





**Unless something changes, there will come a time when we won't be able to grow enough food to feed the world. Codema wants to transform the way farming works. Growing sustainably by benefiting people, profits and planet.**

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WE DELIVER  
ESSENTIAL  
CUSTOM-MADE  
HORTICULTURE  
SOLUTIONS.  
HERE IS  
WHY WE DO  
WHAT WE DO  
SO INTENSIVELY.



**BECAUSE**

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# **YOUR WORLD IS OUR WORLD.**

**Codema believes in its ability to create a healthier and more sustainable world for future generations. This is what drives us. We develop essential, custom-made horticulture solutions. Every single day. Because your world is our world.**

A stylized, handwritten signature in blue ink, consisting of a large loop and a long horizontal stroke.

Gideon de Jager  
CCO Codema Group

HOW DO WE DO THIS?

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# BY BEING UNDERSTANDING AND RELIABLE.



By empathizing with our partners, who will be using our solutions for decades, we can really understand them. Through co-creating, and working according to our methodology “design-develop-deliver”, we share our horticultural knowledge and skills. This is how we can innovate and deliver sustainable products and services. According to our clients, we are understanding and reliable.

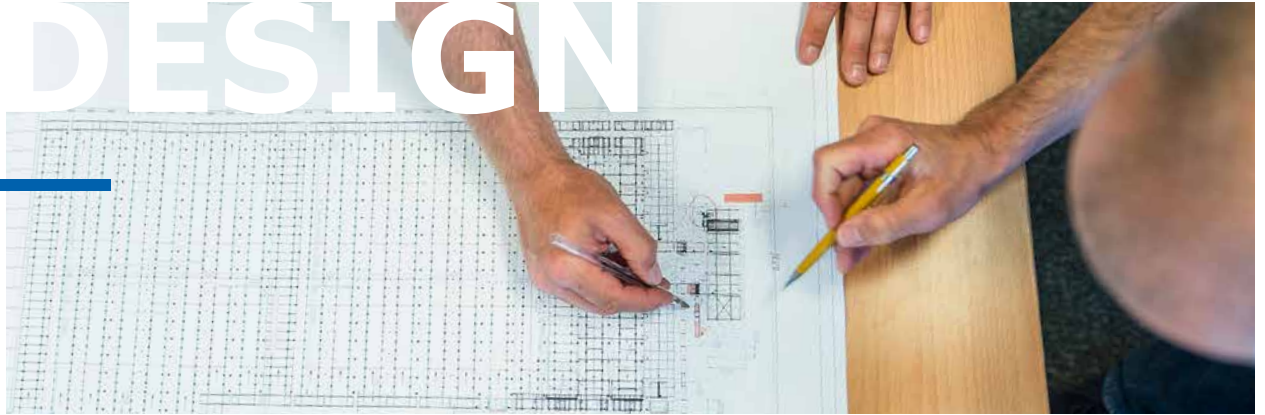




01



# DESIGN



02



# DEVELOP



03



# DELIVER



**"Codema aims to help reduce the high operating costs that result from the inherent volatility of water supply, energy prices and labour. Our growing systems, while beneficial for the planet and for your business, also produce healthier and better-tasting crops"**

Gideon de Jager  
CCO Codema Group



**WHAT DO WE DO? WE BRING YOU:**

# **HIGHER OPERATION EFFICIENCY.**

**By building essential, custom-made horticulture solutions, we can solve most of your issues. We can increase your operating efficiency by applying our extensive experience in the six essential disciplines: Water Management, Climate Control, Engineering & Construction, Cultivation Systems, Power & Lighting, and Software & Web Solutions.**







## THE SIX ESSENTIAL DISCIPLINES:

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**Water  
Management**



**Climate  
Control**



**Engineering  
& Construction**



**Cultivation  
Systems**



**Power &  
Lighting**



**Software &  
Web Solutions**



# WATER MANAGEMENT

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Since its establishment, Codema has built a strong reputation for its unmatched ability to design, engineer and install irrigation systems. The company has emerged as a leading supplier of customized irrigation systems for growers in both domestic and international markets.

