Viridian
Nature · Logic

Investment Deck
Nature-based data product

Summary

Situation

- Growing markets for 'benefits from nature' lack affordable data.
- Annual, achievable data markets are **£21m UK** and **$642 global**.

Our Solution

- We will create the first **affordable** data product, providing intelligent baseline and optimisation insight.
- We have used our market-leading models for nature-based prioritisation, mapping and quantification on a consultancy basis. These will power the data product.

Opportunity

- 10% penetration of UK nature-based data market by 2025 gives revenue of **£2,450,000**.
- 1% penetration of global nature-based data market by 2028 gives revenue of **$6,420,000**.

The Ask

- **£510,000** to create the data product machinery, distribution channels and launch.
  - human-centred design of product, technology and business plan **already funded by InnovateUK**
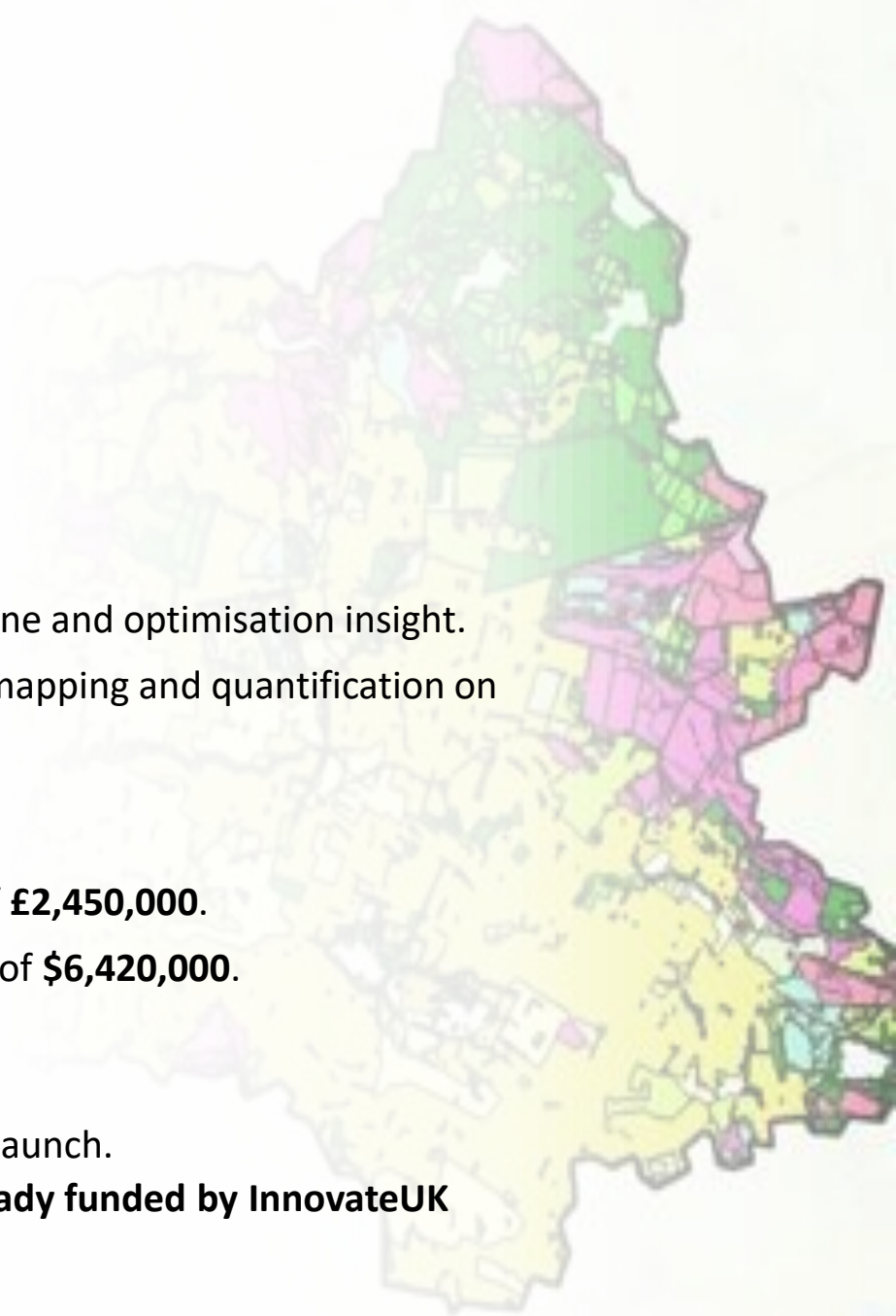
The Problem

Using nature to solve society's problems is becoming mainstream. To be successful, projects need good 'nature-based' information on what to do where, which is **only available through expensive consultancy**.

