



SOLAR IMPULSE: OR HOW TO THINK LIKE AN ALIEN TO INNOVATE

THE FIRST-EVER AROUND-THE-WORLD SOLAR FLIGHT GIVES AN EXAMPLE
OF HOW YOU CAN INNOVATE AT YOUR COMPANY

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Solar impulse, while it is currently grounded awaiting new batteries, has accomplished some astounding feats. But, the project is also a useful guide to understanding innovation at any organization.

Throughout history those who have achieved the “impossible” have used a similar formula for success. Solar Impulse co-pilots Bertrand Piccard, André Borschberg and their sun-fuelled ship are no exception.

To start innovating, learn to think like an A.L.I.E.N.

A for anthropology

The first rule of ALIEN thinking is to observe reality as an anthropologist would, to see problems and human beings as they are and not how we would like them to be. In his book “Changing Altitude”, Bertrand Piccard tells how he finally got authorization to fly over China when he co-piloted the first ever, non-stop around-the-world balloon trip in the Breitling Orbiter. During the first two failed attempts, the team asked for permission following the usual international law protocols. Beijing refused the requests. Not giving up, Piccard went to meet face-to-face with the Chinese authorities “to try to understand the problem and to find a solution together”. And it worked. They gave the Breitling Orbiter permission to fly over the north and south regions of the country, where their radars could keep track of the balloon. By discovering the problem was that, at the time, China only had radars along its borders and air routes, he was able to negotiate a solution.

L for lateral thinking

The second rule of ALIEN thinking is to think laterally and to combine ideas from previously unrelated fields. When Piccard and Borschberg were conceiving their idea for a plane which had a wingspan comparable to that of an A340, was as light as a small car, and could fly night and day only using solar power, aviation specialists said it was “impossible”. The two Solar Impulse pilots had to look outside of the existing knowledge of the aviation industry to find a way forward. As Piccard said “An innovation is not just coming up with a new idea, it is the shedding of an old ‘certainty’”. Solar Impulse was born from the partnership between Piccard, a psychologist and explorer, and Borschberg, an engineer and entrepreneur, both who had never built an airplane before. That allowed them to be open to other ideas and technologies as well as to function together like a battery that gives off energy thanks to its opposite poles with different strengths.

I for imagination

Up next is the third rule. You have to have imagination, to be able to picture another world, and dream about something different. For this, Bertrand Piccard was fortunate from childhood. He recalls “I was captivated hearing about my father’s adventures at the north and south poles, Mount Everest, in space, and in the deep sea”. At 11 years old in July 1969, Piccard decided what he wanted to do with his life. His father, Jacques Piccard, had just left in the first passenger submarine to study the Gulf Stream, and a couple of days later the crew of Apollo 11 landed on the moon.

E for experimentation

But dreams are not enough to fuel a solar plane. Ideas have to be tried and tested, sometimes for lengthy periods of time. This is the fourth rule. Acceptance of failure is necessary and so is the courage to get up and start again. For Piccard “Success comes from trying once more than the number of times you fail. But you have to try something different every time: another altitude or another method. That’s what makes the difference between doggedness and perseverance”. To drive the point home, Piccard gives the example of the balloon. “Pilots can’t change the strength or the direction of the wind; they are prisoners to those. But they can change altitude to find another layer of air in order to gain control”.

N for navigation

The fifth rule is to navigate, to take others along on your journey, to motivate them by sharing your vision and values so you can build a team that will achieve your goals. Despite the doubts of aviation experts, Bertrand Piccard managed to gather together 80 partner companies to bring Solar Impulse to life. It now has a team of 100 people, made up of 30 engineers, 25 technicians and 22 mission operators.

Think like an ALIEN

All of the A.L.I.E.N. rules were consciously applied during the creation of Solar Impulse.

And they have always been part of the recipe for big discoveries and innovation. Bertrand Piccard says “Often creativity and innovation don’t come from inside the system, because the system is too paralyzed by prejudices to invent something new. Car companies are not the ones who built the best electric car. It was a billionaire who made a fortune with the internet who created Tesla”.

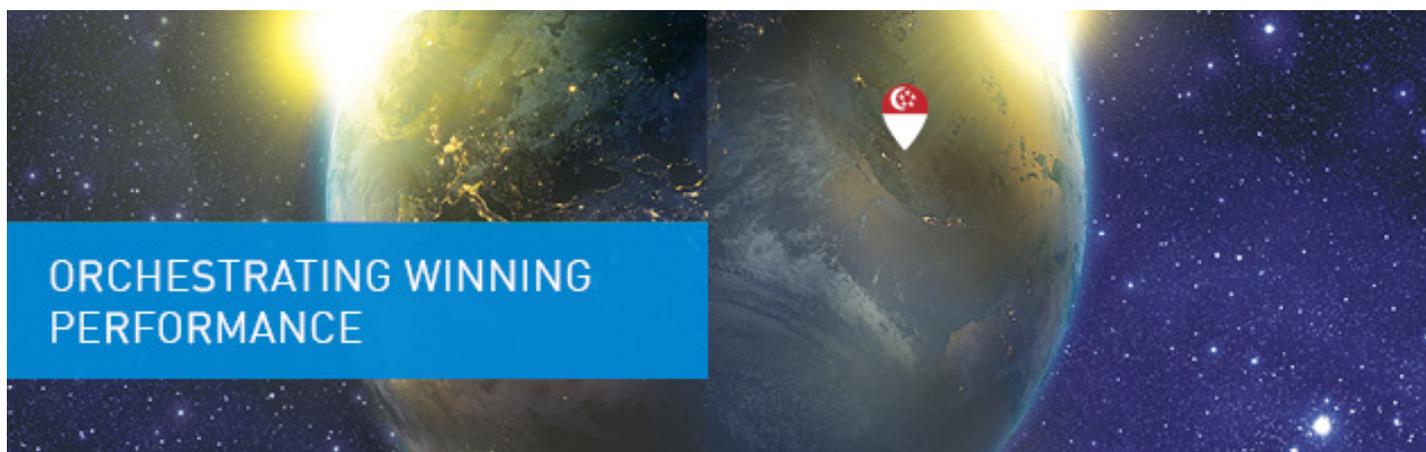
So, can you think like an ALIEN?

[Cyril Bouquet](#) is Professor of Strategy at IMD. His major interest is the interface between organizational psychology, strategy and leadership.

Bertrand Piccard and André Borschberg were [guest speakers at last year’s Lausanne session of Orchestrating Winning Performance \(OWP\)](#).

The next session of Orchestrating Winning Performance takes place in Singapore from November 16-20, 2015.

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