Codema's irrigation solutions have not only enabled growers to dramatically increase the quantity and quality of their crops, but they have also been instrumental in saving water, energy, and in reducing overall operational and labour costs. In short, Codema's irrigation solutions offer growers value for money. Codema has been designing customized irrigation systems for growing potted plants, cut flowers, vegetables, leafy greens, young plants and seedlings etc., for both greenhouse and open-field cultivation.

## CODEMA WATER MANAGEMENT SOLUTIONS:

- Water Storage Tanks
- NFT Systems
- Ebb-Flood Systems
- Drain Water Treatment
- Fertilizer Dosing Units
- Drip Irrigation Systems
- Fogging Systems
- Overhead Sprinkler Systems











**The greenhouse climate has an immense influence on the condition of your crops. Air temperature, humidity, CO<sub>2</sub> content and the timing of growing lights must be properly controlled to grow a healthy and bountiful crop. By properly regulating your greenhouse's climate, you reduce the chance of diseases and you ensure the quality of your production.**

But it doesn't stop there. Codema combines six essential disciplines to make the right steps towards increasing production efficiency. With extensive possibilities with regard to data analyses you will be able to get the necessary insight to know exactly what is going on in your production facility. Codema believes that nothing is impossible. We offer a wide range of technologies and customized solutions to address the needs of the horticultural industry for professional climate control.

# CLIMATE CONTROL

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## CODEMA CLIMATE CONTROL SOLUTIONS:

- Irrigation & Greenhouse Process Computer
- Management Information System
- Air Circulation & Ventilators
- Sensors
- Online Data Comparison Platform





# ENGINEERING & CONSTRUCTION

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**Codema starts each project with a well-thought-out design. This is inseparable from the development, engineering and construction of our custom-made horticulture solutions. Our engineers are professionally educated to make your demands come to life. Together with their colleagues, they build rock-solid parts of big solutions.**

Every detail first becomes visible in 3D-animations. The next step in this process is the development and fine-tuning of our custom-made horticulture solution. When the modelling and testing is done, our field team begins the construction of your solution at your facility. Every detail is recorded in the project file which is used for maintenance and any desired adjustments in the future. In this way our design-develop-deliver method is an on-going model.

## ENGINEERING & CONSTRUCTION SERVICES:

- 3D Modelling
- Equipment Construction
- On-site Construction Team
- Testing Facility











**Cultivation is the core of your operation. Codema designs, develops and delivers cultivation systems for the growers of today and tomorrow. We offer solutions for substrate cultivation, hydroponics, benching, movable gutters, multi-layer and even fully robotic systems. Each product can be used individually or installed as part of a connected system layout.**

Logistics are extremely important for increasing production, cost savings, improvement of working conditions and the quality perception of your crops. Codema integrates the three essential components of an operating system; hardware, electricity and software. The operating system provides fast and clear insight into the total nursery cultivation process.

It enables you to anticipate cultivation, processing, purchasing, sales and market developments, flexibly and efficiently.

# CULTIVATION SYSTEMS

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## CODEMA CULTIVATION SOLUTIONS:

- Substrate Cultivation
- Hydroponic Cultivation
- Benching & Container Cultivation
- Multi-layer Cultivation
- Logistics & Automation Systems



# POWER & LIGHTING

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**Greenhouse operations are heavily and increasingly dependent on electrical appliances and electronics, which demand a reliable power supply. Any brief or extended power failure can have a major impact on the crop.**

## **Lighting**

Light, when combined with CO<sub>2</sub>, provides food for plants. The process in which light is converted into growth is called photosynthesis. Without light no plant growth is possible. Successful growing light starts with a carefully considered lighting plan that is custom-made to suit your specific business situation. A lighting plan calculates the best possible coordination of fixtures, reflectors, patterns and distances between the lights and plants. This requires a thorough analysis of various factors, such as the desired light level, the light distribution, the most effective lighting height, the greenhouse structure, irrigation, screening and heating.