- The standard cost of creating this information for a single farm varies between £2,000 and £15,000. This is cost prohibitive for most farmers.

- Most commercial trades in 'nature-based solutions' spend between £5,000 and £30,000 on data and modelling. This requires grant funding and long lead times, so is commercially unsustainable.

There are **no low cost, off-the-shelf data products** that help farmers apply for grants, or corporates to undertake trades. Without this, the expense of consultancy services will severely impair market expansion.

Market Opportunity

Market Size of Nature-based Projects

- UK agri-environment grants (ELM) up to **£2.4bn annually.**
  - 219,000 farms in UK will be eligible for grants and need data for applications.
- EU commercial investment into nature-based solutions **at least €5bn.**
  - Flooding, water quality, water supply, carbon, biodiversity offsets, heat, air pollution, culture.
- UN Green Climate Fund **$8.8bn.**
  - UNEP identifies 'high demand' for nature-based data in deploying the Fund*.
- Global 'payments for ecosystem services' were **$48bn in 2018** and growing rapidly.
- Carbon and nature-based offset market **$1bn in 2018** and projected as **$40bn in 2030.**

Total Addressable Market

UK: agricultural market alone offers **£21m achievable data market.**

World: Conservative estimate that 1% of project costs are currently spent on acquiring data and information, this results in a total global **market for nature-based data sales of $642m annually**.

*Via private communication with Viridian

Solution

UK Core Market Offering

Digital, modular data product providing all the information needed for farmers to apply for ELM grants.

- Goes beyond identifying current landscape character (baseline) to show the best changes to make to improve nature's benefits.
- Individual components £30 per annum per farm.
- Full product £200 per annum per farm.

UK Adjacent Markets Offering

The same digital, modular data product will offer a comprehensive range of information required for commercial trades in nature-based solutions, such as those used by Defra pilots, LENS trades and water companies*.

International Expansion

We will create similar data products internationally to address the large and growing nature-based funding for sustainable development, climate and watershed management. These will use satellite feeds and international datasets to fill gaps in local availability of raw data.

*Viridian currently provides data and modelling to all these sectors on a consultancy basis

Product and Technology

## Viridian's unique HydroloGIS™ model

- Only model to properly identify the best nature-based options for flooding, diffuse pollution, erosion, overland flows and ponding. Semi-automated for national coverage using open data inputs.

Advanced GIS modelling

- Mapping all landscape features of interest and identifying nature-based options such as carbon, recreation, pollination.
- Quantifying benefits to evidence funding and trades. Technical risks of investment also possible.

