

Expertise: Digital Solutions, Sustainability, Product Development

Industries: Energy, Renewable Energy, Industrial Manufacturing

LED lighting revolutionises greenhouse cultivation

Overview of the partnership

Partners:	A Swedish LED lighting company and Consat Engineering.
Objective:	A cost-effective and innovative lighting solution for greenhouse cultivation with scalability potential.

A Swedish company specialising in LED lighting for greenhouse cultivation faced new challenges and chose to collaborate with Consat to take the next step. Together, they developed a solution that not only met their needs but also paved the way for future innovations.

Challenge

The company faced challenges in product development, project management, and industrialisation. They needed to improve the entire development process, from mechanics to electronics and software.

Solution

Consat developed products that enable customised lighting for different plant types, improving cultivation efficiency and reducing energy costs.

The Swedish company has specialised in advanced LED lighting for greenhouse cultivation. To tackle new challenges and drive growth, they decided to partner with Consat. The result was not only innovative and groundbreaking but also a testament to what a successful partnership can achieve.

A pragmatic partner

The company and Consat have jointly developed a technical innovation with the potential to transform the greenhouse cultivation industry. By combining the company's knowledge of plants and light with Consat's technical expertise, they created a solution that is flexible, cost-effective, and innovative. This partnership highlights how close collaboration between companies can generate synergies and outstanding results.

The company currently has around 15 employees, complemented by anywhere from two to eight Consat engineers, depending on project requirements.

The challenge

The company faced several challenges when developing and improving its products. They needed to resolve complex development projects, enhance project management, product development, and industrialisation, and refine the entire product – from mechanics to electronics and software.

The solution

The company turned to Consat to develop solutions and improve its entire development process. Consat's broad expertise and extensive experience in project management proved to be a valuable asset. The company ultimately decided to close its in-house development department and outsource everything to Consat.



Key outcomes

- The company can precisely control light, directly impacting plant growth and quality.
- Products are adaptable for different plants and cultivation conditions.
- The project has increased cultivation efficiency, improved quality, and reduced energy costs.

Summering

- The company needed to enhance product development, project management, and industrialisation.
- Consat developed a flexible and cost-effective lighting solution.
- The lighting can be adjusted for different plants and growing conditions, increasing efficiency.
- A wireless control system simplifies light adjustments and ensures reliability.

The result

The company's strength lies in its ability to precisely control light. By using LED lighting, they can influence plant growth and quality by adjusting light levels and wavelengths – an essential factor for optimising cultivation and achieving the best possible results.

Products that allow customers to customise lighting for different plants and growing conditions enhance both cultivation efficiency and quality while reducing energy costs. This innovation is particularly valuable for growers of light-intensive crops.

Value-driven innovations

Consat's development team has designed a wireless system to control lighting fixtures in large greenhouses. Reliable radio modules in each LED fixture create a network controlled by a computer. Additionally, growers can use a simple app to adjust light levels and wavelengths throughout the day and plant cycle, clearly visualising efficiency improvements compared to traditional HPS lamps.

Contact us

Are you interested in exploring how Consat Engineering can support your organisation with value-driven innovation? Contact us today for more information or a demo.