

MID-TERM PROGRESS REPORT

A Summary: 2024





Supporting sustainable innovation in the horticulture and plant-based food and drink sector

About Growing Kent & Medway

Our mission is to develop Kent and Medway as a UK leader for sustainable and climate-smart horticultural food production and processing.

Growing Kent & Medway is funded by UK Research & Innovation's flagship Strength in Places Fund (SIPF). Our project was awarded £18 million by the programme to invest in supporting innovation for horticulture and plant-based food and drink businesses. The five-year programme started in 2021 and is led by Niab. Our partners include University of Greenwich, University of Kent, Canterbury Christ Church University and Locate in Kent.

This is a summary of our full Mid-term Progress Report and highlights our key activity since the project began and is correct to November 2024.

Investing in Innovation

Creating R&D Infrastcture



£8.6 MILLION

invested in **4** new state-ofthe-art research infrastructure hubs with specialist technical support and skills We have invested £8.6million in research infrastructure, already being accessed by a wide range of horticultural, food & drink and packaging businesses.

We have designed, built, fitted out and delivered critically needed state-of-the-art facilities, adding a raft of ground-breaking research and innovation capabilities to the region.

GreenTech Hub for Advanced Horticulture at Niab

Located in East Malling, this new research facility includes specialist glasshouses, modern polytunnels, controlled environment growth rooms, cold rooms, research winery and client zone.

The Hub received £2.7m of investment from Growing Kent & Medway, with additional funding from the East Malling Trust, Local Growth Fund (SELEP) and Niab. 22 businesses have used the facilities for 12 hours+, with many more in the pipeline.

Research areas include crop resilience to pests or climate change, efficient production systems, and reducing inputs from water to fertiliser.



The Industrial Biotechnology Hub for Sustainable Food & Drink at University of Kent

Based in Canterbury, the research hub in Canterbury has been fitted with high quality, specialist equipment, with £215k from Strength in Places and £55k of in-kind funding.

The BioTech Hub applies cutting-edge approaches to research for the production and processing of high-value foods and plant-based compounds from plant material and waste, pathogen identification and control, and maintenance of healthy soils



Student, Jade Van Wijk at the University of Kent, using the plant-growth chamber on her undergraduate summer placement in the Biotech Hub

The Medway Food Innovation Centre at the University of Greenwich

The Medway Food Innovation Centre opened in January 2023, fully refurbished with state-of-the-art equipment for food processing.

The specialist team support research into food processing, new product development, food safety and storage, with a specialist focus on alternative protein-based food and drink products.

To date, 78 businesses have made use of the facilities at the Medway Innovation Centre for 12 hours or more.



The Industrial Agri-Engineering Hub, at Canterbury Christ Church University

Through our partnership, the Canterbury-based Hub in the Verena Homes building offers facilities for innovative engineering and manufacturing R&D for the horticulture sector.

Canterbury Christ Church is one of only a few UK universities offering the CDIO (Conceiving, Design, Implementing and Operating) international engineering model developed by the Massachusetts Institute of Technology (MIT). It enables students to work on real world systems and products with industry.



The Verena Holmes Building, Canterbury

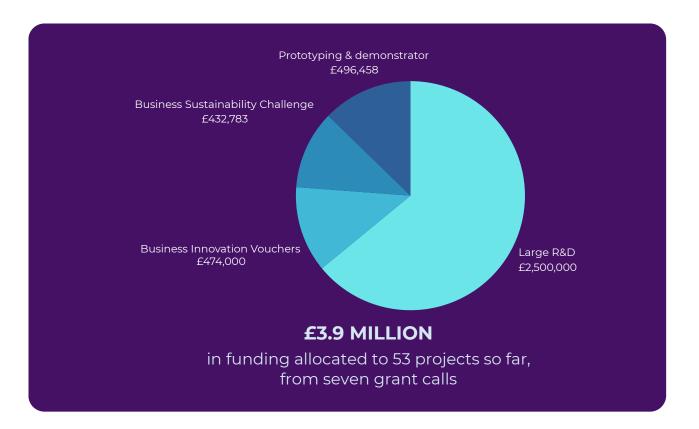
We have so far challenged two cohorts of engineering students at Canterbury Christ Church University to tackle key issues facing our sector using the CDIO initiative, working in material science (developing sustainable materials from horticultural waste) and Agri-Tech (quantifying the ripeness and yield of cherries pre-harvest).