Web-based interface

- Integration (API) with data providers and resellers. Outputs in GIS, image or PDF formats for ease of use by different client groups.
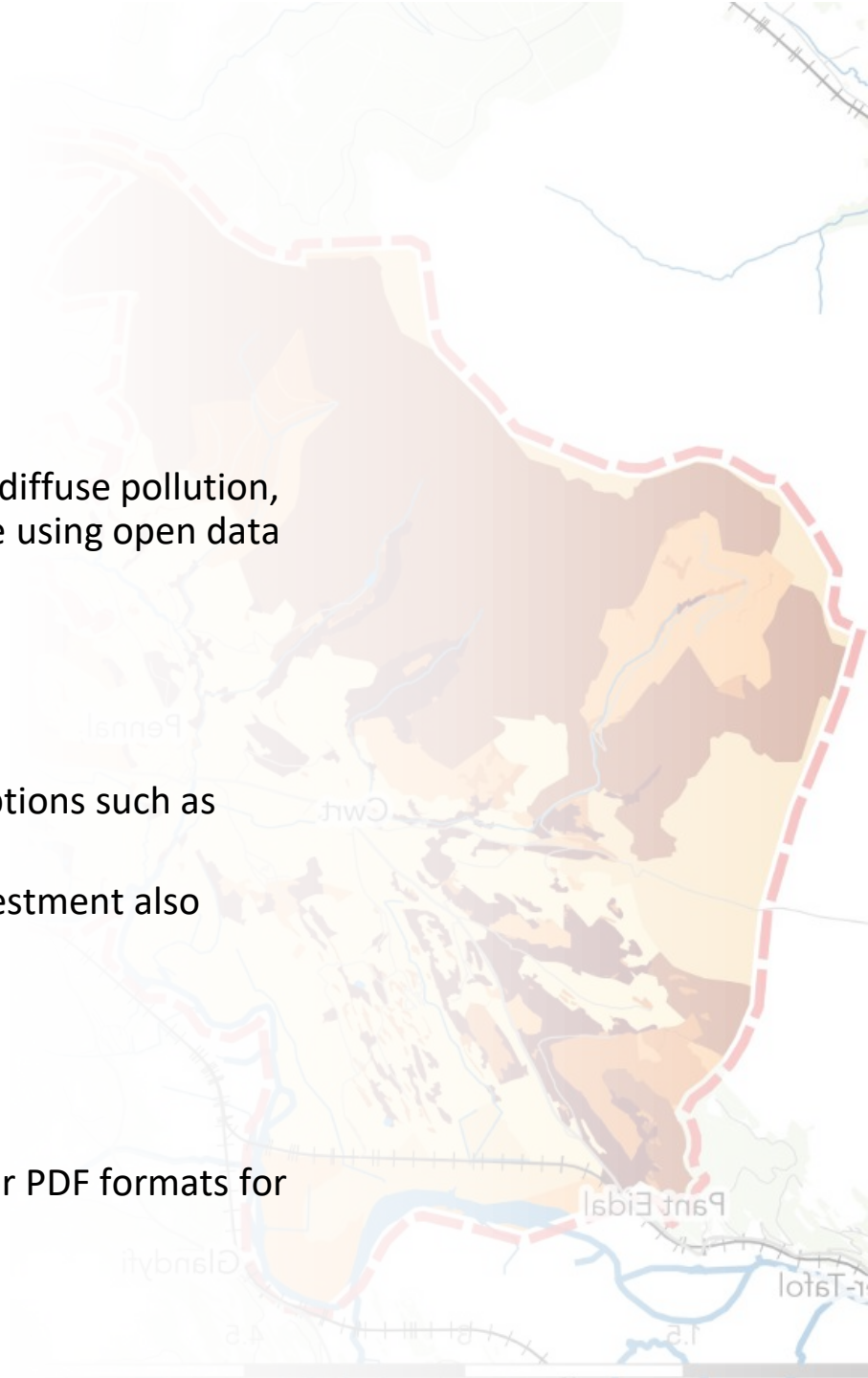
Business Model

UK Market

- Annual subscription at £30/farm for single product component* or £200/farm for full product access. Additional costs for farms/areas greater than 500ha.
  - Farmers: 10% of 106,000 English farms purchase full product resulting in sales of £2,120,000 by 2025 (1 year after full ELM launch).
  - Commercial: 10% of trades covering equivalent of water utility land holdings (830,000ha) resulting in full product sales of £330,000 by 2025.

International Market

- Annual subscription at £30/farm for single product component# or £200/farm for full product access, plus direct satellite data costs as required. Additional costs for farms/areas greater than 500ha.
  - 1% capture of addressable data market resulting in annual sales of $6,420,000 by 2028.

Costs & Profit

- IT/cloud £200,000; staff and overheads £960,000 2025 rising to £1,960,000 2028; data £200,000; 30% revenue on marketing and sales commission of market channels.
- Profit £285,000 2025 rising to £2,590,000 by 2028.

*e.g. slope angle above 3º, 7º, 11º steepness to meet Sustainable Farming Incentive for erosion

components will vary by territory depending on policy and funding drivers

Goals

We believe that **nature-based solutions are essential** in solving the twin climate and nature crises.

We believe that **our low-cost data product will make a material difference** in the widespread application of nature-based solutions. This will offer major benefits to social and economic development whilst protecting biodiversity.

We will become the de facto supplier of nature-based data and insight to the UK. We will supply a very minimum of 10% of farms and commercial projects by 2025, aiming for over 50% market share by 2028.

We will expand internationally once established in the UK, with products selling profitably in the 10 most propitious counties by 2028.

