

ШТЕНГЕ А.А., ст.гр. МЭД-07

Науч. руков.: Макеев А.Ю. проф., к.т.н.

ГВУЗ "Донецкий национальный технический университет"

г. Донецк

## **OPERATIONAL CORRECTIONS OF THE BUSINESS PLAN ON THE RECONSTRUCTION OF DONETSK REGIONAL AIRPORT**

*Приведено сравнение бизнес плана реконструкции коммунального предприятия «Международный аэропорт Донецк» 2005 года с проводимыми в данный момент работами. Проанализированы перспективы развития аэропорта. Сделаны выводы о важности оперативной корректировки бизнес планов для успешного завершения проекта.*

**A research urgency.** The question of the Donetsk regional airport reconstruction has been raised 10 years ago. In 2005 the detailed project has been elaborated but due to the lack of financing the work was started only in 2008. Because of the fact that Ukraine has won the opportunity to conduct EURO 2012 on its territory and as quarterfinals and semifinals will take place in Donetsk, the main part of the money needed for the reconstruction had been received from the state budget. It is of interest to compare the business plan that was worked out in 2005, current situation and further plans of reconstruction.

**A research objective:** The main purpose of this work is to confront the business plan that has been elaborated some years ago with the current situation at the building plot.

**A body.** A unique location of the Donetsk regional airport challenges it to be a catalyst in the development of the whole region. The airport is 8 km from Donetsk. It is situated in the centre of the biggest agglomeration in the country and it services very important industrial region of Ukraine. Availability and round-the-clock work of the airport provides an easy access to the region. In turn this raises attractiveness of the region.

More than 5 mln people live and work within a radius of 110 km from the airport. Considering a decay of the Lugansk international airport, service area could be expanded to the greater part of Lugansk region, some parts of Zaporozhje, Kharkov and Rostov regions.

The conditions of infrastructure, for example, driveways, have a great influence on a successful work of the airport. As of today the road connecting airport with the centre of the city has been repaired. Location of the routes P19 and M04 makes the airport available for residents of other cities and regions.

Airfield of the International Donetsk Airport is a complex of engineering structures including runway, taxiways and apron.

At the present time the runway is 2484 m long and 50 m wide with asphalt covering. The airfield is equipped with navigation system ILS. Infrastructure of

the airport allows to serve medium-sized aircrafts, such as TU-154, TU-134, YAK-42, IL-76, Boeing-737, Airbus A320 etc. Category of the airfield is 'B'. It is equipped with major taxiway, five branch taxiways and apron. The apron has an area of 165 thousands square meters and has 28 parking places for aircrafts. It is worth mentioning that the covering of the apron and runway is out of condition and need a capital repair.

For a ground maintenance of aircrafts and airport support one uses such special equipment as fuelers, deicing machines 'Tempest' and 'LMD', apron buses, passenger steps, lift track for the flight catering loading, mechanical snow plough 'Boschung', towing machine for aircrafts, fire trucks, etc.

The building of the air terminal was built in 70<sup>th</sup> (it had an area of 14 thousand square meters). Nowadays it doesn't meet modern standards and requirements. The airport capacity is 700 passengers per hour.

Investment project "Complex reconstruction, extension and technical equipment of the international airport Donetsk" has been elaborated in 2006. At the moment the reconstruction is on a full scale. But time has made it's allowances and the project was changed several times.

The project made in 2005 had stipulated that there would be built a new air terminal building with an area of 27 thousand square meters and capacity of 1000 passengers per hour (international flights — 600 passengers per hour and domestic — 400). At the moment as a result of the realization of the project it is expected to provide a capacity of the international airport Donetsk at the level of 3100 passengers per hour. Such capacity will meet the requirements of UEFA to the infrastructure of an airport.

New terminal will service 2500 passengers per hour, the existing terminal after reconstruction — 500 passengers per hour and VIP terminal will service 100 passengers. Also there is an arrangement with METRO cash & carry about probable organization of temporary terminal on their territory.

It was planned that an apron will have an area of 48 thousand square meters. Now it is expected to count for 51 thousand square meters.

It is worth mentioning that the project has been revised several times, but the new renders are rarely shown.

Also there will be built an indoor parking for 600 cars and outdoor parking for 1200 cars. New air terminal will be able to serve 6 air crafts simultaneously and will have a parking for 81 air crafts.

According to the project at the first stage it is planned to build an AR — artificial runway 4000 m long and 60 m width, which would be equipped in accordance with III category of ICAO from one course and with I category from another. Such parameters allow landing of any aircraft existing at the present moment. Construction of the artificial runway has been finished and it is ready to accommodate airplanes. Works as to offset of water- and gas- piping are coming to the end and one continues installation of a special equipment on the runway.

Very ambitiously looks a striving of the airport to accommodate airplanes of any type. In addition to providing with takeoff and landing one should ensure the corresponding service. For that the airport must have special equipment: fuelers, ice-removal machines, loaders, container transporters and so on. First of all it is necessary to prove from the economical point of view a size of airplanes, based on which, capacities of the airport would be calculated.

A construction of a new air-control tower 45 m height that is equal to 14-store building height is coming to the end. Such height is necessary to be able to overlook all new runway 4 km from the air-control tower

Under the preliminary plans the tower would be put into operation within a few days. This autumn contractor will start installation of special equipment supplied by Ukraeroruh.

While according to the business plan 2006 it was suggested that one should have 929,1 million UAH for realization of the investment project (table 1, chart 2):

- building of air-terminal complex and runway — 802,4 million UAH,
- reserve of goods and services costs increase — 76,7 million UAH,
- extra costs (insurance against risks, customs fees, bank expenses, etc.) — 50 million UAH.