Grant funding

We are investing £5 million in secondary grant funding for R&D and innovation activity and have awarded more than £3 million in grants to date.

These grants support projects looking to innovate and develop new technology or approaches to tackle some of the key challenges facing horticultural and plant-based food or drink production. They facilitate collaboration between businesses and scientists and researchers, as well as other innovative businesses to deliver new insights for the sector.

Our flexible programme design has enabled us to offer four different types of secondary funding to meet the needs of different business sizes and types.



Large Collaborative Research & Development Grants

Businesses could apply to collaborate with leading research specialists in Kent and Medway and apply for up to $\pm 250,000$ in round one, and $\pm 350,000$ of grant funding in round two.

Industry partners of the projects have co-invested £951,467 in round one, and £815,386 in round two.



Prototyping and Demonstrator Fund

Businesses could apply for a share of up to £750,000 for innovation and development of new technologies for commercial scale demonstration in the horticultural food and drink supply chain.

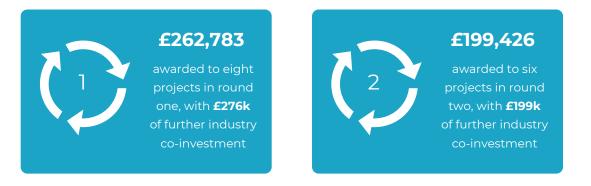


£496,458

awarded to **four** projects with further industry co-investment of **£213,550**

Business Sustainability Challenge

Funding was offered at a value of £10,000 to £50,000 to cover eligible project costs. Designed to encourage collaboration between businesses and supporting projects which might create circular economies or find new value-added uses for waste products to benefit the environment as well as economic growth.



Business Innovation Vouchers

The Vouchers enabled industry partners to access the research facilities and technical capabilities at the GreenTech Hub at Niab, The Biotechnology Hub at University of Kent and the Medway Food Innovation Centre at University of Greenwich.

In round one, funding was awarded for up to 75% of total project costs, up to a maximum grant of £15,000, with grant funds being paid directly to the research organisation. In round two, Vouchers were offered up to 50% grant funding towards research projects costing up to £60,000. They were also made available to businesses outside of the Kent and Medway region.

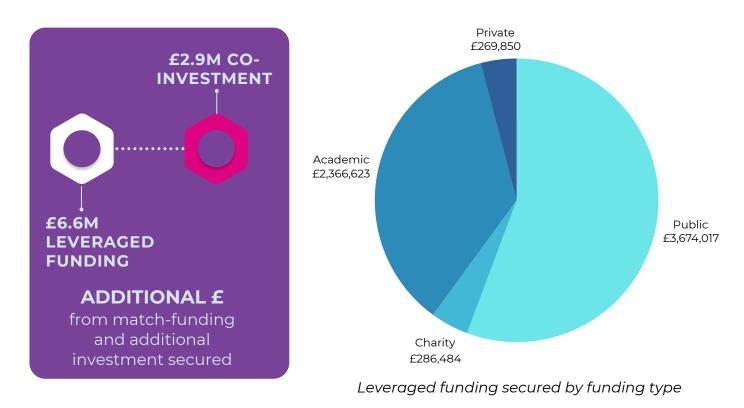


Additional Funding

Our partners have so far secured additional (leveraged) funding of **£6,596,974** as a result of, and related to, their involvement in Growing Kent & Medway. This figure is entirely made up of funds brought in from sources outside of our secondary funding.

