



# Powering Success & Profitability

Through Next Generation  
Vertical Farming



# Crop production needs to evolve.

As the world's population grows there are more mouths to feed than ever before, and in different places.



With a growing demand for fertile land, coupled with the pressure of food security and increasing water scarcity, we need smarter methods of crop production, that compete on price without compromising on quality.



We must, can,  
and will do better.



A top-down view of numerous fresh spinach leaves scattered across a plain white surface. The leaves are vibrant green and have a slightly crinkled texture. A dark red rectangular box is centered in the image, containing white text.

Welcome to the  
vertical future.



vertical  
future



[verticalfuture.com](http://verticalfuture.com)



The vertical farming sector has seen massive growth and capital influx over the past decade, but there's also been a lot of hype and lack of delivery. It's time for us to take things seriously.

We've been here since 2016 and look at things differently. Our innovative technologies combined with unparalleled plant science and commercial expertise provide our clients with the power to take the next step in vertical farming, unlocking profit and scaling efficiently.

With more than 90% of our technologies designed in-house, a dedicated team working across software engineering, plant science, and engineering, and a successful project and research portfolio to call upon, we are uniquely positioned in a market that is primed for growth. Our turnkey, automated, vertical farming systems are also powered by our own sophisticated software; and we are ready to deploy on a global scale.

Our future is looking up.



# Integrated growing system technologies.

A vertical farm is only as good as its growing system and the data that feeds it. We've figured out the right formula.



Proven.  
Reliable.  
Viable.

Our technology is developed with unique insights, born from our years of experience growing, marketing, selling and distributing vertically farmed produce to hundreds of restaurants and thousands of homes across the UK. It's these insights that have enabled us to develop a system that's both effective and scalable.



Fully-automated from seed to harvest, including germination stage



5-channel energy-and-heat-efficient LEDs, offering millions of light combinations



Dual aeroponic and hydroponic irrigation systems, tailored to the needs of each crop



Robotic management of all growing and ancillary areas, minimising human input



Use of high-grade stainless steel throughout the system, with a longer asset-life



Controlled and monitored by DIANA, VF's proprietary SaaS product

# Services

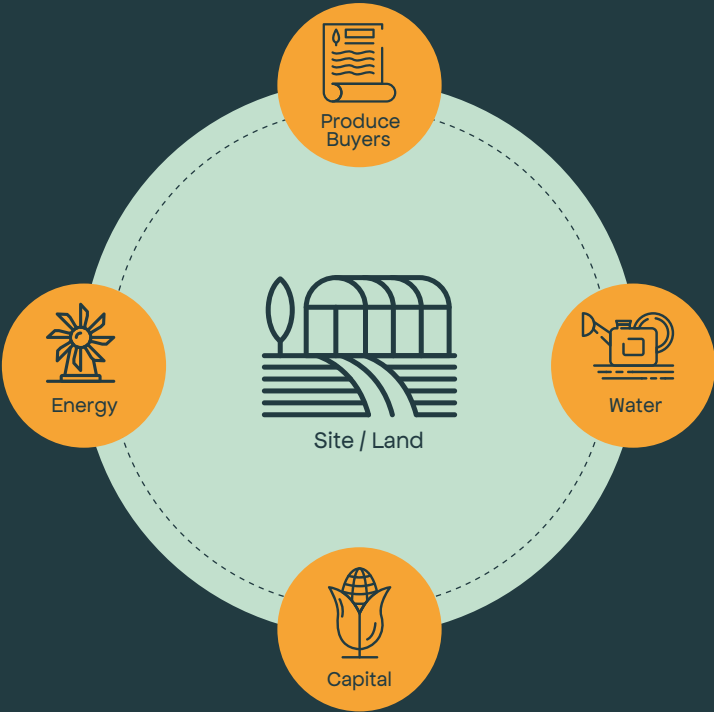
## Core Services

- Building of the vertical farm on a full, turnkey basis, with all works excluding provision of the building and utilities infrastructure under VF's remit.
- Continuous supply of data services, automation scripts, and core plant algorithms through our SaaS offering, DIANA, once the farm is operational. This is provided through a SaaS contract with relevant service provisions.

