



GROWING THE NEXT GENERATION OF SKINCARE INGREDIENTS

Harnessing the power
of plants – applying
science, technology
& ethical practice.

Information Memorandum (EIS) – July 2025



Vita HydroKultur Group Ltd.

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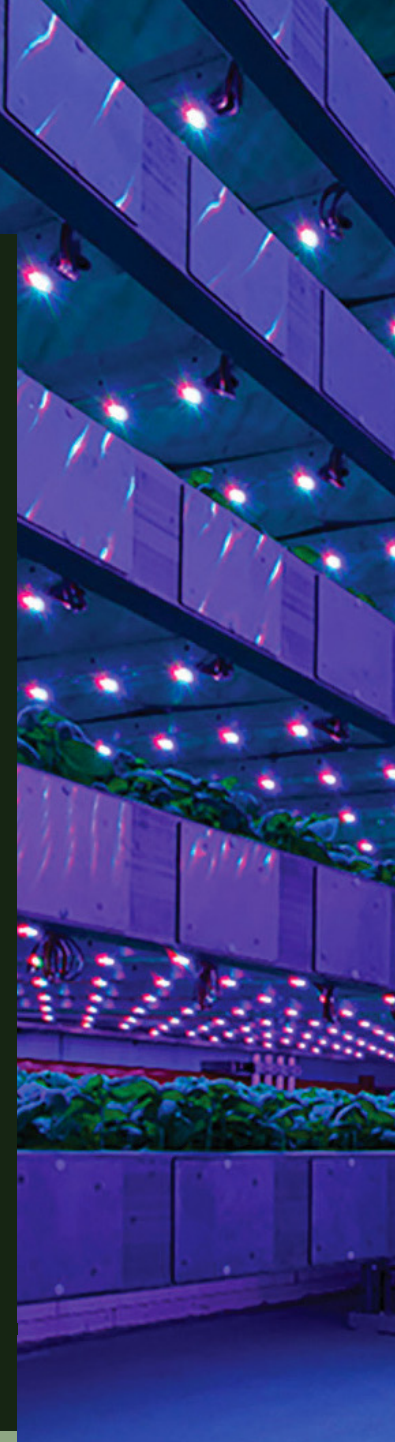
Executive Summary

Company Snapshot

Vita HydroKultur Group Ltd (VHK) is a next-generation bio-manufacturing company pioneering the production of high-performance, plant-based skincare ingredients. These include functional proteins and bioactive plant extracts grown inside precision-controlled vertical farms. The resulting compounds support regeneration, hydration, and skin repair, and are typically sourced today through slow, costly, and ethically questionable animal or microbial systems.

VHK replaces these legacy methods with a faster, cleaner, and more scalable approach – using plants as temporary bio-manufacturing systems to produce pharma-grade actives in a matter of weeks.

The company is targeting the fast-growing cosmeceutical market, valued at \$65.7 billion in 2024 and projected to more than double by 2034, with a reliable, ethical, and industrially scalable supply chain for the next generation of skincare ingredients.



Why Now?

- Consumers, regulators, and retailers are demanding cleaner, cruelty-free, plant-derived alternatives.
- Cosmeceuticals – sitting between cosmetics and pharmaceuticals – offer clinically relevant benefits without the burden of drug regulation.
- “Clean beauty” is now mainstream, with global brands reformulating to stay compliant and competitive.
- VHK delivers pharma-grade performance without the cost, time lag, or ethical baggage of traditional systems.

Engineered for Scale

VHK is developing a state-of-the-art commercial facility to deliver high-purity proteins and functional plant extracts to:

- Tier 1 suppliers
- Formulation labs
- Cosmetic manufacturers and distributors

The system is engineered for consistency, regulatory compliance, and repeatable output – enabling adoption across premium skincare lines and performance-led cosmeceutical products.

Traction & Milestones

- Functional expression achieved for key skincare proteins
- Supercritical CO₂ extraction selected for clean, solvent-free purification
- Facility site secured in Sweden with zoning approval for industrial use.
- Grid connection and vertical farming infrastructure at draft contract stage
- Regulatory clearance from Sweden’s Gene Technology Advisory Board
- Tier 1 suppliers and formulation partner discussions in progress

Team & Experience

The business is led by a cross-disciplinary founding team with expertise in:

- Protein science and bioactive ingredient development
- Capital markets and corporate finance
- Global supply chain and commercial operations

Two co-founders previously built and ran Europe’s largest vertical farm, bringing deep operational, agronomic, and technical experience into a model designed for scale and precision.

Financial Highlights

With its first commercial facility due to launch in 2027, VHK projects:

- Revenue growth from ~£700,000 (2027) to £17 million (2031)
- Positive EBITDA by 2028, reaching £11.82 million by 2031
- Gross margins increasing from 57% to 83%
- Net cash generation of £16.26 million by 2031

These forecasts are built on conservative assumptions around pricing, market penetration, and operational efficiency, with significant upside potential as more proteins are brought online and commercial traction accelerates.

The Investment Opportunity

VHK is raising £8 million (net of costs) at a post-money valuation of £14 million to complete its UK R&D buildout and commission Phase 1 of commercial operations in Sweden.

Based on peer benchmarking within the AgriTech sector and applying a median EV/EBITDA multiple of 10.4x, the company could reach an indicative valuation of £74.3 million by 2029 based on forecast EBITDA of £7.64 million.

A UK stock market listing is being targeted within 3–5 years, offering investors a clear, tax-efficient route to liquidity.

EIS – Exceptional Tax Relief

VHK has received HMRC Advance Assurance for EIS. Eligible UK investors can benefit from:

- Up to 30% income tax relief
- Capital gains tax exemption after 3 years
- 100% inheritance tax exemption after 2 years
- Up to 45% loss relief on net capital at risk

Risk & Reward

As with all early-stage investments, there are inherent risks. However, for investors with an appetite for asymmetric returns – especially those with significant tax exposure – the potential upside is material.

Under EIS, real capital at risk may be reduced to just £38.50 per £100 invested. You can also defer an existing capital gains tax charge if you re-invest the gain in EIS-qualifying shares. If VHK delivers on its plan and achieves a successful listing, the return on capital at risk could be highly compelling – in a company engineered for scale, backed by science, and positioned within one of the fastest-growing segments of the personal care sector.



Company Overview

Who We Are

VHK is a bio-manufacturing company dedicated to producing next-generation active ingredients for premium skincare and dermatology. VHK specialise in cultivating potent, plant-based proteins and botanical extracts inside tightly controlled vertical farms – delivering clean, consistent, and scalable alternatives to animal, marine, and synthetically derived ingredients.

Founded by specialists in biotechnology, vertical farming, and commercial manufacturing, VHK exists to solve a fundamental challenge in skincare: how to meet demand for clinically effective ingredients without compromising on ethics, traceability, or environmental impact.

Mission Statement

“ To culture and deliver the next generation of cosmeceutical proteins – cleanly, ethically, and efficiently – by harnessing plant expression and precision-controlled horticulture. VHK exists to empower skincare brands with ingredients that are effective, scientifically validated, and ready for a regenerative future. ”

Vision Statement

To become a global leader in sustainable, plant-based biotechnology for skincare – where science serves people, production respects the planet, and innovation regenerates more than it extracts.

Core Values

Rooted in Science. Grown with Purpose.

Precision with Purpose

We believe that detail matters – in our proteins, our processes, and our promises. From plant production to final formulation, precision is the path to performance.

Sustainability by Design

Sustainability isn't a checkbox; it's baked into the blueprint. From closed-loop farming to renewable energy and industrial symbiosis, every decision we make considers long-term planetary health.

Innovation Without Compromise

We challenge convention, rethinking how high-performance ingredients should be grown, not just manufactured. Better isn't just new – it's purposeful.

Integrity Over Hype

Our claims are evidence-based, our supply chain is transparent, and our ingredients meet both ethical and technical standards without exception.

Progress Through Partnership

We grow faster and better together. Whether co-developing with brands, collaborating with researchers, or aligning with local industries, we believe shared progress builds stronger foundations.

What We Do

We develop and produce high-performance, plant-based skincare ingredients that deliver clinically relevant results – without relying on animal sources or synthetic chemicals. Using a clean, plant-powered production system, we grow advanced cosmetic actives inside vertical farms, ensuring consistency, purity, and scalability from the ground up.

Our focus is on growth-promoting proteins that support skin regeneration, hydration, and elasticity – ingredients trusted by premium skincare brands, now produced using modern, ethical methods.

Why It Matters

The beauty and skincare industries are undergoing a seismic shift. Consumers, regulators, and brands are demanding more ethical, sustainable, and scientifically validated ingredients.

Traditional protein sources – from bovine and marine extraction to microbial fermentation – carry environmental costs, safety concerns, and declining consumer trust.

VHK offers a new standard: a plant-powered manufacturing model that is scientifically robust, commercially scalable, and fully aligned with the ethical demands of the modern skincare industry.



Leadership Team

VHK is led by a multidisciplinary team with expertise across biotechnology, vertical farming, controlled environment horticulture (CEH), infrastructure delivery, capital markets, and commercialisation. With experience spanning early-stage startups to growth-phase scale-ups, the team is united by a shared mission: to bring high-performance, plant-based skincare actives to market at industrial scale – ethically, efficiently, and profitably.

Gary Thorneycroft

Chief Executive Officer (CEO)

Gary is a Chartered Accountant (FCA) with over 20 years of experience advising and scaling privately owned businesses. After a successful career in public practice, he co-founded Jones Food Company – Europe’s largest hydroponic vertical farm – where he oversaw financial and operational strategy. His leadership brings deep financial insight and infrastructure execution capability across sectors including energy, agriculture, and industrial technology.

Christopher Hill

Chief Business Development Officer (CBDO)

Chris is a serial entrepreneur and investor with over two decades of experience in project development and private capital markets. He co-founded Cornhill Capital, an FCA-regulated member of the London Stock Exchange, and Envirotech Energy Solutions, a leading UK-based grid-scale battery storage company. At VHK, Chris leads capital strategy, investor relations, and commercial development across both domestic and international markets.

Dr Paul Challinor

Chief Technical Officer (CTO)

Paul holds a PhD in horticulture and is one of the UK’s foremost authorities in vertical farming and intensive plant production. With over 40 years of experience in plant physiology, LED lighting systems, nutrient delivery, and cultivation technologies, he co-founded Jones Food Company and helped pioneer its advanced CEA model. At VHK, Paul leads the scientific development of the company’s plant expression systems and vertical infrastructure blueprint.

Andy Allen

Head of Infrastructure Development

Andy is a co-founder of Oasthouse Ventures and a proven infrastructure developer with 14 years’ experience delivering large-scale agricultural and energy systems. He has taken 22 major projects from concept to commercial operation, including some of the UK’s largest low-carbon greenhouse complexes. At VHK, he ensures the vertical farming and biomanufacturing platforms are designed, built, and scaled with precision and operational excellence.

[Name Withheld]

Chief Scientific Officer (CSO)

(Identity disclosed post-investment under NDA)

VHK’s Chief Scientific Officer is an innovation-led biochemist with a PhD in Biomolecular Sciences and more than 15 years’ experience in protein science, bioprocess engineering, and novel expression systems. He has led pioneering work in plant-based protein production across pharmaceutical, personal care, and diagnostic applications. Due to active partnerships and proprietary projects, his identity is protected under a confidentiality agreement.

Melissa Hayman

Head of Operations

Melissa brings close to two decades of experience in operations, manufacturing systems, and supply chain management. She has held key operational roles at global organisations including Sumitomo Corporation and Gel Systems, specialising in scaling frameworks, logistics coordination, and infrastructure delivery. At VHK, she leads the development of scalable operational systems to support production, fulfilment, and quality control.

Products

VHK is developing a new class of high-performance skincare ingredients. Alongside cultivating plants with proven natural actives – such as the soothing and anti-inflammatory compounds in chamomile – VHK also develops and cultivates bioactive proteins: potent molecules that enhance skin regeneration, accelerate repair, boost hydration, and address visible signs of ageing.