The majority of leveraged funds have been publicly funded through UKRI, Innovate UK and Defra's Farming Innovation Programme. Further funding has been awarded via charities, such as the Eat it Up Hubbub Fund, and academic routes, e.g. university innovation funds.

We are actively seeking out investment and leveraged funding to support the legacy of our programme. Examples include our inclusion as a "spoke" for the Bezos Sustainable Protein Centre "hub" led by Imperial College, a \$30m initiative funded by the Bezos Earth Fund, where Growing Kent & Medway will lead the plant-based protein crop research

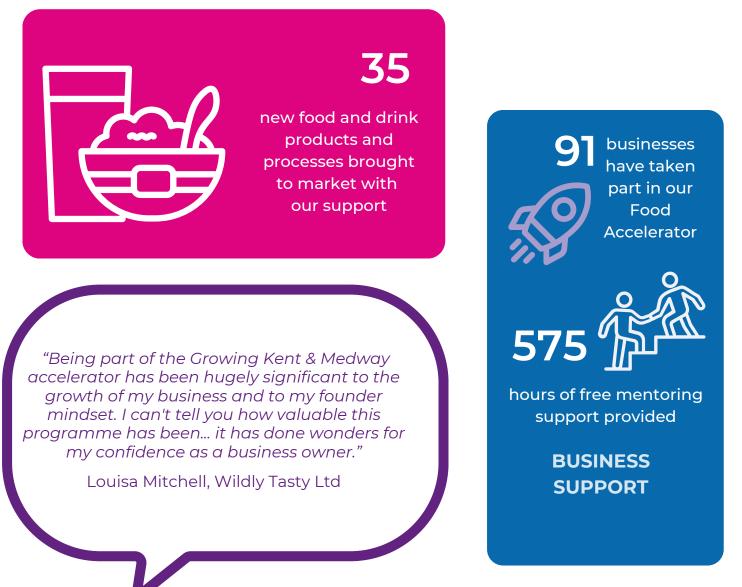


Enterprise support and new products to market

So far, we have provided 12 hours or more of direct support or more than £1,000 of grant funding in our programmes through 383 collaborations and engagements with 224 unique businesses.

This includes through mentoring of people (16 businesses), support for businesses attending our food accelerator workshops (91 businesses), and carrying out research and related activities through our GreenTech Hub (22 businesses), the Medway Food Innovation Centre (78 businesses), the Biotechnology Hub (45 businesses), support provided by our Innovation Growth Managers (84 businesses) and grant funded projects (47 businesses). Many businesses working with Growing Kent & Medway have received support from multiple programmes.

Our Mentoring and Food Accelerator programme, and direct use of our research facilities, have supported businesses to bring a total of 36 new food and drink related products and / or processes or services to market.



Clustering, Interactions and Collaborations

We are connecting industry, scientists, technologies and entrepreneurs and bringing people together through a wide range of events, learning opportunities and networking.

Our 2023 annual Business Innovation Survey showed that 61% of responding businesses agreed that interacting with Growing Kent & Medway had already increased their collaborations with other organisations. When asked how we had helped respondents to increase their collaboration activity, 44% of free text responses mentioned increased networking opportunities was important.

We have extended our reach and impact both nationally and internationally, acting as a gateway for innovation and research in horticulture and the fresh produce sector. Strategic partnerships and engagement have included:

- Visit from House of Lords Select Committee on Horticulture to Niab, spring 2023
- UK-Canada Global Business Innovation Programme visit to Medway Food Innovation Centre for alternative proteins R&D, September 2023
- Visit from Israeli Minister for Agriculture and Rural Development, Oded Forer, to Niab, summer 2022
- Horticulture Trade Mission of the Embassy of the Netherlands in the summer of 2023
- Agri-tech Mission from the British Embassy in The Hague, summer 2024



[Growing Kent & Medway support is] crucial to generating an international partnership that may prove to be of major strategic importance to the UK, particularly in the context of securing access to EU horizon funding. It is a wonderful example of how the SIPF programme can strengthen the national UK research and innovation landscape and support the work of UKRI councils."