Table 1 — Sources of funds of the IA Donetsk reconstruction project (subject to obtaining an IMF credit)

Sources of funds	Building of the air-terminal complex	Building of the runway	Total
Own funds	26,7	28,0	54,7
Budgetary financing	100,0	100,0	200,0
IMF credit	172,2	502,2	674,4
Total	298,9	630,2	929,1

According to the state target program on preparation for EURO 2012, the total cost of modernization of the Donetsk airport is 4,051 billion UAH, of which 3846 million UAH would be allocated from the state budget, 153,59 million UAH from the local budget and 50,5 million UAH would be investors' funds (chart 1).

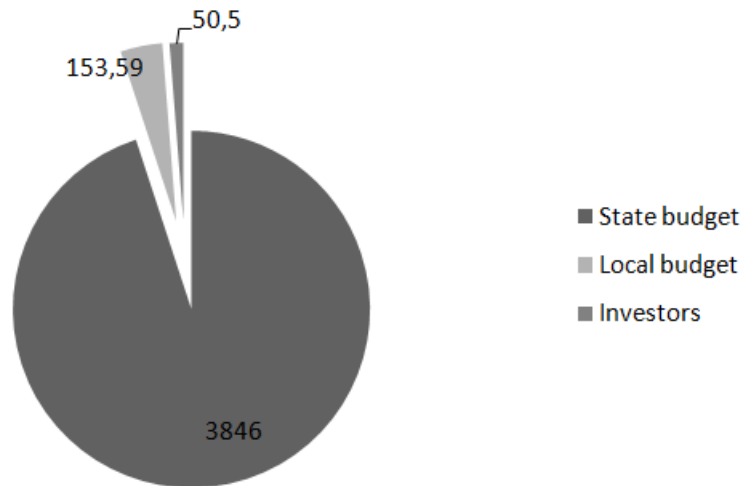


Chart 1 — Costs of the Donetsk airport modernization, million UAH

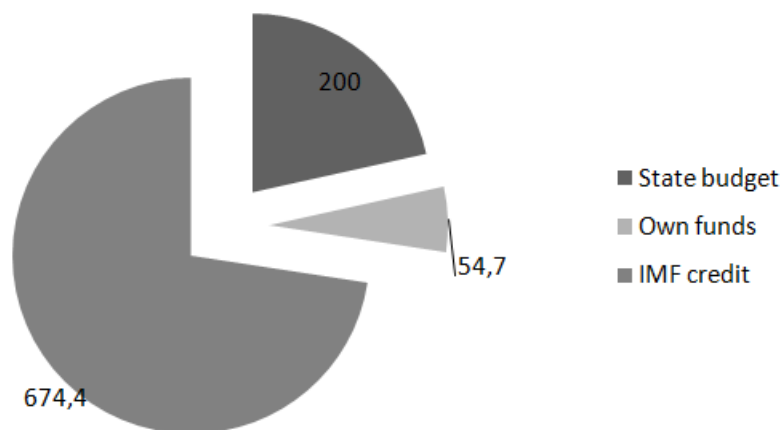


Chart 2 — sources of funds of the IA Donetsk reconstruction project, million UAH

The general contractor of runway building, airfield objects construction and building of a new terminal is OOO Altcom-Investstroy.

At the present moment roofing works are being finished at the construction site of the IA Donetsk. There has been done 90% of structural steel erection of the covering above the terminal building without considering an entrance roof overhang of the overpass. Also one continues front glass fixing and the frame of the building are almost completed. Preliminary works of parking building has been started. Contractor concretes foundation for steel constructions on which decks of parking overpass would be fixed. Moreover, one is preparing a construction of the overpass which attaches to the terminal building.

It is expected, that starting summer 2012 Alliance airlines will be ready to generate simultaneously connecting traffics by means of two Ukrainian hubs — central (Borispol, Kiev) and east (Donetsk). Transit potential of both docking stations will be reinforced by heavy reversible air traffic between them — up to 7 flights per day. At the same time Alliance airlines using experience of creating the connection waves in Borispol will help Donetsk airport with development of transit technologies.

Thus, according to the present project it is supposed to create the second big gateway airport in Ukraine with a possibility to service transfer passengers.

**The conclusion.** Summing up we can make a conclusion that efficient correction gives an opportunity to make changes in the reconstruction project according to the current situation and financial state in the way all objects to be finished in time. During last 6 years the initial business plan has been changed sufficiently: there has been required much more investments than it had been supposed to use. Nevertheless, at the present moment we may say for certain that all reconstruction objects would be ready till 2012.

### References

1. <http://altcom.ua/news?page=2>
2. Краткое описание инвестиционного проекта „Комплексная реконструкция, расширение и техническое оснащение КП «Международный аэропорт Донецк»
3. <http://airport.dn.ua/today.php>
4. <http://airport.dn.ua/develop.php>
5. [http://www.avianews.com/airlines/airport/donetsk\\_dok.htm](http://www.avianews.com/airlines/airport/donetsk_dok.htm)
6. [http://www.avianews.com/airlines/airport/euro2012\\_donetsk.htm](http://www.avianews.com/airlines/airport/euro2012_donetsk.htm)
7. <http://altcom.ua/news>
8. [http://2012ua.net/news/donechchina\\_vserjoz\\_rozgljadae\\_mozhlyvist\\_budivnictv\\_a\\_novogo\\_terminalu\\_aeroportu\\_v\\_supermarketi\\_metro/2010-05-17-5203](http://2012ua.net/news/donechchina_vserjoz_rozgljadae_mozhlyvist_budivnictv_a_novogo_terminalu_aeroportu_v_supermarketi_metro/2010-05-17-5203)
9. <http://www.skyscrapercity.com/showthread.php?s=0b665921494a565a1a32c42c5f44895e&t=741098>