

## CASES/f. course "Knowledgebased Entrepreneurship"

### Introduction

LiTHIUM BALANCE A/S is a company, working to commercialize a charge management system for lithium ion batteries.

In 2006, the first important commercial milestone was achieved when the first pilot system was ordered by an American Customer.

Funded by a pre-seed investor, a prototype was developed and tested and the first business plan describing how to bring the technology to the market was completed. Founder Ivan Loncarevic and his board realized and agreed that the current team, i.e. founder and 1 employee-did not possess the competences and experiences required to take the business to the next level where professional and skilled management was a prerequisite for attracting further customers and setting up production.

In addition, it was clear that a product with a global and significant scalable potential would require several rounds of additional funding.

### Company Presentation:

*"Great performance has always come from good management"*

LiTHIUM BALANCE A/S is a Danish based innovative company. Our specialty is Battery Management Systems for Lithium Ion battery packs.

#### *Why Lithium Batteries ?*

Lithium Ion battery technology is making the jump from personal electronics where it dominates as the energy storage medium; to transport and industrial applications. Lithium Ion batteries outperform all other types of rechargeable battery technology by a considerable margin and are currently the focus of intensive development all over the world to further improve on the already comparatively impressive performance. We firmly believe that Lithium Ion technology has a crucial part to play in the migration away from fossil fuels and non renewable energy sources in transport, industry and the home. Our goal is to promote real change by providing the enabling technologies and expertise necessary for industry to adopt Lithium Ion battery solutions - replacing environmentally harmful and energy inefficient lead-acid and NiCd battery technologies.

#### *Why Battery Management ?*

Battery Management is an essential enabling technology for the development of Lithium Ion powered industrial and transport solutions. Lithium Ion battery packs require management to ensure safety, performance and reliability. Our Battery Management Systems are unique in the

market among other things because of our very effective and proprietary cell balancing functionality, which increases the capacity of the Lithium battery in use.

### *Why LITHIUM BALANCE ?*

We have a range of multi-voltage Battery Management Systems, based on two platforms that can be used for a wide range of applications, such as electric vehicles for disabled persons, scooters, motorcycles, cars and trucks, industrial machines, boats and camping vehicles and UPS systems. Our off the shelf battery management solutions are easily tailored to specific customer needs making the adoption of Lithium Ion technologies easy and cost effective.

### **Background:**

Lithium Balance A/S (originally Eco Tech A/S) was founded in 2006 by physicist Ivan Loncarevic with the specific purpose of developing the first really effective Battery Management System (BMS) for Lithium Ion batteries.

The vision of the founder was to perfect effective, battery management solutions, making them available off-the-shelf at a reasonable price, giving industry a fast route to practical Lithium-Ion battery, powered solutions. With such a technology the founder wanted to take part in reducing some of the world's environmental problems by facilitating more CO<sub>2</sub> friendly means of transportation than the traditional petrol driven vehicles.

The first breakthrough was achieved in September 2006 when the first prototype was tested successfully in an electric scooter. With Lithium batteries and our BMS it was possible to drive 157 km on a single charge, compared to only 40 km with the standard lead-acid battery pack. As a result of the development efforts the 12-48V BMS range was released for sales in July 2007 and a 72V version was released in October 2007.

Development of a scalable BMS platform for electric cars and other high voltages applications began early 2008. The first prototypes were successfully implemented in two electric cars developed by Lotus Engineering for Proton Cars of Malaysia in February 2009, and the platform was released for production and sales mid 2009.

### **The Challenge, the process and the conclusion:**

A discussion was initiated in the board to identify options for professionalizing company management. The concern was first and foremost *how to attract* the ideal "high-profile" manager – being a very young company and a very small organization.

The ideal candidate should have extensive management and sales/marketing experience from a company with a very technical platform as well as an international representation. In addition, the candidate should have solid leadership experience and skills

What would it take to convince the right candidate, given the constraints:

- Small organization with only 2 employees
- High-risk profile
- No customer base
- Several funding rounds needed to develop a sustainable business
- Founder/owner based company

And, what is the profile? The company has a very technical profile. Managing it requires a certain technical understanding on top of strong commercial skills

What are the key challenges and tasks for the Company the next 3-5 years?

- Proof of concept (the first customer)
- Ensure sufficient funding
- Build the organization

A candidate was identified and he asked the following questions to himself and the company as well as his considerations:

- Even though I have an ambition to work in a small company – is this “too” small for me and my competences?
- A 50% salary reduction would also be required – what kind of incentives would compensate for that? Will I be able to obtain co-ownership?
- Not knowing the industry segment – is this the right product – is there a market and a significant potential?
- Are the “ingredients” to create value through commercialization and growth present?