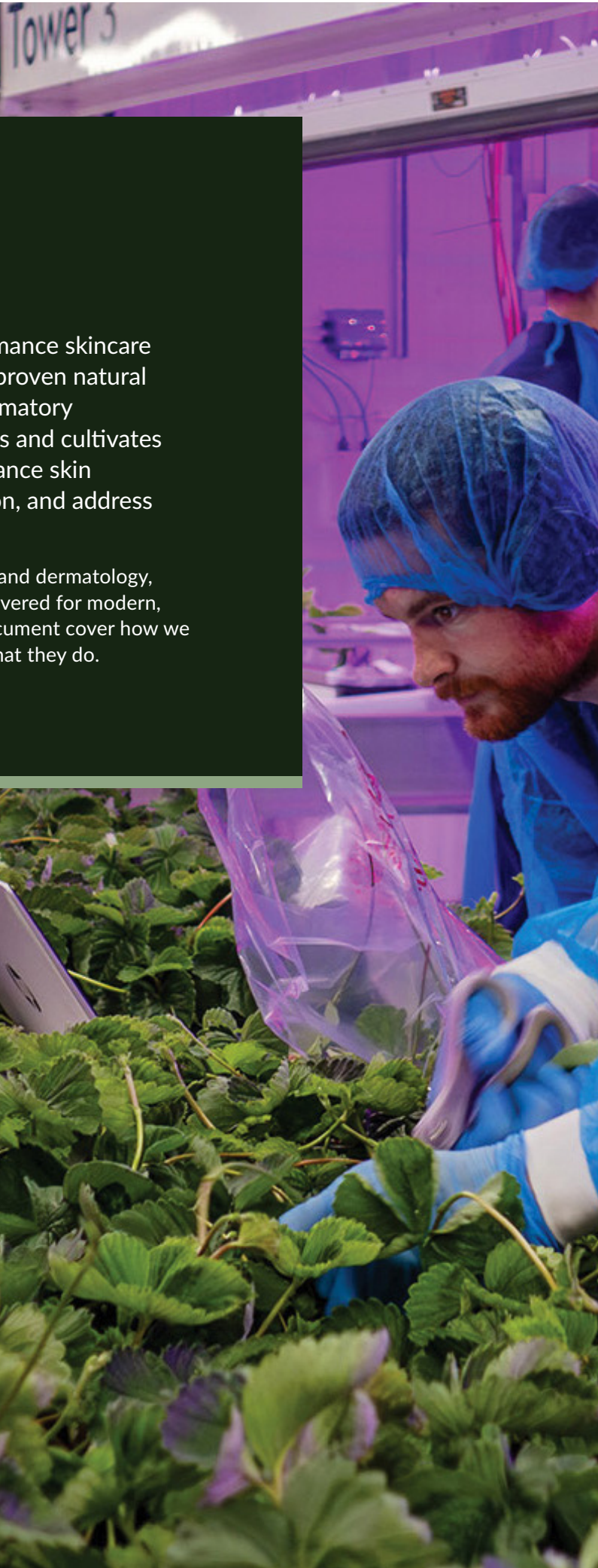
These proteins are already used in advanced skincare and dermatology, but VHK is reimagining how they're produced and delivered for modern, conscious consumers. While other sections of this document cover how we make them, this section outlines what they are and what they do.

Bioactive proteins are biologically active molecules that interact with skin cells to trigger specific responses. In skincare, they act as molecular messengers – helping to repair tissue, build collagen, reduce inflammation, and restore skin vitality.

Used in the right concentrations, these proteins can:

- Stimulate collagen and elastin production
- Accelerate wound healing and cell regeneration
- Improve hydration and barrier function
- Reduce redness, scarring, and signs of ageing

They are especially valuable in high-end cosmeceuticals, post-treatment products, and dermatologist-led skincare routines.



Functional Roles in Skincare

Different proteins have different biological effects, and their application depends on the specific skin function they're targeting. At VHK, we've prioritised a selection of proteins based on their efficacy, relevance to cosmetic science, and demand within the skincare market.

The table below summarises key proteins under development, their biological functions, cosmetic applications, and current status within VHK's pipeline:

Protein	Biological Function	Cosmetic Application	VHK Development Status
FGF1 (Acidic Fibroblast Growth Factor)	Stimulates fibroblast proliferation and collagen production	Skin regeneration, anti-aging, improved elasticity	Proof of concept achieved
FGF2 (Basic Fibroblast Growth Factor)	Promotes cell proliferation and angiogenesis (blood vessel formation)	Wound healing, skin rejuvenation, hydration boost	Proof of concept achieved
VEGF A (Vascular Endothelial Growth Factor A)	Induces formation of capillaries and microcirculation	Brighter complexion, improved nutrient delivery, post-procedure recovery	Proof of concept achieved
EGF (Epidermal Growth Factor)	Signals skin cells to regenerate and repair epidermis	Fine line reduction, resurfacing, overall rejuvenation	Planned for future R&D
IGF-1 (Insulin-like Growth Factor 1)	Enhances collagen/elastin synthesis and skin density	Skin thickening, firmness, elasticity	Planned for future R&D
KGF / FGF7 (Keratinocyte Growth Factor)	Stimulates keratinocyte growth and differentiation	Barrier repair, hydration, sensitive skin support	Planned for future R&D
PDGF (Platelet-Derived Growth Factor)	Stimulates cell growth and tissue remodeling	Wound healing, post-treatment recovery, scar reduction	Under evaluation
TGF-β (Transforming Growth Factor Beta)	Regulates collagen production and immune response	Anti-aging, firming, scar prevention	Under evaluation
GM-CSF (Granulocyte-Macrophage Colony Stimulating Factor)	Modulates skin repair and immune signalling	Skin regeneration, inflammation control	Under evaluation
NGF (Nerve Growth Factor)	Supports nerve regeneration and skin innervation	Anti-aging, sensitivity recovery, neurocosmetics	Future exploration
Interleukins (e.g. IL-10, IL-4)	Regulate inflammatory pathways and immune balance	Sensitive skin care, rosacea, redness reduction	Future exploration

Production Systems & Technology

Plants, Reimagined as Producers

At the heart of VHK's production system is a powerful idea: use plants as precision bio-manufacturing units to produce high-performance skincare ingredients.

Just as yeast can be used to brew beer or manufacture insulin, VHK's selected host plant – *Nicotiana benthamiana* – can be directed to temporarily produce bioactive proteins that are structurally, biologically, and functionally identical to those found in the human body. These include proteins that support regeneration, hydration, and skin vitality – compounds that naturally decline with age.

This isn't agriculture. It's precision biofabrication – harnessing the plant's internal cellular machinery to produce high-value compounds with pharmaceutical-grade purity, consistency, and speed.

How It Works: A Clean Expression Cycle

VHK uses a natural, transient expression system to introduce a temporary set of genetic instructions into the plant's leaf cells. This is achieved via a naturally occurring soil microbe, long used in both industrial and academic research, which delivers the protein-coding message into the plant's internal processes.

For a short period – typically 5 to 7 days – the plant produces the target protein, after which it is harvested. No part of the plant's genome is permanently altered, and the plant reverts to its original state following the expression window.

This method allows for speed, scalability, and safety – while avoiding the regulatory and ethical concerns associated with genetically modified organisms (GMOs).

Why *Nicotiana Benthamiana*?

VHK selected *Nicotiana benthamiana* for its rare combination of scientific performance and commercial suitability. It is a fast-growing, leaf-rich plant that reaches ideal biomass in just 4–6 weeks – giving VHK the potential for 8 to 13 harvests per year.

For context, if harvesting were limited to just two or three cycles annually, achieving the same output would require up to four times the space, infrastructure, and cost.

Crucially, *Nicotiana benthamiana* is uniquely compatible with transient expression, enabling high-yield protein production without the need for genetic modification. It produces low levels of background metabolites (known as “biological noise”), simplifying downstream purification and enhancing batch-to-batch consistency.

As a non-food, non-feed crop with a fully mapped genome, the plant avoids crossover with agricultural supply chains – supporting biosafety and regulatory alignment.

This species is widely regarded as the biotech workhorse of modern molecular horticulture – used by global research institutes and life science companies to produce complex proteins safely, consistently, and at scale.

Vertical Farming: Built for Precision

VHK has partnered with Intelligent Growth Solutions (IGS) to deploy modular vertical farming systems, transforming traditional cultivation into cleanroom-grade, closed-loop bioproduction.

Factor	Vertical Farming (Lab-Grade)	Greenhouse Cultivation	Outdoor Cultivation
Environmental Control	Full control (light, CO ₂ , temp, humidity, nutrients). Precision-tuned for protein expression.	Partial control (mostly temperature & humidity). Vulnerable to light & climate changes.	No control. Fully exposed to weather and seasonal variation.
Efficiency	Operates 24/7/365. Continuous production cycles. No downtime due to seasons or sunlight.	Dependent on natural light and seasons. Some downtime in winter	Restricted to seasonal daylight cycles. Large downtime between harvests.
Cycle Time / Harvest Speed	Accelerated growth cycles (3–6 weeks), year-round staggered production.	Moderate. Dependent on seasonality but somewhat extendable.	Seasonal. Only 2–3 harvests per year depending on location.
Yield Consistency	High. Controlled conditions = reliable batch-to-batch results.	Moderate. Influenced by weather and greenhouse infrastructure.	Low. Subject to pests, rain, drought, and other variables.
Contamination Risk	Very low. Sterile or semi-sterile systems prevent microbial/pesticide contamination.	Moderate. Pest intrusion and pesticide use possible.	High. Exposure to pests, soil pathogens, air pollution, etc.
Pesticide / Herbicide Use	None. Indoor clean environment eliminates need for chemical treatments.	Occasionally used. Less than outdoor farming, but still present.	Regular use required for weed and pest control.
Protein Purity & Safety	Highest. Cleanroom-grade growth with no interfering plant toxins.	Moderate. More impurities and biological variability.	Lowest. High bioburden and variable biomass.
GMO Risk / Cross-Pollination	Zero risk. Fully contained system; no chance of genetic escape or wild cross-pollination.	Some risk if GMOs are involved. Airborne cross-pollination possible.	High risk in GMO systems. Pollen drift can impact surrounding crops.

These systems enable year-round, high-throughput production, with complete control over environmental variables and zero exposure to pests, pesticides, or outside contaminants. It is agriculture redesigned for molecular precision.



Expression Optimisation: Science at the Micro-Level

Protein output depends not just on the plant, but on its environment. VHK’s R&D team continually optimises a wide range of parameters to maximise yield, purity, and performance, including:

- Light intensity and spectrum
- Photoperiod (light duration per 24 hours)
- CO₂ concentration
- Temperature (air and root)
- Relative humidity and vapour pressure density (VPD)
- Nutrient composition and pH
- Airflow and plant spacing
- Infiltration timing and plant age
- Elicitors (stress-based priming compounds)

These variables interact dynamically – requiring continuous modelling and iterative refinement to achieve the best expression outcomes for each protein.

Precision Bio-Manufacturing: Built for Scale, Speed, and Purity

VHK’s system doesn’t just improve protein production – it redefines the commercial and operational model for bringing them to market.

Speed

From concept to purified protein in a matter of weeks, not years. VHK’s process is typically 12–24 months faster than traditional systems involving cell-line engineering or genetically stable crops – enabling rapid iteration, testing, and commercial deployment.

Cost

VHK’s bioreactors grow on stalks, not in steel. Traditional fermentation and microbial expression systems require costly capital investment, energy, and operational oversight. By contrast, VHK’s vertical farming model reduces infrastructure costs, utility usage, and chemical inputs – while maintaining pharmaceutical-grade precision.

Flexibility

Switching from one protein target to another does not require new cell lines, bioreactor configurations, or regulatory resets. This agility enables rapid adaptation to market demands – from standardised bulk production to bespoke client formulations.

Purity & Consistency

All proteins are:

- Endotoxin-free
- Animal-free
- Vegan-friendly
- Batch-validated for purity, potency, and stability

Consistency is achieved through a closed-loop system with rigorous environmental control and embedded quality assurance protocols.

Full traceability is maintained from design file to final product.