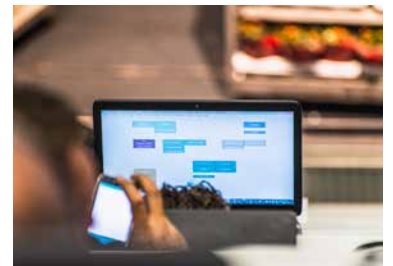
Codema provides reliable electrical systems for your business. Electrical engineering is an important link in the operation of greenhouse cultivation. For that reason, Codema has a separate Electrical Engineering division, where enthusiastic engineers design, develop and deliver each project down to the smallest detail.

## **CODEMA POWER & LIGHTING SOLUTIONS:**

- Light Technology for vegetables
- Light Technology for cut flowers
- Light Technology for potted plants
- Light Technology for nurseries
- Light Technology for breeding
- Light Technology vertical farming







**Data is the key to anticipating changes in cultivation, processing, purchasing, sales and the market. Furthermore, it allows you to flexibly respond to these changes.**

We have developed an integrated ERP and WMS system specially designed for the horticultural industry.

We offer state-of-the-art Vision Systems, which are specifically developed to grade and sort all kinds of crops. With over 30 years of experience exclusively in horticulture, we know what's going on.

Sales and order processing are key factors of the success of any business. Many hundreds of large and smaller nurseries use our ordering software, which has been specially developed for the horticultural industry. The software makes it possible to plan your resources better and organize your operations in a proactive way.

It will also give you precise information about your future product availability. The software packages put you in total control of crop production and all your costs, including labour-, space-, water-, nutrients- and energy costs.

# SOFTWARE & WEB SOLUTIONS

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## CODEMA SOFTWARE & WEBSOLUTIONS:

- Codema ERP / WMS (Management Info Systems)
- Codema Profice (Logistics Control)
- Codema Logice (Whole Sales Solution)
- Codema Vision Systems (Grading and Sorting)
- Codema Webshop (Online Sales)
- Codema Virtual Marketplaces (Online Management)
- Datawarehouse



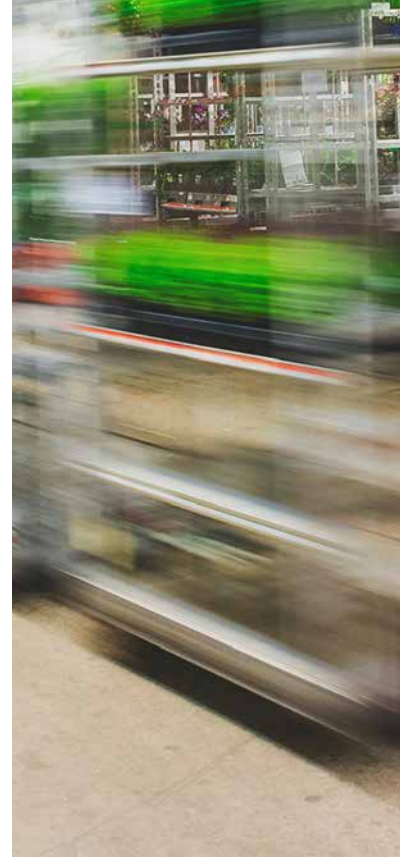
OUR SERVICE:

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# AFTERSALES AND SPARE PARTS FOR MINIMUM DOWNTIME.

**Codema supports you throughout the service life of the installation or machinery, whatever its level of complexity. This is the most perfect expression of what partnership includes.**

Our local teams in the Netherlands, Belgium and Germany are available seven days a week to take immediate actions on your installation in the event of equipment failure. This enables you to continue working with limited downtime. A primary diagnosis is ensured by a technical support helpdesk 24/7.



