean and the crowd well-being as the goal. This design project aims at delivering an inspirational design concept, which provides different possibility in arrangements of aircraft interior. The implementation of the Blended Wing Body is also a significant trial in showing the new concept in function and meaning of air travel.

EFFICIENCY

Efficiency in boarding time
Blended Wing Body is capable of setting multiple entrances both in the front and in the rear of the cabin. Passengers can be divided into 6 groups based on their selected seat at the gate in advance. Then, these six groups of passengers can start boarding simultaneously to reach a high efficiency in boarding and cut down the boarding time. Therefore, the long waiting situation of boarding nowadays can be solved with AirMEGA.

Efficiency in use of space: noise insulation
According to the interview(s), noise problem in an Economy Class is always one of the biggest discomforts in the cabin especially when there is a crying baby or playing kids with careless parents. AirMEGA interior is designed with several sections, which blocks noise inside the group. The walls in between each group are made of sound-absorbing materials, which effectively insulate sounds in preventing from spreading to other sections.

Efficiency in use of space: utilizing valid space
In the simulated model of Blended Wing Body, It is equipped with 1108.91 m2 of 'floor area' with combination of the two decks. However, because of deductions such as the forward and rear spar, the engines' area, the passenger 'floor area' is only 671.62 m2; this constitutes 60,6% of the 'floor area' of entire cabin. The AirMEGA design concept utilized 74.6% (500.44 m2) of the passenger 'floor area' with 504 seating capacity. Although there is a great amount of space that cannot be used as seating area, they are planned as the public space in AirMEGA. By doing this, the cabin space is not only used efficiently, but also provides vivid and refreshing space for the thrive of passengers' physical and psychological states.

Efficiency in expenses

1. On cabin crew
AirMEGA centralizes galley, stair and service all in the centre area in order to invite passengers to interact with each other. On one hand, passengers are no longer passively waiting on their seat for all the service, such as food and drink. On the other hand, the service that was provided by flight attendants with the trolley is no longer needed.

2. On food
During the interviews, the serving time of meals were mentioned frequently. Some of the participants were not satisfied with the amount and the timing of the meals. One of them even felt guilty when she almost ate nothing of the meals so all the food were wasted. By providing buffet service, passengers can decide the timing and the portion of each meal. This not only prevents from waste of the food, but also improves the service based on passengers' preference.

3. On value per ticket
Instead of expecting a long-duration of sitting and sleeping, in the future, a flight ticket with AirMEGA means more than moving from one city to another city. In AirMEGA, passengers can expect more meaningful and interesting activities, which makes the differentiation from other aircraft interior designs. The overall experience is therefore highly improved. In 2050, airline industry as well as their passengers can fly with a refreshing and attractive experience.

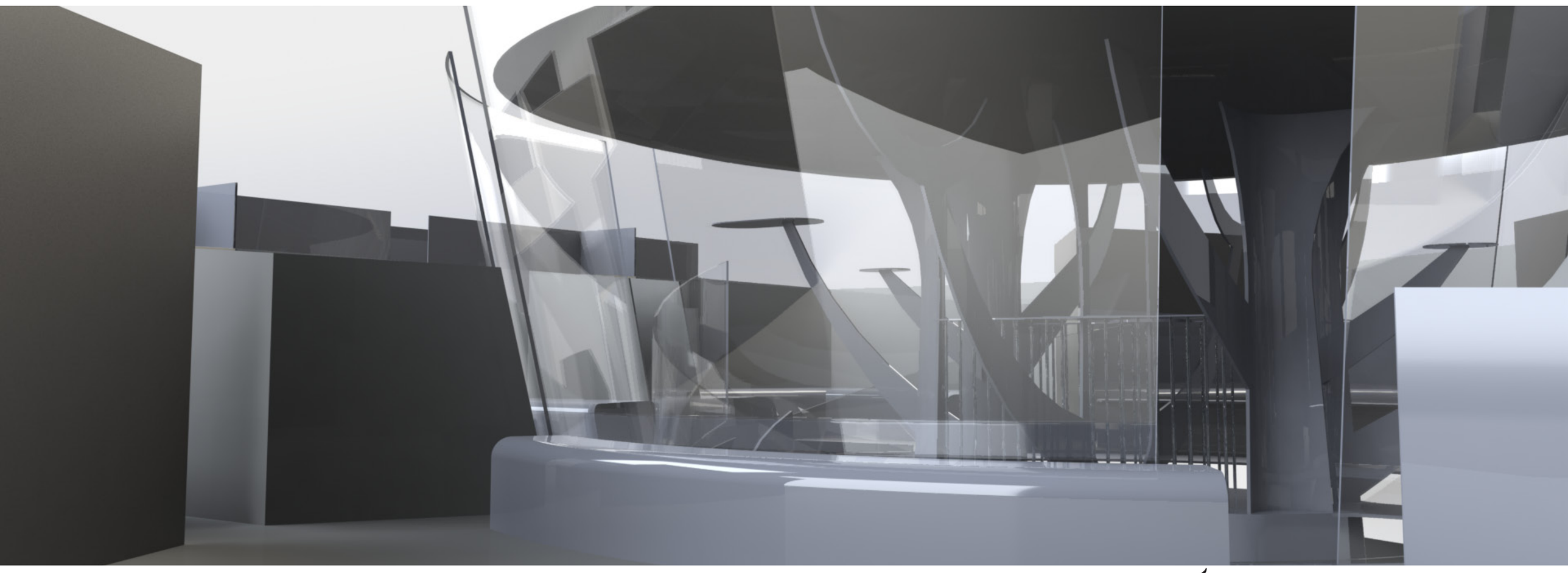
PHYSICAL AND PSYCHOLOGICAL WELL-BEING

Increased space per passenger
The city metaphor makes the overall interior plan far different from what we have in a commercial airplane nowadays. In AirMEGA, the dimension of per seat did not increase significantly in comparison with the current seats in Economy Class; however, the space per passenger significantly increases by sharing spacious public space in the plane. Passengers are more capable to leave their seat for some activities instead of being trapped in their seat and stare at the screen for hours. Thus, physical fatigue caused by a sitting with the same posture for a long time will be decreased. Passenger can regain their physical energy not simply only by napping or sleeping.

Open Space & multi-level structure
The spacious and open interior space provides a healthy environment for passengers. Bridges and the central sky tree give passengers a better view of the entire cabin, just like hiking to hills to oversee the view of the entire city. This structure inspired by the city also gives passengers a sense of competency. That is, they are capable and free to go anywhere they like in the plane just like they do in their daily life. They have freedom in choosing if they want to stay connected to others or they prefer to stay at their seat to enjoy themselves.

Surrounded by nature
The virtual and seamless screens are set on the inner wall of the airplane by spreading OLED paint on it. These screens provide a vivid view of outside scenery as well as the simulated blue sky. As a consequence, when passengers walk on the sides of the AirMEGA and when they raise their head towards the virtual sky, they feel immersed in nature instead of being trapped in a sealed cabin.

More intentional activities
According to the research of the most refreshing activity in the airplane with the relation to duration of the flight, "walking through the plane" was considered as most refreshing one in an over six hours flight (Meyenborg, 2013). AirMEGA provides passengers with versatile public space for social networking, discussing, shopping, walking and exercising. These activities not only satisfy the passengers' expectation of walking through the plane but also enable more possibilities for doing other activities.



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