Sustainability

VHK’s system operates 24/7, 365 days a year – without soil, pesticides, or agricultural runoff.

Electricity is sourced from a local hydroelectric facility, enabling 100% renewable energy use and a dramatically lower carbon footprint than animal- or microbial-based systems.

Traceability

Every step – from gene design to final vial – is monitored, recorded, and documented.

This ensures full auditability and transparency for regulators, formulation partners, and end-clients.

Product Versatility

VHK’s proteins are available in two stable, ready-to-use formats:

- Lyophilised powder for long shelf life and precision dosing
- Aqueous solution for direct formulation use

Each format is supported with validated stability, identity, and potency data — and can be tailored by concentration, packaging, or delivery form.

Ethical by Design

VHK’s products are 100% animal-free, cruelty-free, and contain no genetically modified material or recombinant DNA. They are manufactured using a clean, transient plant-based process – ensuring nothing artificial remains in the final product. This aligns with both regulatory expectations and consumer trust.

This is More Than Biotechnology

It is a reinvention of how high-performance skincare ingredients are imagined, manufactured, and delivered.

- VHK doesn’t just grow proteins
- It grows trust
- It grows opportunity
- It grows the future of beauty – from concept to formulation





Technology Outlook: Unlocking Future Gains Through AI

Improving output and reducing cost is not something we do once – it's something we build into every step. Every gram of yield, every point of purity, and every drop of input efficiency is the result of disciplined optimisation across our production cycle.

Artificial Intelligence (AI) is not a silver bullet but in the right places, applied thoughtfully, it has the potential to accelerate this process dramatically. At VHK, we are actively exploring a shortlist of high-impact opportunities where AI could enhance scientific performance, operational resilience, and long-term scalability.

These areas have been selected not because they're fashionable, but because they are grounded in our real-world operating model – chosen for their ability to deliver measurable improvements without compromising regulatory clarity or simplicity.



Bioinformatics & Sequence Design

Designing the *temporary* DNA that instructs plants to produce a human-identical protein isn't a one-size-fits-all task. There are billions – quite literally billions – of ways to write the same protein blueprint using different codon combinations. Some versions are read smoothly by the plant, producing high protein yields. Others lead to folding errors, instability, or weak expression.

Without AI, this optimisation relies on codon tables, rules of thumb, and trial-and-error – often resulting in suboptimal performance and wasted cycles.

AI changes that.

Just as GPS helps drivers navigate the fastest, cleanest route through countless road combinations, AI can model and score millions of DNA sequence variants – flagging likely failures and predicting which ones will yield the highest expression in *Nicotiana benthamiana*. It saves time, reduces waste, and helps generate proprietary designs with long-term IP potential.

Protein Expression Optimisation

Even a perfectly designed DNA sequence won't perform at its best without the right environmental conditions. Variables such as light intensity, wavelength, photoperiod, CO₂ concentration, nutrient mix, humidity, and airflow all affect expression – and they do so in complex, interdependent ways.

There are millions of potential “recipes,” and testing them manually is time-consuming and costly.

By integrating AI into our vertical farming systems, we can simulate and predict the ideal conditions for each protein – optimising yield and purity while reducing the need for physical trial-and-error. Over time, this allows us to move from fixed growing protocols to dynamic, protein-specific optimisation cycles.

Predictive Maintenance & Infrastructure Monitoring

Consistent, high-purity production depends on stable infrastructure – lighting arrays, irrigation systems, nutrient delivery, and HVAC all working in unison. Failures in any of these systems can degrade performance or disrupt output.

AI-powered monitoring systems can analyse sensor data in real time, detect early signs of malfunction, and trigger proactive maintenance before issues arise. This improves uptime, reduces unplanned downtime, and extends the lifespan of key infrastructure assets.

Strategic Perspective

Our approach is methodical and intentional. The goal is not to “do AI” for its own sake, but to selectively embed intelligence where it can materially improve performance, protect margins, and enhance long-term value.

Development Status & Roadmap

Current Status (2024-2025)

VHK has laid the groundwork for a rapid transition from concept to commercialisation. Key achievements to date include:

- Proof of concept successfully completed for a number of proteins in host plants
- Early validation of plant-based protein expression using controlled vertical farming
- Supercritical CO₂ extraction method selected and lab-tested
- We have a signed option on a building in a science park for a new research facility
- We have an offer to lease land in Sweden. The land is zoned for industrial use, and we have a grid connection offer from the electricity supplier
- We have confirmation that we already meet environmental rules for our facility, and our methodology for plant growth has outline approval from the Swedish Gene Technology Advisory Board.
- We have a final form turn-key construction contract with the supplier of the vertical farming technology in place.
- Initial conversations held with potential offtake partners
- We have met officials at the Swedish Embassy in London, in Stockholm and the municipality, all of whom are very supportive of our plans
- SEIS/EIS Advanced Assurance secured
- Fundraising round in progress

Short-Term Milestones (Next 12–18 Months)

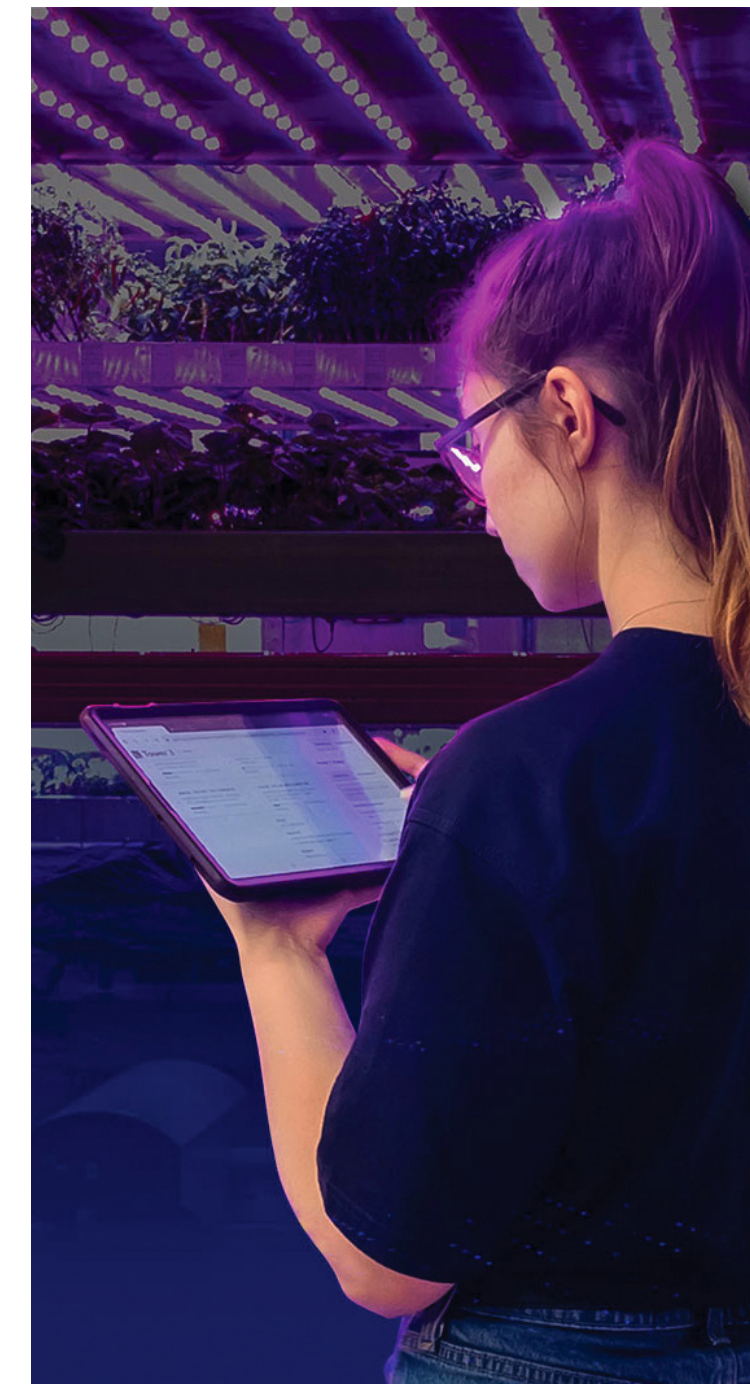
- Close initial funding round and initiate grant applications
- Fit out new research facility with advanced testing and production equipment
- Optimise expression yields and batch consistency for validated proteins
- Expand proof of concept to include additional proteins
- Finalise Swedish facility design and secure commercial lease agreement
- Appoint an Engineering, Procurement, and Construction contractor (EPC)
- Prepare site in Sweden for commencement of construction
- Begin development of quality assurance and regulatory frameworks
- Deepen early-stage customer relationships and continue market testing

Medium-Term Milestones (18–36 Months)

- Complete and commission VHK's first vertical bioproduction facility
- Transition to pilot-scale production for customer sampling and pre-commercial batches
- Secure first commercial contracts and supply agreements
- Expand protein portfolio and explore licensing/IP protection
- Build out internal teams in production, QA, and business development
- Commence IPO-readiness preparations, including financial and legal advisory engagement.

Long-Term Vision (36+ Months)

- Scale facility capacity from 18,750ft² of growing space to 188,000ft² and enter full commercial production
- Establish VHK as a trusted supplier to cosmeceutical tier 1 suppliers and brands
- Explore adjacent applications in therapeutic skincare and pharma
- Pursue international expansion or co-manufacturing opportunities



Commercial Model & Market Access Strategy

VHK is pursuing a focused, B2B commercial model aligned with the structure and purchasing behaviour of the global cosmeceutical supply chain.

Rather than selling directly to individual brands, VHK will partner with upstream companies – including formulation labs, tier 1 suppliers, and ingredient distributors – that already serve hundreds of skincare and cosmetics companies. These intermediaries are central to product innovation pipelines and provide scalable, infrastructure-ready routes to market.

Enabling the Enablers

VHK’s strategy is to integrate seamlessly into the workflows of those who formulate and manufacture cosmetic products at scale. By supporting trusted intermediaries with validated, high-performance ingredients, the company creates a multiplier effect – enabling widespread adoption across dozens of product lines through a small number of strategic partnerships.

This approach avoids the dilution and complexity of brand-by-brand sales and positions VHK as a preferred ingredient partner within the industry’s established innovation networks.

Lowering the Barrier, Expanding the Market

The high cost of functional proteins has historically limited their use to premium, pharma-adjacent skincare lines. VEGF-A, for example, can retail for over £1,500 per milligram – a price point that effectively excludes all but the most exclusive brands.

VHK’s bio-manufacturing system changes this dynamic. With a substantially lower cost base and consistent, high-purity output, VHK

can deliver pharmaceutical-grade actives at a fraction of traditional prices – while maintaining gross margins above 80%.

This margin efficiency allows for a disruptive commercial strategy:

- **Formulation samples** are provided free of charge to qualified partners, removing risk from early-stage testing.
- **Pilot-scale orders** are priced to support rapid prototyping and reformulation cycles.
- **Commercial volumes** are offered at breakthrough pricing – enabling broader market access without compromising quality or compliance.

The result is market expansion, not just market competition. Brands that previously couldn’t afford to include regenerative proteins in their formulations now can and those already using them gain access to cleaner, cruelty-free, non-GMO alternatives – without a cost premium.

Just as cost reductions in mobile technology and renewable energy unlocked new user segments, VHK’s pricing model enables a new tier of functional skincare – from ultra-luxury to high-performance everyday.

How VHK Outperforms Traditional Biotech

The table below outlines the structural differences between conventional bioproduction systems (such as CHO cells, E. coli, or yeast) and VHK’s clean, plant-based alternative.