## Optional Services

- Minority equity investment, part-leasing, and/or extended payment terms to support you with getting your project underway. For international projects of suitable size, this may include support from UK Export Finance.
- For projects of a suitable size and location, operating of the vertical farm under an Operating and Maintenance (O&M) contract with relevant service provisions, including performance guarantees.

## 5 Key Deal Components Required for a VF Farm



## Indicative Project IRR (unlevered, based on 10-yr exit) – Blend of Leafy Greens, Herbs, & Soft Fruits

Net m2 of Growing Space	MENA	North America	Southeast Asia	UK	Mainland Europe
< 5,000 m2	13 – 20%	10 – 20%	12 – 22%	11 – 22%	13 – 18%
5,000 m2 – 10,000 m2	16 – 24%	15 – 24%	13 – 24%	13 – 23%	14 – 20%
10,000 m2 – 20,000 m2	18 – 29%	17 – 25%	15 – 26%	15 – 24%	16 – 25%
20,000 m2 – 50,000 m2	20 – 35%	18 – 28%	16 – 32%	16 – 26%	19 – 27%
> 50,000 m2	>35%	>30%	>32%	>26%	>27%

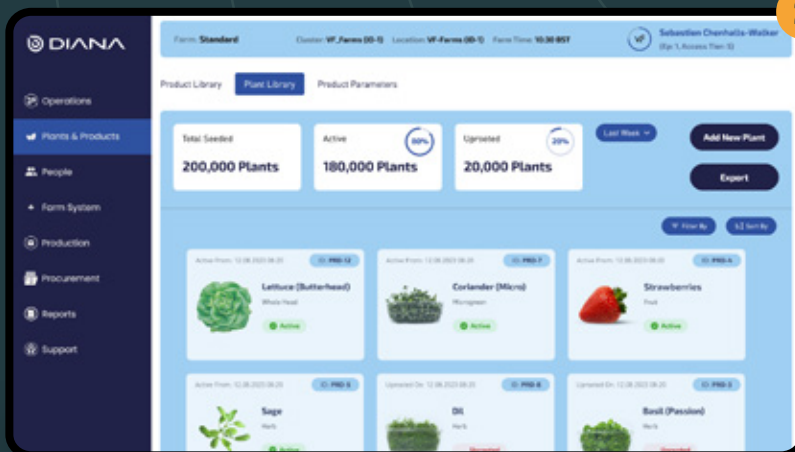
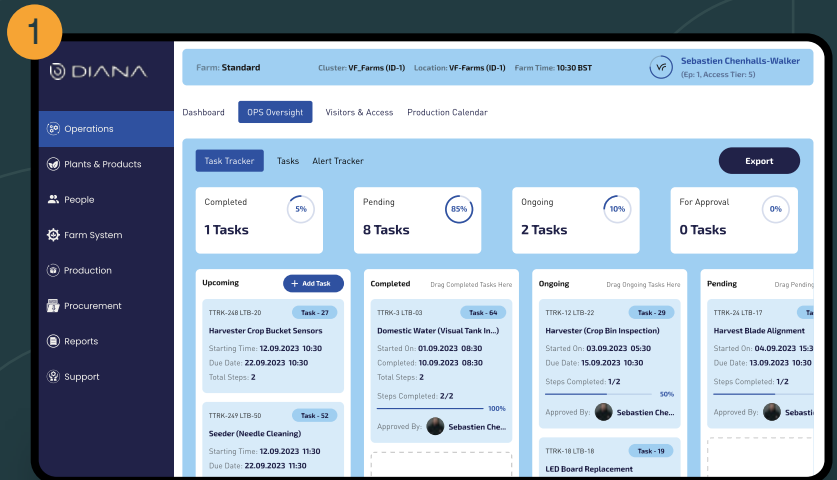
Assumptions: IRR ranges are based on different sales prices and product mixes, with the lower end indicative of price parity in most cases. Energy prices are based on 2023 average and are assumed to be from green sources, with long-term Power Purchase Agreements. All examples are based on ‘standard’ retail products and do not represent indicative returns for VF farms where other product types are grown and/or models implemented. All returns are unlevered.