Head of Translation and Innovation Capability, BBSRC

A Centre of Excellence

Growing Kent & Medway is leading the way in providing best practice advice and guidance at a local, regional and national level, for example with the publication of our White Papers including, the <u>Workforce 2030 Skills Research Report</u>, the <u>Workforce 2030 Strategy</u> and the <u>Alternative Proteins Identifying UK Priorities</u> <u>Roadmap reports</u>.

Through the Strategy we have developed links between our research Hubs, partners and researchers with businesses, support organisations and local government/civic bodies, including Kent County Council, Low Carbon Kent and the Kent Invicta Chamber of Commerce, Social Enterprise Kent, TIAH, Canterbury Business Improvement District and others. The Strategy also fed into the Local <u>Skills Improvement Plan</u> for Kent and Medway, produced by the Kent Invicta Chamber of Commerce.

Business Growth and Productivity

Growing Kent & Medway is investing in the region to support business growth and improved productivity. Our secondary grant funding for R&D, combined with our business support programmes and expert knowledge and facilities, is enabling industry-led innovation across the region.

As a result, Growing Kent & Medway is attracting new roles, securing investment (as seen through our leveraged funding), bringing businesses to the region and driving business growth.

Even though there is a well-recognised time lag between investment in R&D and innovation, we are starting to see the outcomes of our support. In our 2023 Business Innovation Survey, 68% of respondents said they are engaged in innovation activities, of which 67% said they were engaged in R&D. Of these, 95% stated that they had full-time employees engaged in R&D activity.

Forty-one percent of respondents told us that their Innovation activities have led to new to market products, services or processes in the last 12 months.

We anticipate wider impacts of our support will be realised more generally within employment and productivity (GVA) figures in the much longer-term as businesses, networks, connections and projects mature, and new technologies and innovations are commercialised and adopted.

Advancing Opportunity and Inclusive Growth

One of our goals is to deliver inclusive growth, to ensure that all sectors of society can be part of, and gain from, an improvement in the innovation, business growth and prosperity of the region.

Our aim is for 30% of the support that we offer through our Innovation Growth Managers, the Medway Food Innovation Centre, the Mentoring Programme and the Accelerator to selected target groups and priority areas identified as underserved or under-represented.

These groups include young people (18-30 years), young parents (18-25) and females, who are all under-represented in enterprise and innovation activity. In addition, these groups have felt a disproportionate effect of the impacts the Covid-19 Pandemic and negative impacts on their employment and earnings. Furthermore, priority areas of Thanet, Swale, Medway, and Folkestone & Hythe, were identified, where significant prosperity gaps exist (as evidenced by the English Indices of Multiple Deprivation).

We have so far met our 30% target, providing 63.2% of our support to under-served/under-represented groups and priority areas.

63%05%<

KENT REGIONS

Targeted support to underserved areas of Kent and Medway



Community Engagement

A key element of our strategy for inclusive growth is to deliver social value through community engagement delivered by beneficiaries of our secondary grant funding as well our project team and partners.

Our Social Value Framework enables us to obtain a commitment from grant funded businesses to deliver one or two (or in some cases more) days of community engagement. This can include raising awareness of opportunities or careers in horticulture, food production and underpinning technologies through participation at events, or STEM based (Science, Technology, Engineering, Mathematics) work such as Nuffield Student Placements aimed at gifted and talented year 12 students from under-privileged backgrounds.

Our grant funded businesses have already provided 223 days (preparation and delivery) of social value and with more projects due to start, we anticipate this figure increasing much further in the future.