Stage	Traditional Biotech (CHO / E. coli / Yeast)	VHK Plant-Based Method
Design to Protein	3–6 months (CHO), 4–8 weeks (E. coli/yeast); requires cell line development	<3 weeks from gene to protein (no cell line development needed)
System Setup	High-cost bioreactors, sterile fermenters, cleanrooms	Modular greenhouse/vertical farm with standard agri inputs
Scale-Up Method	Bioreactor expansion (10–2000L), batch-dependent	Plant infiltration, linear scaling with trays/plants
Expression Format	Stable integration, often low-yield or inconsistent	Transient, high-expression using TMV-based vectors
Protein Harvesting	Cell lysis with mechanical or chemical methods	Whole leaf homogenization
Purification Steps	3–5 purification stages, often including endotoxin removal	1–2 steps using His-tag and polishing (e.g., SEC, IEC)
Yield Consistency	Variable; gene silencing or misfolding common	High and reproducible transient yield
Total Time (first batch)	6–18 months depending on host system	3–4 weeks
Regulatory Burden	Heavily regulated (GMP, biosafety, GMO, endotoxins). GMO approval can add 3–12 months and £10k–£50k+ in compliance costs	Lower (non-GMO, cosmetic-grade standards)
Flexibility	Rigid (new protein = new cell line, new QC pathway)	Agile (new gene = new infiltration)
Environmental Impact	High (energy-intensive, chemical waste, media from animal products)	Low (plant-based, animal-free, minimal waste)

Where traditional methods are slow, expensive, and operationally rigid, VHK’s approach is fast, modular, and scalable – enabling pharmaceutical-grade skincare actives to be produced in weeks, not months, and at materially lower cost.

These advantages don’t just improve margins. They enable a new commercial model – one in which advanced proteins are no longer the preserve of pharma, but a viable input for next-generation skincare products at scale.

Global Footprint, Local Trust

VHK’s initial commercial site is based in Sweden, supported by UK-led R&D. From inception, the production architecture has been designed for global scalability – using modular, replicable systems that can be deployed across international markets.

While the infrastructure is designed for reach, the brand is built on trust: scientific credibility, clean production, and a proven ability to deliver consistent, high-performance actives at industrial scale.

Marketing Strategy – Building Awareness, Credibility, & Pipeline

In a market crowded with pseudo-scientific claims and commoditised ingredients, VHK's marketing strategy is built on scientific clarity, ethical leadership, and education-led engagement.

Our audience is not the end consumer, but the scientists, developers, and decision-makers behind tomorrow's skincare products. This is not a mass media strategy – it's a credibility-first, trust-led growth engine.

Positioning: Where Precision Meets Price Disruption

VHK's brand is positioned at the intersection of clinical performance and ethical integrity. We offer pharmaceutical-grade, plant-expressed proteins – free from animal inputs, GMOs, and microbial contaminants – at breakthrough cost.

This combination of performance, purity, and accessibility transforms the economics of cosmeceutical innovation. What was once niche becomes scalable. What was premium becomes practical.

We don't just talk sustainability – we enable it, without compromising on science or price.

Content Marketing: Educate to Lead

Our content strategy is built to inform, not sell. Through white papers, high-authority blogs, and comparative data analyses – from the benefits of FGF2 in post-procedure recovery to protein production system comparisons – we will create an educational ecosystem tailored to formulation scientists, innovation managers, and procurement leads.

This content will be hosted on SEO-optimised landing pages and distributed via targeted outreach, creating a consistent inbound pipeline of qualified interest.

Precision Outreach: LinkedIn + CRM

LinkedIn will serve as our primary B2B engagement platform. Through a mix of thought leadership posts, sponsored campaigns, and direct outreach, we will build visibility and credibility among key stakeholders across the cosmeceutical supply chain.

This activity is supported by a structured sampling programme – offering qualified leads free access to our proteins (both lyophilised and aqueous), Certificates of Analysis, formulation guides, and stability data.

All interactions will be captured via a centralised CRM system, allowing us to segment leads by protein interest, technical readiness, and engagement history. This data backbone ensures follow-ups are timely, tailored, and conversion focused.

Founder-Led Sales & Scientific Events

At this stage, trust is earned personally. Early-stage sales efforts will remain founder-led, ensuring high-context engagement, market feedback loops, and commercial credibility from the top.

We will also selectively engage with high-impact industry events where scientific credibility and peer recognition matter. With both our CTO and CSO well-known and respected in their fields, VHK is well-positioned to contribute as keynote speakers or expert panellists – reinforcing our technical authority while building relationships with formulation leaders, tier 1 suppliers, and strategic partners.

PR & Thought Leadership: Contribution Over Coverage

As visibility grows, we will pursue measured PR activity focused on credibility, not noise. This includes:

- Publishing in trade journals
- Applying for innovation awards
- Contributing expert commentary on molecular farming, clean beauty, and biotech-enabled cosmeceuticals

The aim is not press for its own sake, but thoughtful contribution to industry discourse.

A Strategy Built for Influence, Not Interruption

VHK's marketing strategy is not designed for short-term reach – it's built for long-term influence. By educating, converting, and retaining the most forward-thinking formulation partners, we're laying the groundwork for scalable growth and lasting category leadership.



Intellectual Property Strategy – Defending Innovation, Driving Value

At VHK, protecting innovation is not a defensive tactic – it is a strategic asset central to our business model, valuation, and long-term market position.

We are building a production system, not just a product – and our intellectual property strategy is designed to match that scale. From the start, we’ve prioritised identifying, documenting, and securing the elements of our process most likely to deliver commercial, scientific, and legal advantage, from codon-optimised sequences to production protocols and formulation methods.

A Holistic, Tiered Approach to IP Protection

VHK is developing a diversified IP portfolio that spans synthetic biology, protein engineering, and environmental optimisation for plant-based protein production.

Our hybrid protection model includes:

- **Patents:** for novel synthetic DNA sequences and inventions
- **Trade Secrets:** for proprietary infiltration, extraction, and stabilisation protocols
- **Copyrights & Trademarks:** for brand assets, data outputs, bioinformatics tools, and educational materials
- **SOPs & Know-How:** safeguarded through internal governance and legal controls

This layered approach balances exclusivity with operational flexibility – protecting the core of what makes our platform commercially viable without slowing its development or deployment.

Patent Priority: Codon-Optimised DNA Sequences

A key early priority is protecting the synthetic DNA sequences used to express human-identical proteins like FGF2 and VEGF-A in *Nicotiana benthamiana*.

These sequences are not naturally occurring – they are designed using codon optimisation to maximise expression efficiency in our plant

host. With the aid of advanced bioinformatics tools, we are developing proprietary sequences that may be patentable based on novelty, non-obviousness, and functional performance. This will create both a commercial moat and a potential licensing revenue stream as the platform scales.

Trade Secrets: Protecting the ‘How’

Much of our defensible advantage lies not in what we make, but in how we make it. Our production methods are being continuously refined to improve protein yield, purity, and cost-efficiency – and many of these innovations will be protected as trade secrets.

Examples include:

- Vacuum infiltration protocols for high-throughput plant expression
- Supercritical CO₂ extraction and solvent-free purification workflows
- Environmental controls (light, CO₂, humidity) to boost expression yield
- Stabilisation techniques for both lyophilised and aqueous formats
- SOPs for scaling, scheduling, and tray-level farm optimisation

Stored securely and protected through internal systems, access controls, and contractual safeguards, these non-patent assets are some of the most commercially defensible IP in the business.

Overview of IP Coverage

The table below provides a summary of VHK’s anticipated IP coverage – including asset types, protection strategies, valuation levers, and strategic relevance. This modular framework will evolve with the business but remains grounded in defensibility and commercial impact.

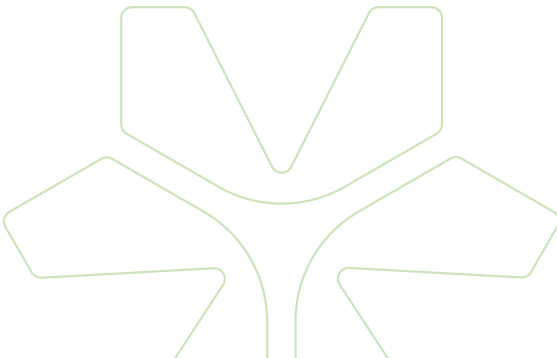
Protein	Biological Function	Cosmetic Application	VHK Development Status
Codon-Optimised DNA Sequences (e.g. FGF-2, VEGF-A)	Patent	Cost-to-develop, market exclusivity, licensing potential	Could be core to VHGs defensible moat – each gene must be uniquely optimised for plant expression.
Plant-Based Expression System Protocols	Trade Secret	Strategic value, difficulty to replicate, process control	Not disclosed externally; stored internally under strict access control with layered know-how.
Protein Extraction & Purification Processes	Trade Secret	Efficiency gains, reproducibility, and consistency	Refined to be solvent-free and eco-aligned; trade secret status ensures commercial advantage.
Vertical Farming Optimisation Parameters	Trade Secret	Time-saving, yield optimisation, competitive moat	Optimised combinations of light, CO ₂ , spacing, etc., held as confidential research data.
Proprietary Bioinformatics Software/Tools	Copyright / Trade Secret	Replacement cost, developer time, proprietary algorithms	Internally used bioinformatics tools that streamline gene design and codon optimisation.
Brand Name (Vita Hydrokultur Group)	Trademark	Brand recognition, goodwill, competitive differentiation	Protects name across cosmetic and biotech categories; eligible for international registration.
Product Names & Logos (e.g. Seed to Serum™)	Trademark	Trademark strength, market recall, positioning	Marketing trademark for product lines; potentially strong in clean beauty B2B branding.
Marketing Content, Infographics & Educational Materials	Copyright	Content value, education-driven lead generation	Original designs, visuals, and diagrams are protected automatically as creative works.
Customer Database & Formulation Preferences	Trade Secret	Customer lifetime value (CLV), segmentation insights	Highly valuable if entering formulation co-development or D2B supply partnerships.
Stability and Formulation Data for Each Protein	Trade Secret	Regulatory asset, stability guarantees, IP-backed claims	Supports safety claims, regulatory filings, and shelf-life marketing; competitive advantage.
Scientific Whitepapers & Research Publications	Copyright	Reputation boost, citation value, scientific authority	Adds credibility with partners; reinforces leadership in plant-based protein space.

IP Strategy Built for Investors

Our IP strategy is designed with institutional and strategic investors in mind. We’re not pursuing vanity patents; we’re building a portfolio that supports:

- Market exclusivity
- Exit readiness
- Licensing potential
- Diligence transparency

Every IP decision is evaluated through the lens of commercial relevance and investor value – not just scientific novelty.



IP as a Future Value Driver

Though early-stage, our IP framework is designed to deliver long-term enterprise value in three ways:

1. **Commercial Moat:** Making our system harder to replicate and more attractive to partners.
2. **Licensing Upside:** Enabling long-term, non-dilutive revenue streams from synthetic sequences, tools, and methods.
3. **Exit Leverage:** Enhancing company valuation by proving ownership of unique processes, not just outputs.

We’re not just developing proteins. We’re developing proprietary methods, systems, and sequences designed to become protected assets. As the science matures, so will the portfolio – creating defensible value at every stage of the company’s growth.



Sustainability & ESG Strategy – Embedded, Not Retro-fitted

VHK was founded on a simple but transformative belief: the future of skincare must be regenerative, not extractive.

Our audience is not the end consumer, but the scientists, developers, and decision-makers behind tomorrow's skincare products. This is not a mass media strategy – it's a credibility-first, trust-led growth engine.



Environmental Stewardship: Built Into the Blueprint

Minimal Land, Water, and Chemical Footprint

Our vertical farms operate in precision-controlled, lab-grade environments. This eliminates arable land use, reduces water consumption by up to 95%, and removes any need for pesticides, or antibiotics – all while ensuring consistency at scale.

Non-GMO by Design

Our transient expression process leaves no permanent modification in the plant or its offspring. There is no GMO classification, no gene escape risk, and no downstream contamination – supporting a clean-label narrative and simplifying compliance.

Clean Chemistry, Clean Inputs

We use no animal-derived materials, industrial solvents, or microbial fermentation. Extraction is done via supercritical CO₂ – a solvent-free, non-toxic process that generates no hazardous waste.

Renewable-Powered Infrastructure

Our first commercial facility in Sweden will source electricity from a nearby 500 MW hydroelectric station, providing baseload, 100% renewable energy. Combined with low-voltage electrical systems and energy-efficient LEDs, our operations are designed to minimise carbon intensity while maintaining climate resilience.