Our SaaS solution that's pushing the boundaries of data and innovation.

## Operational Oversight

Looking beyond what's growing in your farm and how, the operational oversight tool increases the productivity and operational efficiency of your business overall. Understanding important aspects such as staffing, key tasks (at a system and staff level), and being able to communicate these across the team lead to better overall performance.



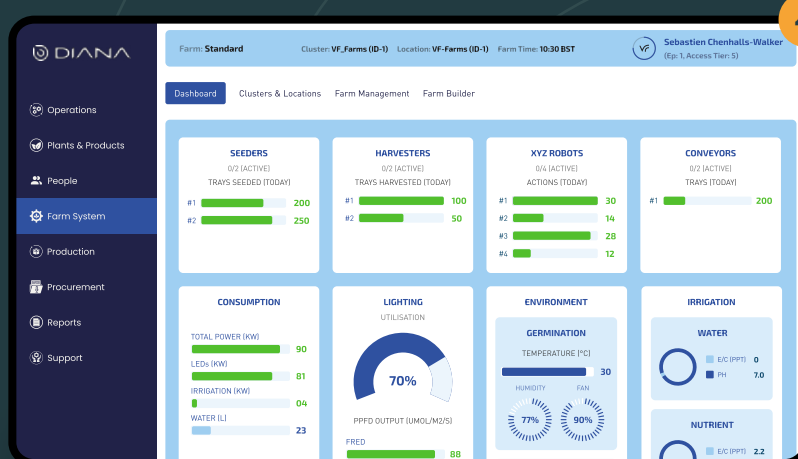
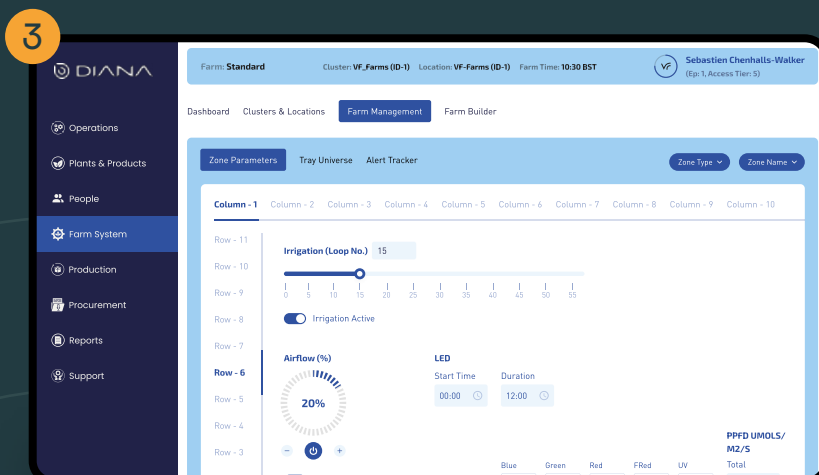
## The Product Library

Leverage VF's growing recipes and know-how across a wide range of product types and growing parameters, as well as building your own product profiles. Our team has spent years developing 'baseline' recipes and these data (which improve over time) are provided to you.



# Granular Control Over Every Metric

Develop, input, and monitor your own unique growing algorithms, leveraging the unmatched level of flexibility across VF's growing systems. Lighting recipes, airflow speed, nutrient composition, irrigation frequency, and photoperiods can all be applied at a very granular level – constantly tailoring the system to the needs of each crop you grow.