## MAINTENANCE

Our goal is to ensure the reliability of your installation. We strongly recommend that you consider a regular maintenance contract for your installations. Whether or not you have a contract, our technicians carry out required controls and adjustments on your installations on a regular basis and replace any worn parts. We also take a proactive approach to upgrading your installations according to your use and needs.





**TO KEEP YOU GOING WE MUST  
ENSURE THAT OUR SOLUTIONS  
ARE LONG LASTING...**

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# **OUR QUALITY STANDARDS.**

**Codema is an experienced and professional partner when it comes to the production and delivery of long-lasting and custom-made horti-solutions. To ensure that we remain the market leader, we work according to the world's highest standards for horti-solution development and production.**

Our commitment to quality is at the heart of all that we undertake. This commitment is evident not only in the development and manufacture of our products, but also in our systems, our assistance, our delivery services and our after-sales service as well as in our quick response to your requests.

When we work alongside you, we share our knowledge and expertise to facilitate increasing the production output and enhancing the performance of your system or equipment. Discover how our passion for quality and the skills of our specialists can result in better products, greater satisfaction with your production system and reduced costs.



# BIG ISSUES AHEAD.

GROWING SUSTAINABLY  
BY BENEFITING PEOPLE,  
PROFITS AND PLANET



## FOR YOUR AND OUR (GRAND)CHILDREN

### FEWER “FOOD MILES” THINGS WILL CHANGE RAPIDLY

Today’s fresh food supply chains often stretch across entire continents and oceans. Because of our contribution to growing and water-management systems, we can overcome local water and energy constraints. Codema believes in its ability to grow closer to end-consumers, reducing food miles and delivering fresher produce.



### ISSUE AHEAD: FRESH WATER GROWING DEMAND VS GLOBAL SCARCITY

People will live longer and populations will continue to grow exponentially. This will lead to an increasing demand for fresh water. On the other hand, we have to face climate change, the vanishing of freshwater lakes and prolonged droughts. We must overcome these challenges by applying sustainable solutions.



### ISSUE AHEAD: INNOVATION THINK DIFFERENT, CULTIVATE DIFFERENT

Due to the fast-growing world population, more food has to be produced in a way that is more sustainable and more efficient. Codema is fully aware of this paradigm. Innovation, sharing knowledge and worldwide intensive cooperation is the best way to do this.



# OUR ANSWER.

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## BACKGROUND

The world is facing a stark future: by 2050, unsustainable farming practices will cut arable land per person in half. Over the same period, the world will see a 50% increase in food demand. With climate change increasing the frequency of severe weather events, water scarcity becoming more acute in arid regions, the continuing degradation of arable land, and the rising market demand for quality vegetable produce, the market for protected horticulture (i.e. greenhouses) has tripled in the past 15 years. Unless something changes, there will come a time when we won't be able to grow enough food to feed the world.

## CONSERVATION OF FRESHWATER RESOURCES



By producing rather than consuming freshwater within its growing systems, Codema believes in reducing agriculture's reliance on finite ground- and surface water reserves.

## EFFICIENT USE OF MARGINAL LAND



Codema enables the transformation of land normally deemed unsuitable for agriculture or horticulture into a hub of concentrated production that will yield more produce per hectare than conventional field production.



## REIMAGINING AGRICULTURE

Codema wants to transform the way farming works. If 20th century farming was about rapid expansion to meet demand, the 21st century has to be about sustainable expansion to conserve resources. Codema believes that its growers should be able to grow delicious, sustainable vegetables without the need to draw on fresh water supplies or cultivate farmland.

## NATURALLY DELICIOUS PRODUCE



Our growing systems, while beneficial for the planet and for your business, also produce healthier and better tasting crops. The fruits and vegetables you will grow are rich in vitamins, minerals and fibre, and low in fat and sodium.





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**ONE VISION. ONE BRAND.**

Since 1958 Codema has provided essential custom-made horticulture solutions. Over the last couple of decades, our holding entities have built up an excellent reputation worldwide. They intensively work together under the **CODEMA** brand.