Industrial Symbiosis: A Closed-Loop Ecosystem

We are co-locating with two industrial partners to build one of the world's first vertically integrated biotech ecosystems:

- **Hydropower integration:** In addition to clean energy, we plan to harness residual heat from hydropower turbine friction for use in water preheating and environmental buffering.
- **Aquaculture partnership:** Big Akwa's inland fish farm will produce nutrient-rich organic waste from 6,000 tonnes of annual trout production. Post-filtration, this biomass can be converted into plant feedstock, closing the nutrient loop and reducing reliance on synthetic fertilisers.

Packaging and Biomass Valorisation

All product packaging will use recyclable, low-impact materials. Post-harvest plant biomass will be upcycled where possible – into compost, polymers, or nutraceutical precursors – ensuring no useful resource is wasted.



Social Impact – Responsible Growth, Inclusive Innovation

Fair Employment and Talent Development

We are committed to creating high-quality jobs in both Sweden and the UK. Our employment model supports workforce diversity, academic partnerships, and future talent development through internships and apprenticeships.

Ethical Standards Without Compromise

Our products are animal-free, cruelty-free, and fully compliant with EU Cosmetics Regulation (EC) No 1223/2009. We rely on validated in vitro test models such as reconstructed human epidermis and 3D skin equivalents.

Widening Access to Innovation

By dramatically lowering the cost of pharma-grade proteins, VHK enables a broader spectrum of brands – including mid-tier and challenger brands – to adopt high-performance, ethical ingredients once reserved for the top 1%.

Local Anchoring, Global Vision

In Sweden, we are working with local authorities to align with regional sustainability and economic development goals. In the UK, our R&D facility will serve as an innovation hub and training platform for the next generation of plant-based biotech professionals.

Governance: Fit for Purpose, Built for Scale

Current Structure

VHK's governance is currently led by the co-founders and executive team, with clear accountability across key functions: R&D, finance, regulatory, and commercial. This lean structure ensures speed, clarity, and capital efficiency at the early stage.

Governance Maturity Plan

As the company scales, we will implement a formal Board of Directors, including independent non-executive members and board subcommittees such as:

- Audit & Risk Committee
- Remuneration & Incentives Committee
- Scientific Advisory Board

Where appropriate, we intend to align with the UK Corporate Governance Code and adopt best-in-class reporting frameworks.

Foundational Principles

Even prior to full institutional governance, our leadership culture is rooted in:

- Transparency: Regular reporting to shareholders and stakeholders
- Accountability: Defined roles and measurable milestones
- Scientific Integrity: Evidence-led strategy and claims
- Prudence: Responsible capital deployment aligned with long-term value creation

Conclusion: ESG as a Value Engine, not a Checkbox

For VHK, ESG is not a retrofit. It's the foundation of how we build, how we grow, and how we create long-term value – for customers, communities, and shareholders alike.



What Are Cosmeceuticals?

Cosmeceuticals are a rapidly expanding category within the skincare sector that sits at the intersection of cosmetics and pharmaceuticals. These products go beyond surface-level aesthetics by incorporating biologically active ingredients that target skin function at the cellular level. Whether stimulating collagen production, enhancing hydration, or reducing inflammation, cosmeceuticals provide measurable, science-backed benefits.

Unlike conventional cosmetics, which are primarily aesthetic, cosmeceuticals target biological mechanisms within the skin, making them both highly functional and increasingly central to modern skincare routines. For example, FGF1 (acidic fibroblast growth factor) works by stimulating the skin's fibroblasts to produce collagen and elastin, rejuvenating the skin from within. This is a significant leap from traditional creams containing externally sourced (often animal-derived) collagen, which typically sit on the surface of the skin without triggering any biological repair.

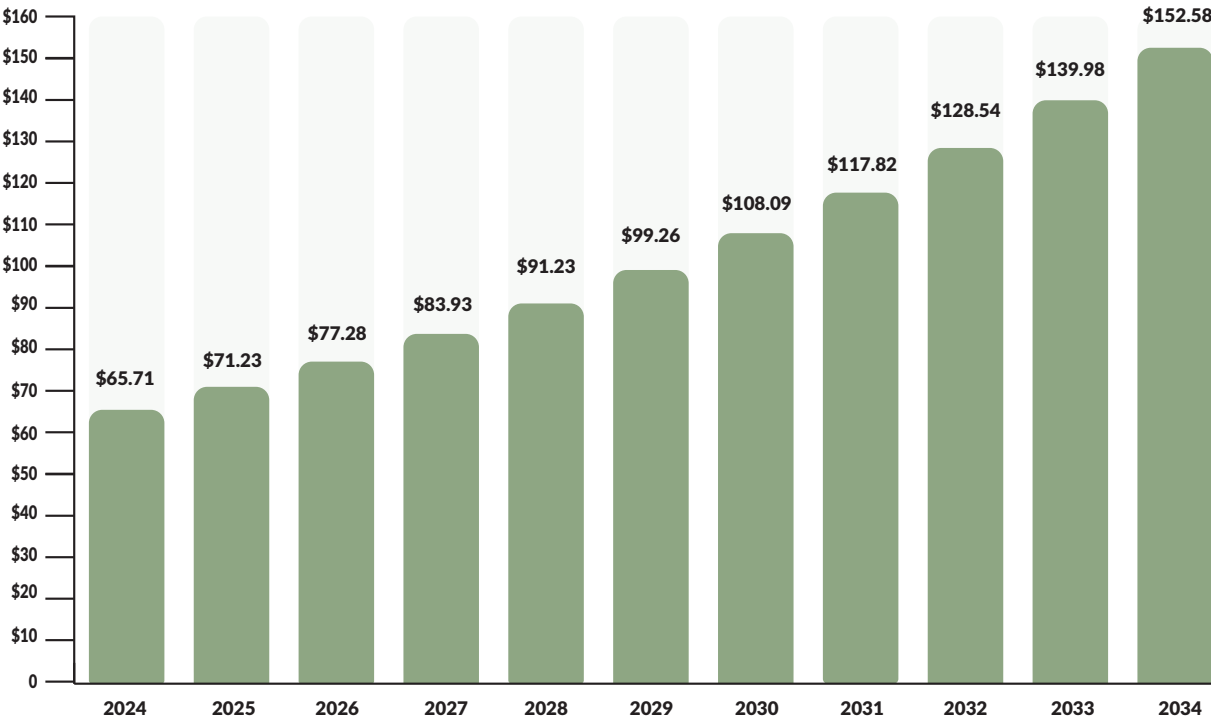
As consumers increasingly demand efficacy, transparency, and safety, cosmeceuticals have emerged as a key driver of innovation and market growth within the broader personal care landscape.

Market Size & Growth Trajectory

The global cosmeceutical market has shown strong year-on-year growth, driven by increased consumer demand for performance-based skincare. This trend is expected to accelerate further, fuelled by ageing populations, wellness trends, and a consumer pivot toward science-driven products.

According to Precedence Research, the global cosmeceuticals market was valued at USD 65.71 billion in 2024 and is projected to grow from USD 71.23 billion in 2025 to approximately USD 152.58 billion by 2034, at a CAGR of 8.83% between 2025 and 2034.

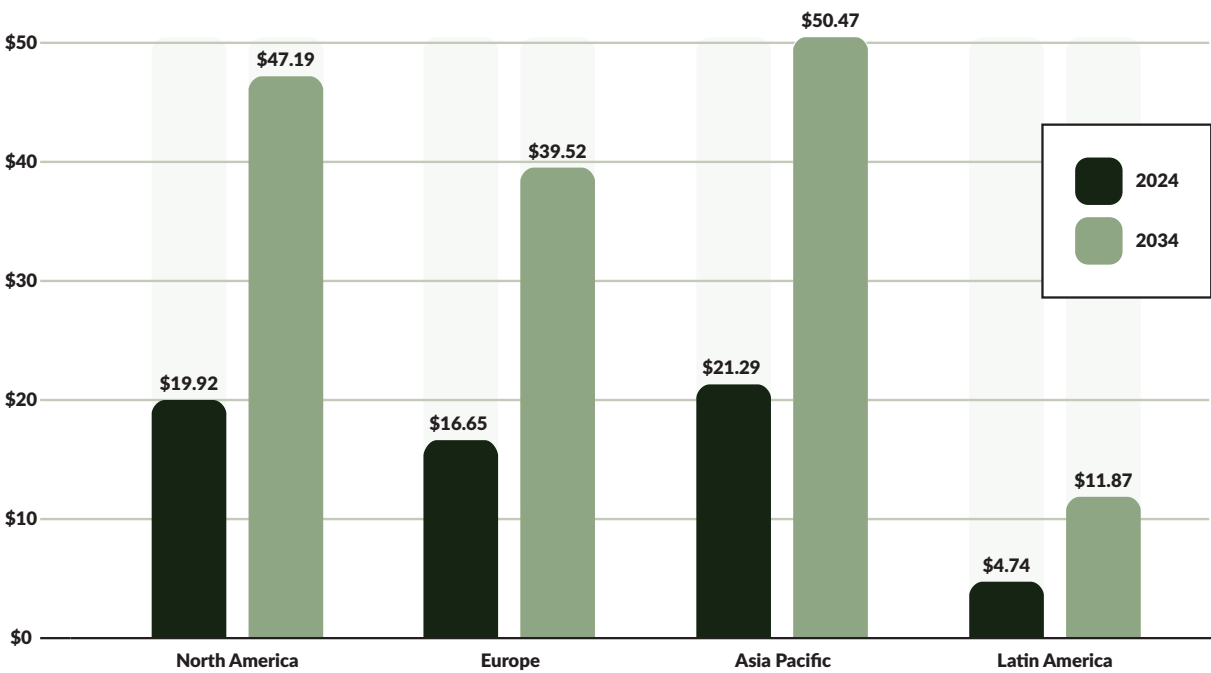
Forecasted Global Cosmeceuticals Market Size (\$bln): 2024-2034



Regional Breakdown:

In North America, the cosmeceutical market is forecast to grow from \$19.92 billion in 2024 to \$47.19 billion by 2034. In Europe, it is expected to rise from \$16.65 billion to \$39.52 billion over the same period. The Asia Pacific region leads in both scale and growth, expanding from \$21.29 billion in 2024 to \$50.47 billion in 2034. Meanwhile, Latin America will see the market increase from \$4.74 billion to \$11.87 billion.

Cosmeceuticals Industry Market Size by Geography (\$bln) by geography: 2024-2034



Key Growth Drivers

Ageing Population

Globally, the population aged 60 and over is expected to grow from 1 billion in 2020 to 2.1 billion by 2050. As longevity increases, so does demand for regenerative, preventative skincare, particularly among consumers seeking to maintain appearance and skin health later in life.

Science-Led Formulations

Modern consumers are more informed and more discerning. Nearly half of Asia-Pacific consumers report a willingness to pay significantly more for skincare products supported by clinical validation. This shift is driving a premiumisation of the skincare category centred on measurable results.

Preventative Skincare Culture

A growing portion of the market is focused not on repairing visible damage, but on proactively maintaining skin health. This makes cosmeceuticals ideally placed to capture demand from consumers looking to incorporate high-efficacy treatments into daily routines.

Rise of Ethical and Plant-Based Products

Plant-based ingredients are in high demand due to their association with sustainability, safety, and ethics. Key supporting data:

- The vegan cosmetics market is expected to grow from \$19.21 billion in 2024 to \$32.56 billion by 2032 (CAGR: 6.85%).
- The clean beauty market is expected to reach \$21.68 billion by 2030, growing at a CAGR of 14.8%.

Personalised and Functional Beauty

Consumers increasingly want targeted solutions tailored to their unique skin biology.

This has fuelled growth in:

- The personalised skincare market is forecast to grow from \$26.2 billion in 2022 to \$48.65 billion by 2030, at a CAGR of 8.0%.
- Consumers now expect tailored skincare based on their unique skin types and concerns.
- Functional ingredients derived from plants and botanicals are in high demand for their eco-friendliness and efficacy.
- AI-powered diagnostics and skin analysis tools are making hyper-personalised skincare more accessible.
- This shift reflects a broader desire for skincare that is both effective and tailored to individual lifestyles.

