



Tech Talk

Solar Impulse 2 ©

by Max Farrington and Pascal Grierson

Solar Impulse is the name given to a Swiss long-range experimental aircraft. As per its name, the plane is purely solar powered. This project is privately financed and led by the Swiss engineer and businessman André Borschberg with Swiss psychiatrist and aeronaut Bertrand Piccard. The latter is known to have co-piloted the first balloon to circumnavigate the earth.

Up to now there have been two planes; first, the Solar Impulse 1, a prototype which managed to stay in the sky for 26 straight hours, 9 of them during nighttime. But this was back in July 2010. 5 years later a newer aircraft, the Solar Impulse 2 was launched, which is the real model. Completed in 2014 it carries more solar cells and more powerful motors as well as other improvements.

Now to the plane itself. The aircraft is a single seat monoplane that is powered by photovoltaic cells and is capable of taking off and landing using solely the power it has stored. Its length is 22.4m, its wingspan is 71.9m and its height is 6.37m. The maximum speed recorded so far is 140km/h.

The goal of Solar Impulse 2 is to circumnavigate the earth, being the first solar-powered plane to do so. But it won't be the first solar powered *vehicle* to do so as the MS Turanor Planet Solar, a solar boat has already done so back in May 2012.

The Solar Impulse project started in November 2003 when the University of Lausanne in Switzerland, identified the feasibility of the project. By 2009 Bertrand Piccard managed to assemble a team of 50 engineers and technical specialists from 6 different countries! The project is widely financed by companies and individuals like Schindler, Omega but also Swiss Re, Altran and Toyota. Other companies have provided additional advice and technical expertise like Dassault and the European Space Agency.

On March the 9th 2015 the plane left Abu Dhabi in the United Arab Emirates for the first checkpoint of its circumnavigation: Muscat in Oman. The flight lasted 13 hours. As of today the plane has flown over the Indian Ocean, India, Burma, China, Japan and recently over the Pacific Ocean. It is now in Hawaii, where it will soon depart for Phoenix, In the United States.