## Farm System Dashboard

Bringing it all together, is the farm system dashboard, which provides consistent (remote and on-site) understanding of what's happening across your farm, 365 days per year. This includes power consumption, space allocation, seeding frequency, environmental metrics, robotic movements, and other metrics relating to predictive maintenance and output.

# Production Calendar

Space optimization is everything in vertical farming systems. The production calendar ensures that your farm is at maximum utilization and output, making use of every inch of space in the production environment. This is particularly important when growing multiple crop types with different profiles, needs, and customer requirements.



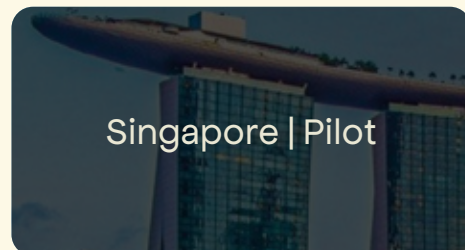
# VF Projects



UK | Peri-Urban



UK | Rural Farm



Singapore | Pilot



UK | Global Brand



UK | Ultra Urban



UK | Alternative Protein Brand



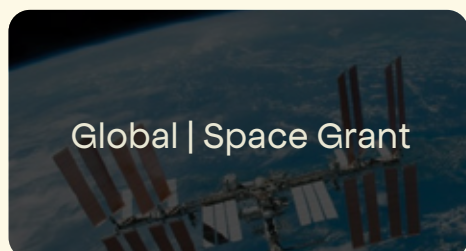
UK | Carbon Capture



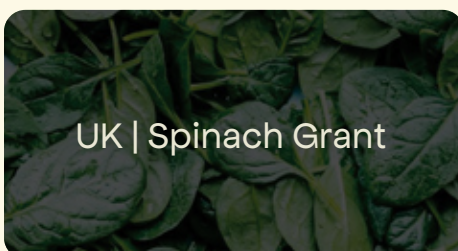
UK | Strawberries



MENA | Fodder



Global | Space Grant



UK | Spinach Grant



UK | Protein Grant



# R&D at VF

Our continuously expanding network of farms combined with our unique team, technology and expertise lets us support our clients' and partners' research projects with outsourced contract growing. Below are a few examples of ongoing and completed projects at VF.

## Chronoculture to enhance production efficiency

We have developed light recipes which change during a 24 hour period, working with the normal circadian rhythm of the plant. We have reduced energy inputs by over 30% and improved productivity by 24% compared to a standard lighting regime.

## Monitoring the plant to tune the environment

In partnership with the University of Cambridge we are developing sensors to monitor the plant directly rather than infer a plant response from environmental monitoring. Integrating via DIANA, using these sensors allow us to maximise productivity in real time.

## Taking Vertical Farming back to space to deliver remote agronomy services

Funded by the UK Space Agency, we are working with commercial and government space agencies in UK, USA and Australia to improve farm connectivity and enable real-time remote agronomy through suites of sensors and plant imaging.

## Quality+ Strawberry plants for the whole sector

We're using vertical farms as a nursery to produce high-health strawberry plants which can be transplanted into any growing system. In early trials, we've seen fruit yield improvements of up to 40% compared to those produced traditionally.

## Food is just the beginning for vertical farming

There's now a huge opportunity to apply this technology beyond food and extend to other verticals including pharmaceuticals and nutraceuticals. We have already started on this journey and are actively looking for beneficiaries from our work.



Researching  
the future  
of food.







Let's grow a better  
future together.

[verticalfuture.com](https://verticalfuture.com)

#### HQ

3 More London  
Riverside  
London  
SE1 2RE

#### Manufacturing

Units 4 & 5  
Raynham Road  
Bishop's Stortford  
CM23 5PD

#### R&D Centre

3 Creekside  
London  
SE8 4SA

#### Growing Centre

3 Creekside  
London  
SE8 4SA

[info@verticalfuture.co.uk](mailto:info@verticalfuture.co.uk)