The Opportunity for VHK

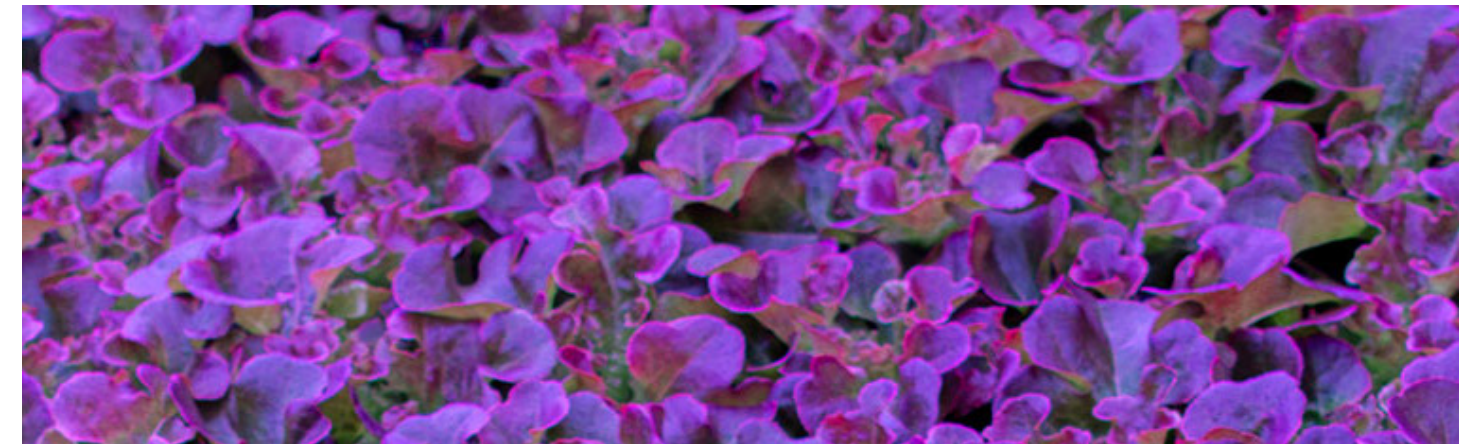
These insights confirm a clear market transition toward clean, ethical, personalised, and performance-based skincare. VHK is uniquely positioned to meet the evolving needs of this dynamic market. With a platform rooted in vertical farming and molecular biology, VHK offers:

- Scientifically validated, recombinant proteins (FGF1, FGF2, VEGF-A)
- 100% plant-based production (Nicotiana benthamiana)
- Non-GMO, vegan, and cruelty-free credentials
- Scalable B2B supply chain for premium skincare brands.

The cosmeceutical revolution is not a fleeting trend – it's a structural realignment of how consumers care for their skin. VHK is not only aligned with this movement; it's cultivating the future of it.

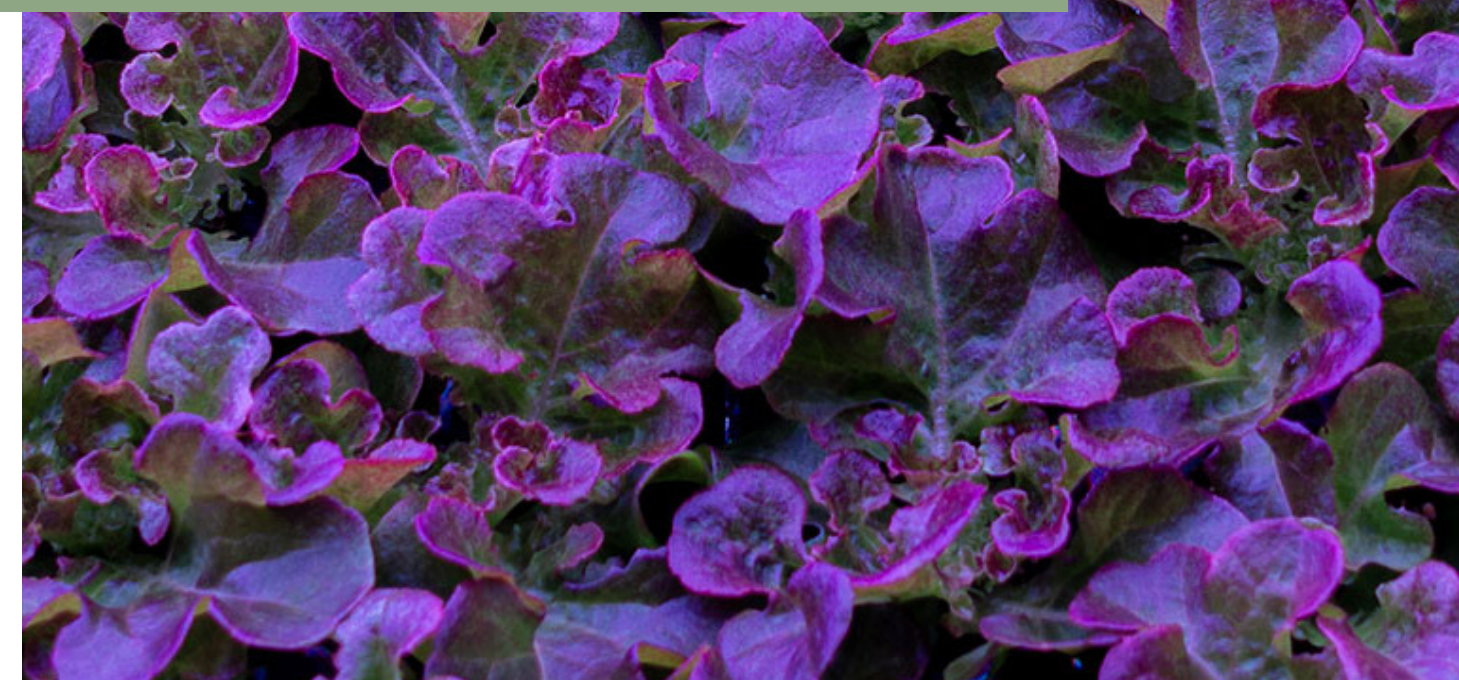
Our value proposition isn't just that we can supply proteins used in elite skincare. It's that we can supply them at a significantly lower cost, with unrivalled purity, consistency, and environmental responsibility.

In a sector driven by innovation, ethics, and results, VHK is not merely following trends – we're helping to set them.



Financial Forecast (2027-2031)

VHK anticipates strong financial performance beginning in 2027, aligned with the commissioning of its first commercial-scale vertical farming facility. Our business model is designed to unlock both high gross margins and strong operating leverage through the scalable production of bioactive proteins using plant-based expression systems.



Year-end Dec (£m)	2027E	2028E	2029E	2030E	2031E
Sales	0.69	2.56	11.49	14.04	16.85
Gross margin (%)	57%	74%	82%	83%	83%
Operating costs	0.80	0.90	1.76	2.18	2.20
EBITDA	-0.41	0.97	7.62	9.42	11.82
Statutory PBT	-0.73	0.10	6.21	6.67	9.07
Net cash/(debt)	0.10	1.30	7.93	5.92	16.26
EV/sales (x)	-	-	3.73	3.05	2.54
EV/EBITDA (x)	-	-	5.62	4.55	3.62

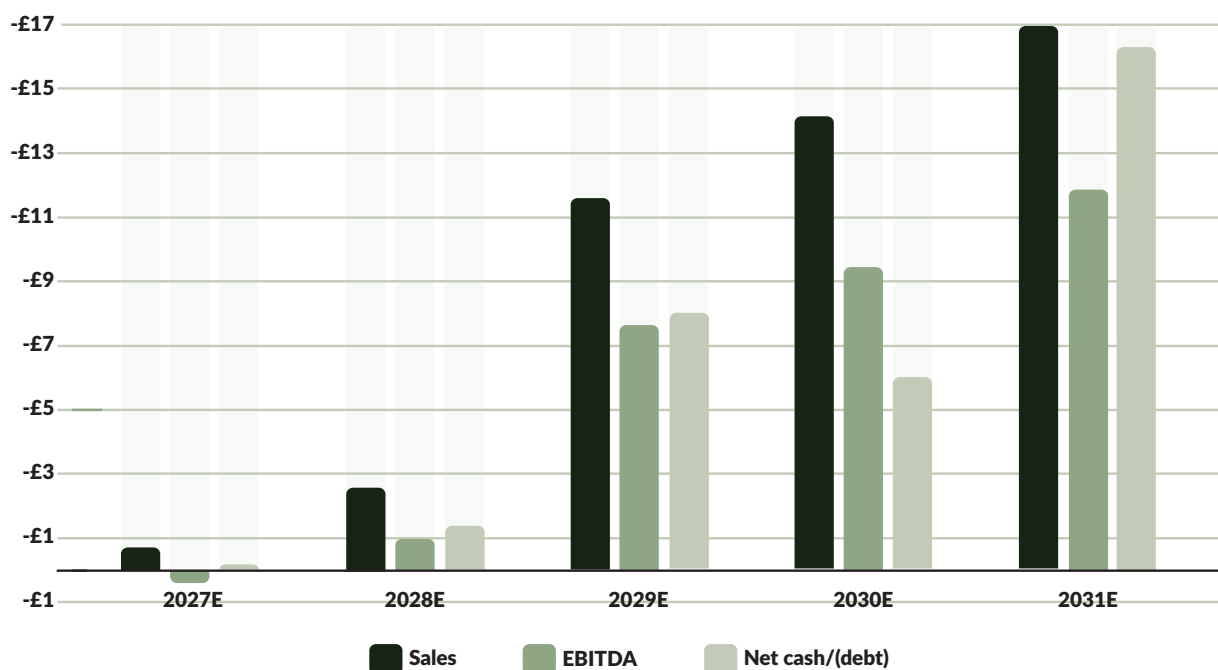
Sales are forecast to grow from just under £700,000 in 2027 to nearly £17 million by 2031, reflecting both increased production capacity and market adoption. This revenue growth is driven by expanding our protein portfolio, scaling operations, and onboarding commercial partners across Europe and Asia.

Gross margins are expected to climb from 57% to 83% over the forecast period. These gains are a function of improved expression yields, automation, and the intrinsic cost advantages of plant-based production over traditional CHO cell and microbial fermentation systems.

EBITDA turns positive in 2028, reaching £11.82 million by 2031. This is enabled by a capital-light production footprint, centralised vertical farming infrastructure, and disciplined cost management.

We also project a consistently strong cash position, ending 2031 with £16.26 million in net cash. The business becomes cash generative early in its lifecycle, with healthy EBITDA margins and low capex requirements per revenue unit.

VHK Financial Forecast (£ mln): 2027-2031



These projections are grounded in conservative assumptions regarding protein pricing, facility throughput, and customer onboarding timelines. We believe they offer meaningful upside potential as customer adoption accelerates and as additional proteins are brought to market.

Use of Funds

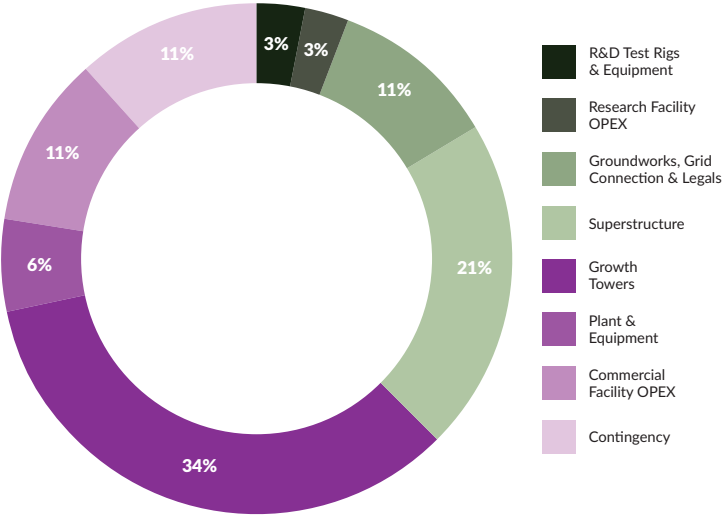
To deliver this roadmap, VHK is raising £8 million (net of costs) in seed capital under a combined SEIS and EIS structure, with Advanced Assurance already secured. The raise includes £250,000 under SEIS and £7.75 million under EIS.

