

Another very important issue for ecological logistics is waste utilization and disposal because of the waste recycling problem in the developed countries due to a lack of widely available landfills.

Equally important for ecological enterprise logistics is the choice of the carrier and the safe cargo transportation, namely, carriage of hazardous materials. As chemical companies are most concerned with this issue, Dow Chemical takes into consideration environmental requirements in developing its supply chain policy.

Enterprises, organizations and companies which are willing to become leaders in eco-logistics, use the so-called eco-analysis of "product lifecycle". It identifies all possible environmental problems in the product. Of course, this approach requires certain efforts, but ultimately, provides the product environmental adaptation during its "life cycle". When designing the product most of the companies plan its reuse. By the way, packaging also has its own "environmental dimension". For example, corrugated cardboard is used more often, because it is easily disposed. Typical standard metal containers for reusable items serve as a "Kanban" (signal) for Just in time delivery to the buyer or supplier.

Consequently, environmental logistics study environmental issues in the field of transport and logistics services. It needs further development because the ecological state of companies' logistics systems and their supply chains have the greatest impact on the global ecosystem that involves many environmental logistics factors, e.g. harmful transport effect on the environment that constitutes 1/3 of all energy costs in the developed countries.

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A NEW ERA FOR AVIATION

The Charles Lindbergh's «Spirit of St. Louis», «Apollo 11», the Wright Brothers' aircraft, Chuck Yeager's «Bell X-1» – what do these names have in common? They are things, which made the 20th century incredible. But they are united by something else – taking much energy. And this is unacceptable, because we will have to save our natural resources in several decades.

Some scientists try to ensure the safe future for the next generation. But others, such as Bertrand Piccard, find a solution to the resource issue right now. Just think, being a psychiatrist by profession, in 1999 he completed a non-stopover flight all around the world in a balloon. He has proved that clean flights are possible at long-haul distances and his balloon Breitling Orbiter 3 presently stays in the Museum of Aviation next to other famous aircraft. But, considering the fact that the Bertrand Piccard's mission nearly ended in tragedy, the enthusiast of environmentally friendly technologies decided to choose «another way».

At that moment, he got the idea of the airplane with no fuel which can fly indefinitely. Six years later this idea was embodied in the aircraft Solar Impulse, the

official name of which is HB-SIB. To prove that this is not just a remote controlled model, Bertrand Piccard together with the Swiss pilot André Borschberg made round-the-world flight on the Solar Impulse 2. Pilots completed the mission their 2016 without any drop of fuel. And Solar Impulse 2 became the first device in history, which flew around the Earth on the sun energy.

Solar impulse works due to solar batteries which can charge during a day to fly all night and the next day again. But, as any invention, the plane has both advantages and disadvantages. Performance of its batteries is very high, but the plane is very sensitive to weather change. Solar Impulse can be in flight during many days and nights, but it has the low carrying capacity and relatively low speed. Solar Impulse 2 can carry only a person on board and speeds up only to 140 km / h that is the reason for the negative feedback from experts.

Researchers do not consider that Solar Impulse will transport more than 100 people in coming years, but at the same time it is essential for the future of aviation. After all, when Charles Lindbergh crossed the Atlantic there was enough power only for a man and some fuel. And in a couple of decades many crews flew across the Atlantic.

Engineers have shown that the time for transport of a new generation has come, particularly as there are other solar powered planes besides HB-SIB. For example, the British company QinetiQ has developed and built a drone Zephyr. It uses only the energy of the sun, as the Solar Impulse does. The British aircraft has already set a world record in flying without recharging among vehicles on clean energy.

Another "solar" airliner, Sunseeker Duo, was developed by the American company Solar Flight, which had previously built two other aircraft on solar energy. This device with a pilot and a passenger on board has flown across the Alps. When the plane landed, the battery was fully charged.

It is also worth mentioning the aircraft Hy-Bird, a project of the French company Lisa, which is planned to be used for a round-the-world trip. There are also other similar devices, less noticeable, but not less significant for the development of aviation.

The idea to fly using the power of nature not only encourages people, but opens new possibilities for the aviation. In the future airports can be built right in the centre of the city, because solar powered aircraft fly quietly and without air pollution.

Now Solar Impulse is more as a symbol, rather than a vehicle, because we still cannot abandon fossil energy sources. But it is certainly the thing, which makes the 21 century incredible.

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GLOBAL EXPERIENCE OF INTERACTION OF TRANSPORT ON THE BASIS OF AIRPORT COMPLEX

At the present stage, the ever-increasing demand for transport services, the need to implement a full supply chain "exactly in time" and "from door to door" requires the