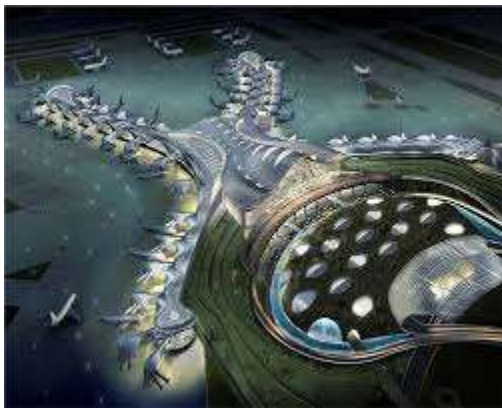


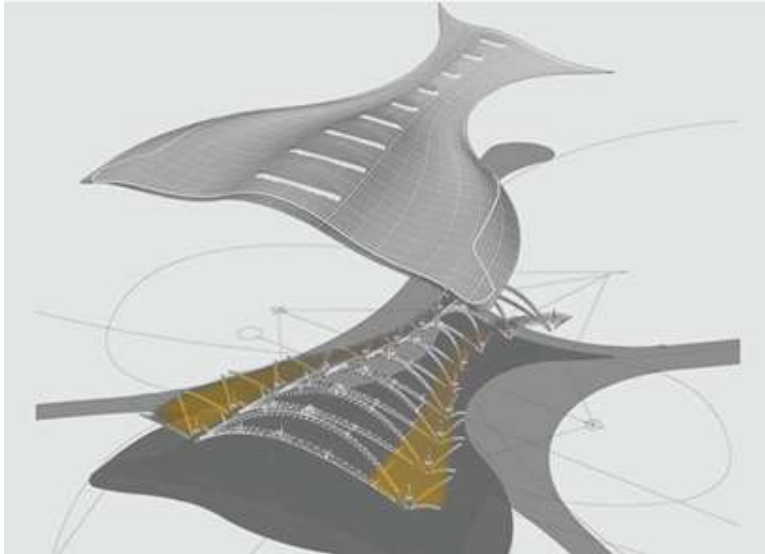
### **NEW ABU DHABI AIRPORT 2030.**

Dubai has long been positioned on the world map as an attractive destination for business and tourism. Abu Dhabi following the example of its neighbor in order to attract more people and to ensure further progress, has launched the project "Abu Dhabi 2030". The project involves the conversion of the desert into the so-called "Garden of the Gulf" by building several projects. The central point of the project is the construction of a new airport that will be able to receive 30 million passengers per year instead of the current 12 million passengers (Figure 1). For comparison Belgrade airport "Nikola Tesla" accepted between 3 and 4 million passengers. The expected cost of new Abu Dhabi airport is 10.8 billion dollars, compared to the project "Belgrade Waterfront", whose budget amounts to 3.5 billion dollars. Completion of the new airport in Abu Dhabi is planned for July 2017.



*Figure 1*

The new airport building is located between the existing runways and hence received the name Midfield Terminal Building - Central terminal. Planned area of 700.000m<sup>2</sup> is equal to the area of 85 football fields. The project envisages the use of modern materials that will have minimal impact on the environment such as curved glass façade that allows less heat and increased efficiency of the cooling system. The project was conducted with several environmental objectives including the use of vehicles powered by renewable energy sources that have low emissions, as well as landscaping for dry climate. A new rack (luggage) system with over 22 kilometer long transmission line is designed to receive 19,000 bags per hour. Transfer time for passengers travelling to other destinations will be reduced to maximum 45 minutes. The terminal is designed to minimize the walking time for the passengers and increase space for parking the aircraft. Canopy in the form of a cross with a corrugated roof that resembles the cave proved to be the best solution.



The structure comprises several basement floors above which rises the steel roof structure with ranges that allow a large open space. The wavy roof resembling a large fish consists of 10 main carriers of more than 300m in length, supported by 18 arches range up to 320m (figure 2). The main carriers are 40m apart with secondary carriers extending between them. The entire roof structure is covered with a curved glass façade coating.

*Figure 2*

At the time of writing the article installation of the roof structure was on-going, while the installation of arches completed (Figure 3 & 3a).



The structure will be built with 69,000 tons of steel, over 680,000m<sup>3</sup> of concrete and 500,000m<sup>2</sup> façade cladding.

In order to complete the project on time more than 18,000 workers are engaged in the process.

*Figure 3*

The main project was done by world renowned company ARUP, and the contract for the construction of steel structures was dedicated to the large Chinese company CSCEC. Part of this engineering team is the company **DNEC** from Belgrade.

**DNEC** is an international engineering consultancy founded in 2005 as a partnership between two experienced structural engineers with over 20 years of experience in the Middle East, working on unique and complex design and construction projects. Our engineers had a task to design all steel connections on the roof construction.

This is just one of many examples where the contribution of our project engineers to world renowned projects is respected and recognized. Even to an ordinary citizen it is very satisfying to know that they are part of the world elite and to participate in creating a masterpiece of construction. Belgrade Waterfront project just might be the opportunity to use their knowledge and experience gained in the world to improve our construction industry.



*Figure 3a*

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