Valuation - Positioned for Growth, Priced for Prudence



Category	Amount (£)
R&D Test Rigs & Equipment	£255,000
Research Facility OPEX	£226,000
Groundworks, Grid Connection & Legals	£850,000
Superstructure	£1,674,000
Growth Towers	£2,748,000
Plant & Equipment	£460,000
Commercial Facility OPEX	£865,000
Contingency	£922,000
Total	£8,000,000

Use of Funds



The proceeds from this raise will be used to complete R&D and protein validation, commission the commercial facility, and initiate commercial rollout. The capital breakdown reflects a balanced focus on infrastructure, operational ramp-up, and de-risking future expansion.

This investment will move VHK from proof-of-concept to revenue-generating operations, setting the foundation for rapid scale and further capital efficiency.

Valuing VHK requires a multi-sector perspective. As a company operating at the intersection of biotechnology, AgriTech, and premium skincare, VHK does not conform neatly to a single industry box – and that’s precisely where the opportunity lies.

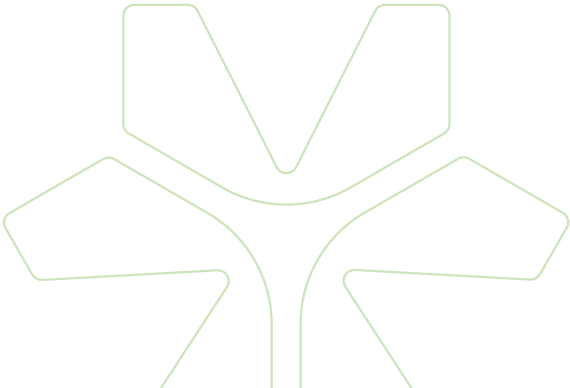
Each of these sectors carries distinct business models and valuation benchmarks. Understanding how VHK compares across them is key to understanding the value proposition on offer.

AgriTech: Aligned with the High-Margin Segment

The AgriTech sector spans everything from autonomous tractors and precision irrigation to lab-grown meat and vertical farming. This breadth creates a wide range of business models, with some tied to commodity markets and others to high-tech IP.

As of Q4 2024, the median EV/EBITDA multiple for AgriTech companies stood at 10.8x, dampened by low-margin players in food and farming. However, those operating at the top of the value chain – offering proprietary IP, automated production systems, and B2B scalability – often achieve significantly higher multiples.

VHK aligns with this premium segment. Its plant-based biomanufacturing model is not a commodity play, but a defensible, tech-enabled production system designed for consistent, high-margin outputs.





Biotech: Avoiding the Risk, Capturing the Premium

Traditional biotech, particularly in therapeutics and diagnostics, often commands strong valuations due to IP exclusivity and global scalability – despite long development cycles and high regulatory hurdles.

As of January 2025, the sector carried an average EV/EBITDA multiple of 18.8x.

VHK shares many of biotech's strengths – such as codon-optimised protein expression, proprietary production methods, and scalable infrastructure – without inheriting its most burdensome risks. By avoiding clinical trials and leveraging non-GMO, cosmetic-grade pathways, VHK sidesteps regulatory friction while retaining the innovation premium.

Skincare & Personal Care: A Strategic Ingredient Partner

The personal care sector, particularly at the active ingredient level, is undergoing rapid transformation. Brands are demanding more from their inputs – not just efficacy, but transparency, traceability, and clean-label claims.

As of Spring 2024, the sector carried an average EV/EBITDA multiple of 22.7x, driven by high consumer demand and brand loyalty for evidence-led ingredients.

VHK is positioned as more than a raw material supplier. It becomes a strategic partner in product innovation – offering scientifically validated, ethically produced proteins that meet both regulatory and consumer expectations.

A Conservative Valuation with Upside Potential

VHK is targeting a public market listing within 3–5 years, subject to market conditions, internal performance, and strategic alignment. Based on forecasted EBITDA of £7.62 million in 2029, and applying the conservative AgriTech median multiple of 10.8x, this implies a potential valuation of approximately £74.3 million.

This projection is intentionally cautious. It does not factor in VHK's:

- High-margin profile (targeting 80%+ gross margins)
- Fully integrated, scalable production infrastructure
- Proprietary IP pipeline
- Expanded TAM through price-disruptive market entry

While a public listing remains the preferred route for providing liquidity and scale, this valuation benchmark offers a grounded, risk-adjusted view of what successful execution could unlock.

Entry Point: Early Risk, Strategic Discount

VHK's current raise is offered at a post-cash valuation of £14 million, with full SEIS/EIS eligibility. This reflects the company's early stage, but also the structural strengths already in place – from validated protein expression and facility infrastructure to a world-class leadership team and a clear go-to-market strategy.

It is not a valuation that assumes success – but one that balances risk with real, scalable upside tied to proprietary production systems and strong market tailwinds.

For long-term investors seeking exposure to next-generation cosmeceutical infrastructure, this represents a rare entry point: early enough to capture significant upside, but grounded in commercial fundamentals, not speculative biotech timelines.

EIS Tax Relief – What It Means for VHK Investors

Investing in VHK qualifies for the full benefits of the **Enterprise Investment Scheme (EIS)** – one of the UK's most generous tax relief programmes designed to reward early investors in innovation-led businesses.

Enterprise Investment Scheme (EIS)

Income Tax Relief

Under EIS, investors can claim 30% of their investment back as income tax relief. For example, a £100,000 investment would entitle an investor to reclaim £30,000 in tax relief, assuming sufficient liability in the relevant year.

As with SEIS, the relief is flexible: you can offset against the current tax year or carry it back to the previous year. This ensures that investors with variable income streams, such as entrepreneurs, business owners, or those who have realised capital gains, can still unlock the full benefit.

Investor takeaway: 30% tax relief upfront means your effective at-risk capital is reduced from day one.

Capital Gains Tax (CGT) Exemption on EIS Shares

Perhaps one of the most attractive benefits of EIS is that any gain realised on the sale of EIS shares is completely exempt from Capital Gains Tax, provided the shares are held for at least three years and the other EIS conditions are met. This means that if your EIS investment doubles or triples in value, 100% of that gain is yours to keep, tax-free.

This exemption turns EIS into a powerful compound growth tool, especially for long-term investors looking to amplify returns without sacrificing a significant portion to tax.

Investor takeaway: Grow your investment, not your tax bill.

Capital Gains Tax (CGT) Deferral Relief (for non-EIS gains)

In addition to the tax exemption on gains from EIS shares themselves, the scheme also offers CGT deferral relief on gains made elsewhere, from the sale of property, shares, or other chargeable assets. If those gains are reinvested into EIS-qualifying shares, the capital gains tax owed can be deferred indefinitely.

The gain only becomes taxable when:

- The EIS shares are sold
- The company ceases to qualify for EIS
- Or the investor passes away

This allows investors to free up capital without triggering an immediate tax bill, redirecting it into high-growth opportunities like VHK.

Investor takeaway: Keep your gains working, not locked up in a tax bill.



Loss Relief

If an EIS investment falls in value, the loss can be offset against income or capital gains, reducing the downside significantly. For a higher-rate taxpayer, this can lower your effective loss to just 38.5% of the invested amount.

For example, a £100,000 EIS investment that returns nothing would:

- Yield £30,000 in upfront income tax relief
- Allow loss relief on the remaining £70,000 at 45% = £31,500
- Result in a total loss of just £38,500 (38.5%)

While no investor plans for the downside, EIS ensures it’s significantly cushioned if it does occur.

Investor takeaway: Defer taxes on old gains and eliminate them on new ones.

Inheritance Tax (IHT) Relief

Like SEIS, EIS-qualifying shares are eligible for 100% Inheritance Tax relief after just two years through Business Relief. This offers investors a powerful tool for long-term estate planning.

Provided the shares are held at death and meet the qualifying conditions, they are entirely exempt from IHT, potentially saving 40% tax on high-value estates.

Investor takeaway: Combine capital growth with intergenerational tax efficiency.

The table below shows several different scenarios of how EIS tax relief helps reduce any losses and magnify any gains.

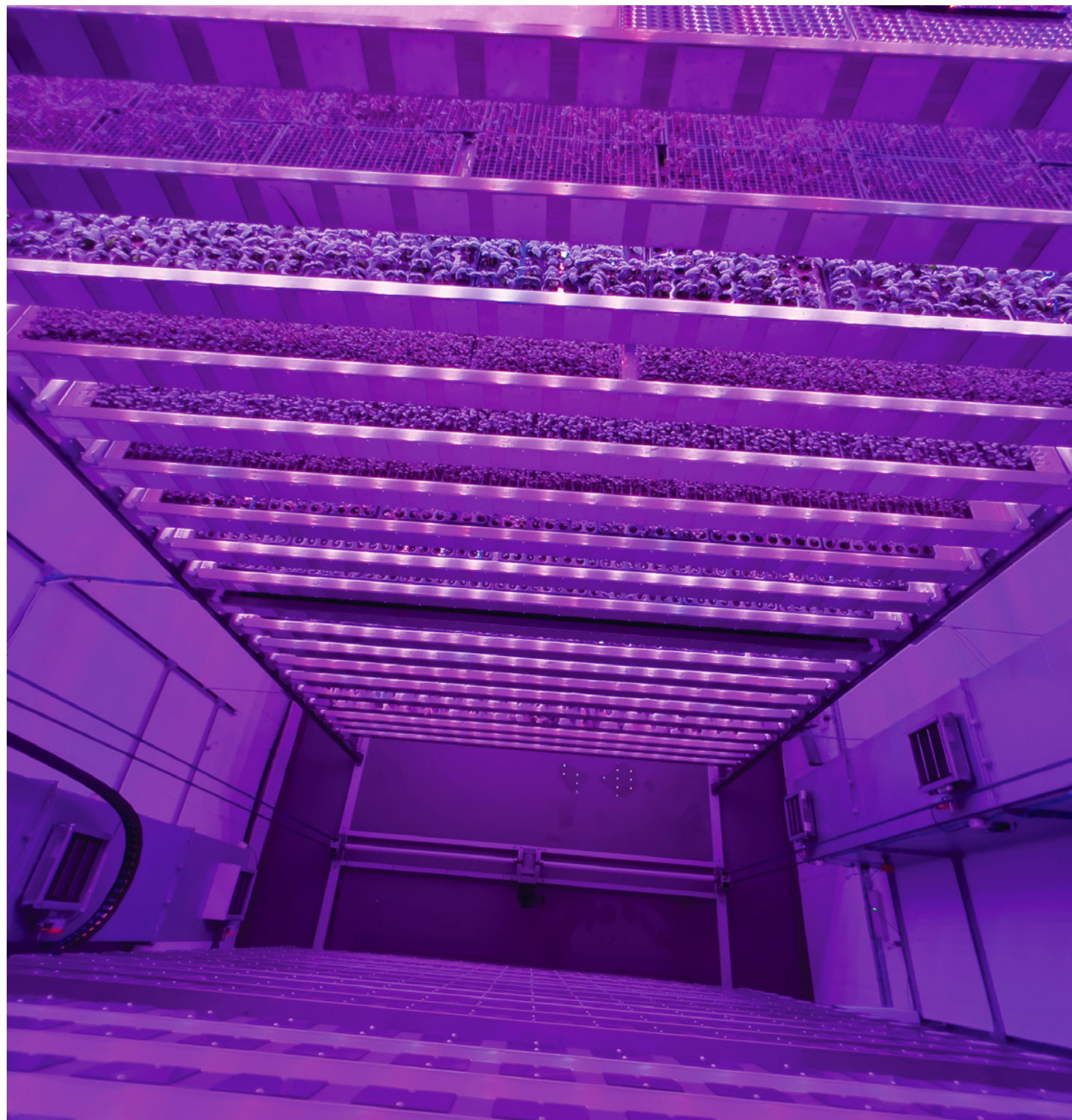
Investment Scenario	Fall to Zero on Initial Investment	Falls 50% on Initial Investment	No Gain or Loss on Initial Investment	Increases 100% on Initial Investment
Initial Investment	£100,000	£100,000	£100,000	£100,000
Net Cost of Investment after Tax Relief	£70,000	£70,000	£70,000	£70,000
Investment Valuation on Realisation	£0	£50,000	£100,000	£200,000
Loss Relief @ 45%	£31,500	£9,000	£0	£0
Effective Gain/(Loss) after Tax Relief	(£38,500)	(£11,000)	£30,000	£130,000
Effective % Gain/(Loss) on Net Cost of Investment	(38.5%)	(11%)	43%	186%

The Government Shares in Your Risk – Not Your Reward

EIS is designed to encourage investment in innovative early-stage companies by reducing the financial risk for investors. Through generous tax reliefs, the government effectively shares in your downside – but lets you keep 100% of your upside.