Our consultancy, innovation and data services **will have helped improve the wellbeing and environment of 1 billion people by 2050**.
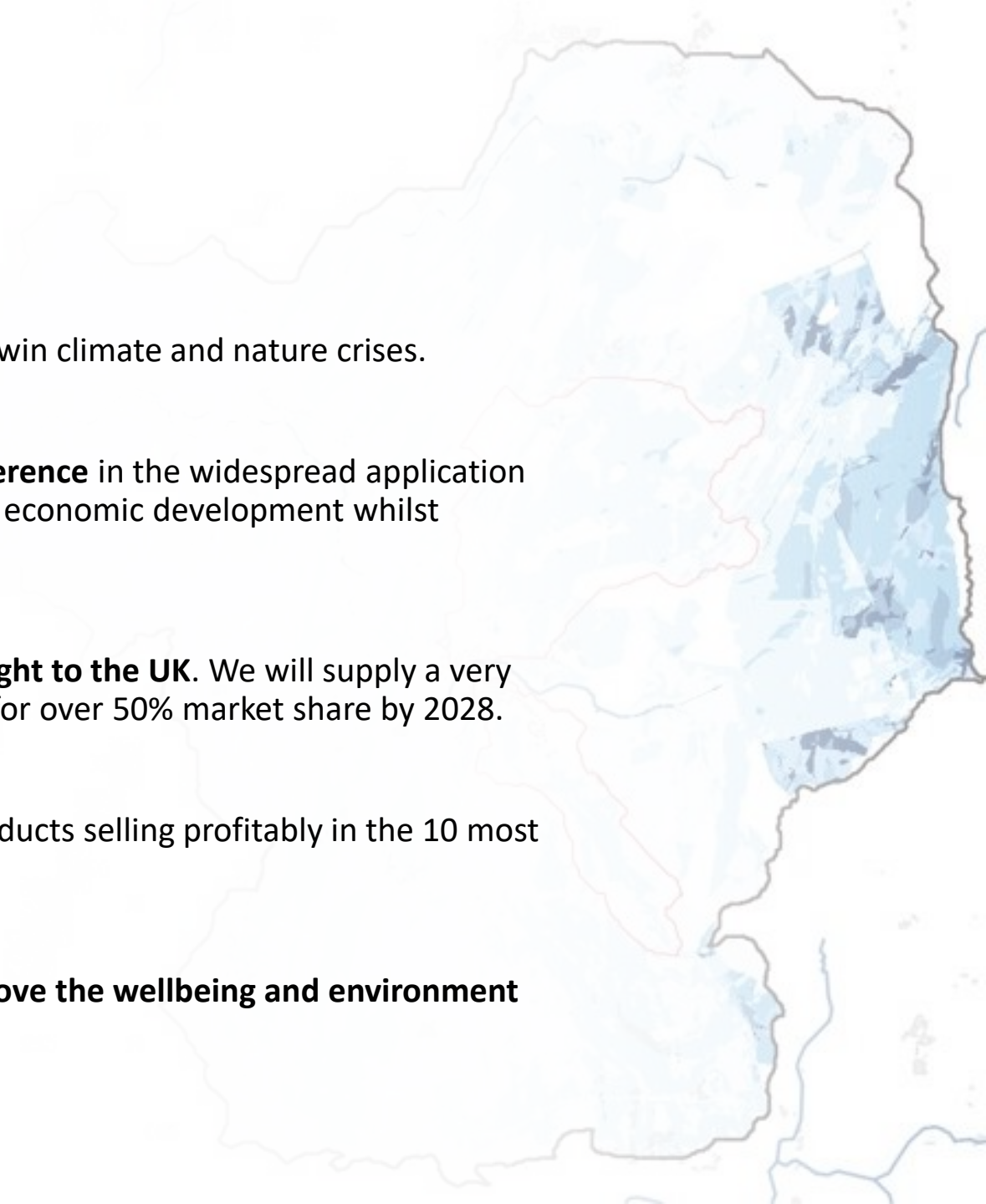
Competitive Landscape

Natural Capital Research offers a natural capital baseline product for UK, but this is generic and does not identify changes that will improve delivery of nature's benefits.

EcoBalance provides insight into soil health, carbon and water services at a strategic level globally. They are not targeting implementation of solutions and are interested in partnering with other organisation to fill this gap.

Earth Genome creates data insights and modelled scenarios for the US market but on a more expensive, consultancy basis.

There are many online tools such as **ORVal, EcoSERV-GIS, ASSIST E-Planner and carbon calculators**, but these are only partial tools and generally **require specialist knowledge** to use.

There are a **huge number of open-source datasets** to power nature-based assessments and planning, but collating them takes time and using them **requires data analytic skills**.

