

The Philips logo is displayed in white capital letters on a blue rectangular background.

Horticulture LED

Case Study GrowWise  
Research Center  
Eindhoven, the Netherlands

A man in a dark blue long-sleeved shirt and jeans stands in a large indoor grow room filled with tomato plants. He is smiling and holding a small cluster of red tomatoes in his hands. The room is illuminated with bright, pinkish-purple light from overhead fixtures.

# Creating a recipe for growth for indoor farming

## The challenge

At the Philips GrowWise Center we focus on making indoor farming successful. Founded in 2015 to prove the concept of indoor farming, GrowWise has grown into a research power house since then. We aim to develop not only optimal light recipes for leafy greens, herbs and soft fruits, but also develop complete growth recipes. These growth recipes go beyond lighting and include other factors, such as irrigation and climate. We aim to offer thorough quantitative and qualitative growth results and reflect them towards an optimal business potential.

Together with the expertise of our horticulture partners, these growth results from our repeated trials should serve as a means to develop a business case that helps entrepreneurs and pioneers in the field generate a positive return on their investment.



At GrowWise, we look beyond the light to make informed decisions for the optimal business case.”

**Jarno Mooren**, plant specialist indoor farming at Signify

## The solution

The GrowWise Center is the culmination of Signify's experience in state-of-the-art lighting, more than 80 years of experience in horticulture lighting applications, including the creation of over 150 specific growth recipes, and knowledge gained from more than 1000 extensive LED horticultural lighting projects since 2008.

## Key benefits

- Grow plants faster, better, reliably and in a more sustainable way
- Comprehensive growth advice for the best possible business case
- Optimal lighting solutions to be integrated seamlessly into a climate computer







Our ultimate goal is to help customers realize an indoor farm that meets their business goals and brings a good return on their investment. In our facility, we are working on solutions for a diversity of crops, for diverse applications, to grow fast and in a more sustainable way. We ensure that our customers have access to the latest developments to improve their business further with our most recent findings. Our GrowWise Control System enables growers to plan and automate light recipes up to one year ahead and to control the grow lighting through their climate computer or greenhouse management system. The system is specifically designed for growers to easily create and run custom light recipes that can seamlessly be integrated into climate control or climate management systems.

### Benefits

By applying different growth recipes, it is possible to influence yield, plant morphology, nutritional content, flowering, root development and germination. Over the years we have also learned how to enhance taste, minerals and vitamin levels and how to increase coloration. In indoor farming you can grow consistent, high quality crops that are free of pests and pesticides. Crops can be grown locally, thereby resulting in a fresher, tastier product that can command a premium price.

We work closely with our customers looking at all aspects of their business case. Whatever a grower's needs are, we can translate that into a dedicated recipe for growth. To achieve this, our team of plant specialists, application engineers and key account managers, together with our horti partners, look at the most important design aspects to come up with a farm set-up that can operate for years and generate a healthy profit.



“By combining the latest technology, business insights and plant expertise, we can help growers make their business successful and future-proof.”

**Ellis Janssen**, director of indoor farming at Signify

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