If your investment doesn't perform as hoped, you can recover a large portion of your losses through income tax and loss relief. But if the company succeeds, your gains are completely exempt from Capital Gains Tax (CGT) after three years. In other words, the government helps cushion the fall but doesn't dilute your return when things go well.

It's a rare case where the tax system is truly aligned with investor risk-taking: less pain on the way down and no extra cost on the way up.



How to Claim EIS Tax Relief

Claiming EIS relief is a straightforward process, but it's important that the correct steps are followed to ensure investors receive the full benefits to which they're entitled.

Once your investment has been made and shares have been issued, VHK will submit a formal compliance statement (EIS1) to HMRC. This confirms that your investment qualifies under the terms of the scheme and triggers the release of your EIS3 **certificate**, which is what you'll need to claim your tax relief.

Note: VHK has already received Advance Assurance from HMRC, confirming that the company qualifies for EIS, significantly de-risking the process for early investors.

This certificate is your key to unlocking the various tax reliefs available.

You then have two options:

Claim through your Self-Assessment Tax Return

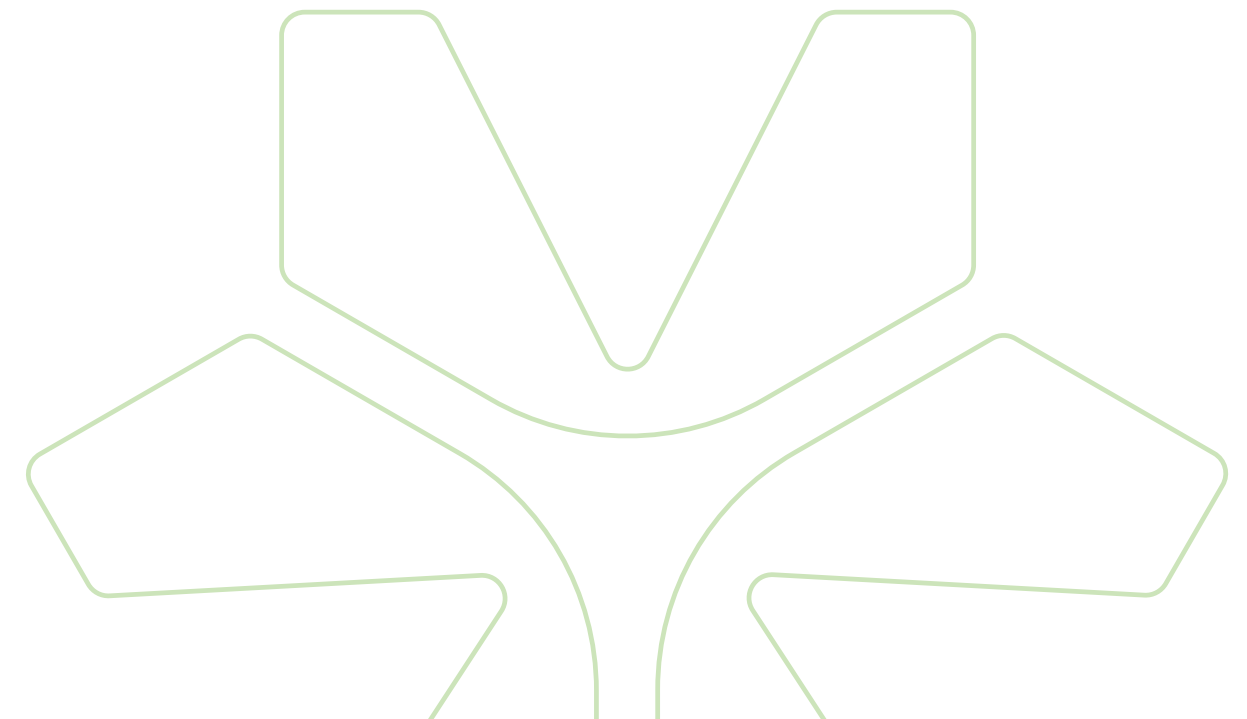
Simply enter the relevant details from your EIS3 certificate in your next tax return. HMRC will process the relief as part of your income tax calculation. If you're using tax software or an accountant, they'll know exactly where to input the details.

Claim via Standalone Form

Alternatively, you can use the standalone form (SA100, along with the EIS supplement) to claim relief outside of your tax return. This is particularly useful if you want to receive your relief sooner rather than wait for the next filing window.

You can also carry back the tax relief to the previous tax year, provided you had sufficient tax liability in that year. This is done using the same certificate and clearly stating that you wish to carry the relief back. It's a valuable feature that enables investors to unlock liquidity more quickly and flexibly.

VHK will work closely with investors to ensure these forms are issued promptly and correctly. For those using advisers or accountants, we will also supply any supporting documentation required to ensure a smooth claims process.





Liquidity With Purpose – Designed for Investor Optionality

While the founders of VHK are committed to building a long-term, globally significant business in plant-based bioactive skincare, we recognise that investors may have different time horizons, objectives, and liquidity needs.

From day one, VHK has been structured to support future value realisation, optionality, and institutional-grade readiness.



Multiple Exit Pathways, Built into the Model

The company's growth strategy has been designed with flexibility in mind. Depending on performance and market conditions, viable exit pathways include:

- **Strategic Acquisition:** A compelling proposition for multinationals in beauty, biotech, or healthcare seeking an ESG-aligned innovation platform with proprietary IP and integrated production.
- **Private Equity Sale:** A credible route as revenues scale, particularly with PE funds focused on sustainability, life sciences, or consumer health.
- **Stock Market Listing:** Our preferred route – subject to commercial maturity, internal execution, and favourable market conditions.
- **Secondary Share Sales:** Structured transactions between existing shareholders and incoming strategic investors may provide earlier-stage liquidity on fair market terms.

Why We Prefer a Public Listing – If We Execute Successfully

Assuming progress continues and recognising that we are still in the early stages of growth – with challenges ahead – a public listing remains VHK's preferred route to delivering investor liquidity.

This path offers several advantages to all stakeholders:

- **Liquidity with Choice:** Shareholders can exit transparently or continue participating in future growth based on their own objectives.
- **Transparent Valuation:** A public listing offers a clear, real-time view of company value and performance.
- **Valuation Uplift Potential:** Historically, public markets assign higher valuation multiples to high-margin, IP-rich businesses compared to private equity or strategic acquirers.
- **Enhanced Commercial Credibility:** Listed status builds trust with tier 1 suppliers, distributors, and brand partners – especially in science-driven industries where transparency and scale are critical.
- **Broader Capital Access:** Public companies benefit from wider access to growth capital, including institutional equity and debt, typically at lower cost and better terms.

Exit-Ready by Design

VHK's operational, legal, and financial infrastructure has been purpose-built to support optionality, scale, and long-term value creation. That includes:

- A clean, founder-aligned cap table
- Auditable financial systems and reporting controls
- A growing and defensible IP estate
- Professional board governance
- Scalable infrastructure across R&D, production, and operations

Whether through listing, acquisition, or continued compounding growth, VHK is being built to deliver enduring value – and to reward the trust of its early supporters with a clear, credible path to liquidity.



Risks & Risk Mitigation

General

An investment in VHK involves a high degree of risk. Prospective investors should carefully consider all information presented in this document, including, in particular, the risks outlined below, before making an investment decision.

This section does not present an exhaustive list of every potential risk, nor is it ranked by priority. It is intended to provide a clear view of the principal uncertainties facing the business and how VHK intends to mitigate them.

VHK is an early-stage company with a limited operating history and no historical revenues to reference. Like any innovative venture, its ability to deliver the business plan depends on the successful execution of multiple parallel activities – including R&D, regulatory compliance, scale-up, commercial traction, and fundraising. Any underperformance in these areas may delay growth or impact financial forecasts.

The A Ordinary Shares being offered are only suitable for investors who are financially sophisticated and capable of evaluating both the merits and risks of such an investment. Investors must be prepared and able to absorb a partial or full loss of capital. Investments should be seen as long-term, illiquid, and complementary to a well-diversified portfolio. Prospective investors are strongly encouraged to seek professional advice before investing.

Non-Traded Company Risk

The A Ordinary Shares are unquoted and not listed on any public market, meaning there is no readily available mechanism to sell shares or determine their market value. Shareholders may have difficulty exiting their investment, and the price they receive (if a buyer is found) may not reflect the Company's intrinsic or future value.

Regulatory Risk

Delays or complications in gaining ingredient approvals (e.g., INCI listing, REACH registration) or navigating market-specific compliance regimes could affect timelines and market access. VHK's non-GMO, plant-derived cosmetic ingredients fall under a lighter regulatory burden than pharmaceutical biologics. We will retain regulatory consultants early, generate batch-level purity and toxicology data in-house, and prepare comprehensive documentation to streamline approvals and reduce risk exposure.

Intellectual Property Risk

Failure to secure robust IP protection could erode our competitive advantage. VHK plans to patent novel, synthetic codon-optimised DNA sequences and retain critical vertical farming and expression system methodologies as protected trade secrets. Our IP strategy will evolve in tandem with the business and is being developed with specialist legal counsel to ensure global enforceability.

Market Adoption Risk

The B2B cosmeceutical sales cycle can be long, and adoption of novel ingredients often requires internal trials, reformulation, and validation. VHK is mitigating this through a focused go-to-market strategy targeting tier 1 suppliers, formulators, and distributors with broad downstream reach. Our free sample and early validation programmes are designed to build trust, demonstrate efficacy, and reduce switching risk.

Funding Risk

As with all early-stage ventures, access to timely follow-on capital is essential. The current raise is SEIS/EIS-eligible and structured in clear tranches to manage investor risk. We are building a capital-light, high-margin model with strong forward-looking narratives and a robust financial model to support future rounds.

Operational & Supply Chain Risk

Delays in construction, supply chain bottlenecks, or input shortages could impact project timelines. Our modular production system – from DNA synthesis to protein extraction- is designed for replication and de-risked via fixed-cost infrastructure partnerships (e.g., with IGS for vertical farms). Critical consumables will be dual-sourced and strategically stockpiled.

Talent Acquisition Risk

Attracting and retaining specialised talent in synthetic biology, vertical farming, and protein purification may become challenging during scale-up. VHK’s mission-led culture, equity incentives, and proximity to major academic clusters in the UK and Sweden provide a competitive recruitment edge. We will actively pursue partnerships with universities and research institutes to build long-term pipelines.

Reputational & Brand Risk

Any deviation from ethical, sustainable, or regulatory standards could erode trust with partners, brands, and end consumers. VHK’s proteins are cruelty-free, animal-free, non-GMO, and traceable. Rigorous QA/QC processes and third-party testing support every batch. Transparency and compliance are not just communication points – they are structural foundations of our production model.

A Resilient Business by Design

At VHK, risk management is embedded in every layer of our platform – from non-GMO expression systems to clean energy infrastructure, traceable QA, and regulatory alignment. This forward-looking approach goes beyond defensive planning. It is designed to build trust with investors, partners, and regulators, reduce friction during scale-up, and create sustainable long-term value.

We’re not just de-risking a startup. We’re building a category-defining company with resilience engineered into its DNA.





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