Our product will collate, model and supply many of the above data in a quick, simple and low-cost format, as well as **show the best changes to make** to improve nature's benefits. These will fit with funding requirements within the target countries (UK ELM to start).

Go to Market

Current consultancy clients, partners and project opportunities acquired through networking and word of mouth.

New data product route to UK market will be:

- Existing clients, contacts and partners, e.g. water utilities, CaBA and CLA.
- Farm management tools, e.g. The Land App, Agrimetrics and Farmplan.
- Networks such as Ecosystem Knowledge Network and Green Infrastructure Partnership.
- Direct discussion with land agents.
- Direct discussion with farmer groups and facilitators.
- Traditional marketing such as articles, conferences and webinars.

Global expansion through contacts such as EcoBalance and UNEP; assistance from DiT; direct discussion with relevant networks; and marketing.

Business Traction

Highlights:

- Partner on Defra's 6 year, £200m Coastal and Flood Resilience Innovation Programme (2021-2027).
- Awarded £28,000 by InnovateUK to research and design data product (2021-2022).
    - InnovateUK received 2,700 applications for this grant.
    - Consultees agreed to date include Defra, CLA, United Utilities, The Land App, Rural Solutions, farmer groups
- 51 commercial projects completed or ongoing since 2017 and 14 high-probability future projects.
    - Project discussions include UK, Mozambique, Colombia and Ethiopia.
- 24 individual clients to data.

"We have been really impressed with the tools that Viridian have to offer … The quality of the mapping and modelling work has been fantastic.."
United Utilities
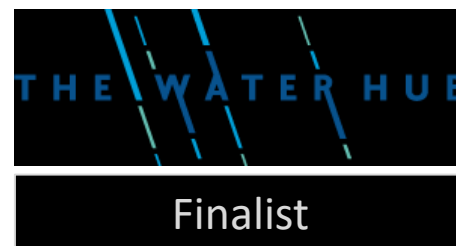
Financial Performance and Projections

Consultancy Profit

Data Product Profit
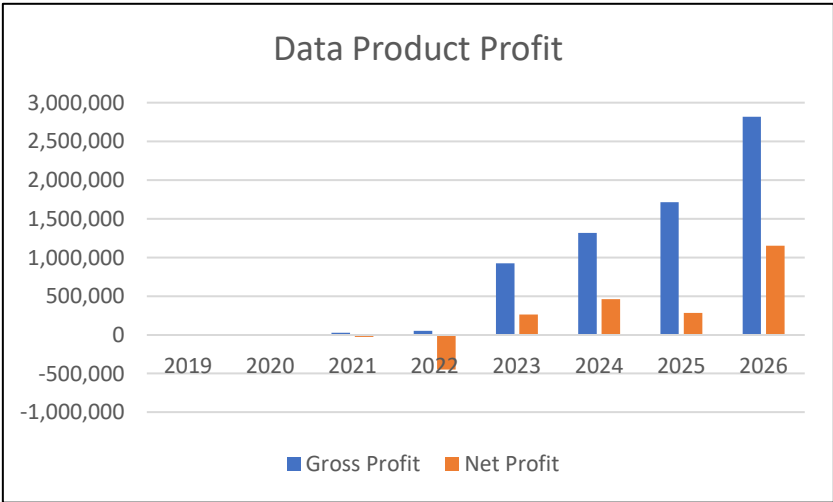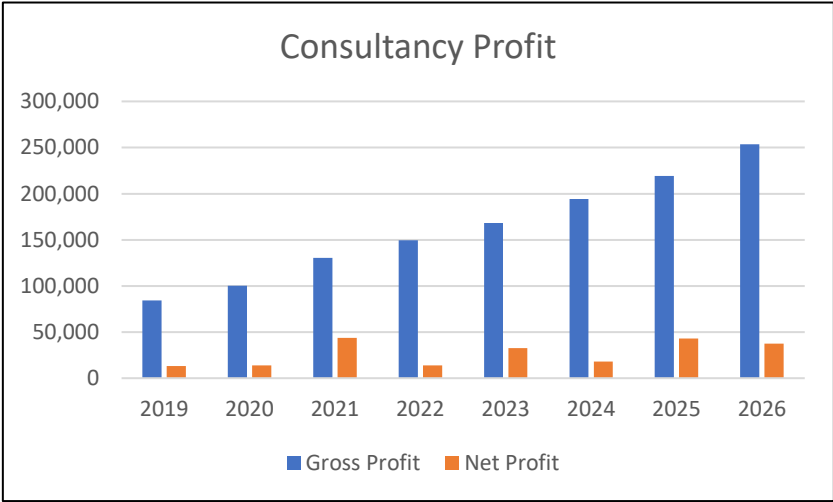
Consultancy income								
	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Income	85,000	101,000	131,000	150,650	173,248	199,235	229,120	263,488
Data/modelling Costs	280	340	500	500	500	1,000	1,000	1,000
Staff	70,000	85,000	85,000	120,000	120,000	160,000	160,000	200,000
Overheads	1,000	1,000	1,000	15,000	15,000	15,000	15,000	15,000
Sales, Marketing, Commission	500	500	500	1,000	5,000	5,000	10,000	10,000
Gross Profit	84,500	100,500	130,500	149,650	168,248	194,235	219,120	253,488
Net Profit	13,220	14,160	44,000	14,150	32,748	18,235	43,120	37,488

Data product income								
	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Income	0	0	27,000*	50,000*	1,320,000	1,885,000	2,450,000	4,030,000
Data/modelling costs	0	0	0	20,000	100,000	100,000	400,000	400,000
Staff	0	0	0	420,000	500,000	700,000	960,000	1,200,000
Overheads	0	0	0	60,000	60,000	60,000	70,000	70,000
Sales, Marketing, Commission	0	0	0	0	396,000	565,500	735,000	1,209,000
Gross Profit	0	0	27,000	50,000	924,000	1,319,500	1,715,000	2,821,000
Net Profit	0	0	-27,000	-450,000	264,000	459,500	285,000	1,151,000

Notes: International product initiated in 2025
          *Income from grant funding

Senior Team

Leon Baruah, Technical Director
- PhD in Extragalactic Astrophysics
- Enterprise Fellow Royal Society of Edinburgh
- Expertise in data, GIS, hydrology, statistical analysis and machine learning

Magnus Willatts, Financial Director
- Finance director of many SMEs since 1993
- Founded, developed and sold three SMEs, including agricultural data company
- Senior management for several environmental consultancies

Angus Middleton, Innovation Director
- Founded, developed and sold environment data product company
- Director of environmental consultancies since 2004
- Creation of Natural Capital Protocol and Innovation Adviser to Natural Environment Research Council
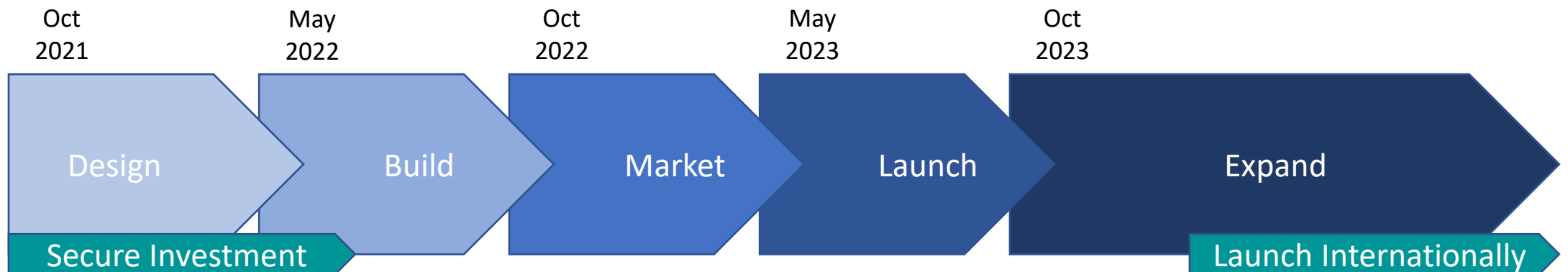
The Fundraising Ask

Already funded

Human-centered product development: completed product design, detailed creation plan, full business model

£43,000 grant funded by InnovateUK and consultees (future partners/customers). Delivery March 2022.

Current Funding Ask

£520,000 (£450,000 product development and launch costs + 15% optimism bias). Agreement in Principle May 2022.

- Activities: data acquisition, build product machinery, build front end, create partnerships, contracts /T&Cs, marketing, launch
- Cost centres: wages, data, IT, contractors/advisers, overheads

Oct 2021	May 2022	Oct 2022	May 2023	Oct 2023
Design	Build	Market	Launch	Expand

Secure Investment

Launch Internationally

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