Grant recipients and research partners ran interactive workshops on soils and plant diseases at the Living Land event at the Kent Event Centre, Detling in May 2023 and 2024. It was attended by children from over 50 primary schools across Kent and Medway



Skills and Opportunities

Additional initiatives to engage young people with the sector and to create new opportunities include;

- MDS Apprenticeships
 - Five skilled graduate trainees benefitted from six-month placements within our communication team to learn about the industry
- Serious Gaming
 - An initiative with Canterbury Christ Church University saw first year BA Games Design students develop 'serious games' to highlight careers in fresh produce sector for young people aged 14-18 years
- TIAH skills portal
 - Development of a Kent-specific hub on leading skills portal for the horticulture sector, profiling local career and training opportunities
- Thanet Earth Centre for Excellence @ Hadlow College
 - Supporting the UK's first Centre of Excellence in glasshouse growing to create a pipeline of new talent to the sector



The official opening of the Thanet Earth Centre of Excellence @ Hadlow College, with from left: Chris Lydon, Vice Principal and Alan Harvey, Head of Horticulture - Hadlow College, Cllr Roger Gough - Leader of Kent County Council, Dr Nikki Harrison - Director of Growing Kent & Medway, Rob James -Technical Director, Thanet Earth

The future of Growing Kent & Medway

Our programme has gained momentum as it has gone on and we will continue to build on our strengths in science, technology and responsible industry innovation, our connected community of experts, business and civic leadership, and our special focus areas in alternative proteins, sustainability and skills for the future.

Throughout our legacy building and future planning, we will continue to keep a focus on the golden thread of inclusive growth. Evidenced by our successes, we believe that there is an imperative for the provision of patient, long-term funding specifically aimed at supporting place-based innovation with a sectoral focus. Such funding will enable projects such as ours to continue to develop and embed comprehensive place-based approaches that address regional challenges and priorities for the future.

If you are not yet benefiting from our network, we encourage you to sign up for free membership and contact our team to see how we can support your innovation and business growth.



Dr Nikki Harrison, Director, Growing Kent & Medway

CASE STUDY: IMPACTS OF SECONDARY FUNDING Canterbury Brewers & Distillers

Canterbury Brewers and Distillers are a popular, family run bar, restaurant, brewery, and distillery, located in Canterbury, led by partners Jodie and Jon Mills. Growing Kent & Medway has provided funding and support to the business, in the form of a £13,810 grant through the first round of Business Sustainability Challenge funding and through our Mentoring Programme. Their innovative project is trialling the production of specialty mushrooms, using the waste grain, water, CO2, and energy generated by whiskey production. Prior to this project, their spent brewing grain was given to a local farmer to use as animal feed. This means that the benefits to Jodie and Jon's business have not only been in the ability to develop new, high-value food products, but also in opening up a new revenue stream by valorising their waste.

Their successful trials of two mushroom varieties – blue oyster and black pearl, have given them the capacity to grow 160kg of mushrooms per week (significantly more than anticipated), which means that rather than just selling the mushrooms in their own restaurant, Jon and Jodie are now exploring new markets and considering building a separate distillery and mushroom farm on a brownfield site to further expand capacity. They are also trialling mushrooms grown on waste botanicals from gin distillation and looking at other possible new grant funding opportunities.

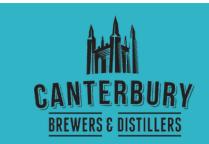
Further, they have trained and up-skilled two employees, as well as themselves, and have the potential to create several new jobs for the local economy. They have generated a high level of interest and engagement through their marketing and social media activities, supported by our communications and networks. They have also created lots of new connections with other businesses, for example, through knowledge sharing with a vineyard in Australia. Jon and Jodie are now looking at other opportunities to apply for new grants.

They say, "Now we've bitten the bullet, and gone for it, we've learned how much easier it was than we anticipated in terms of all the help that it has given us. Without that support we wouldn't have made the progress that we have, so we realized how important it is to seek out these funding opportunities".



"[The grant] provided the resources needed to invest in key areas such as infrastructure, research, marketing, expansion, training, and partnerships.

This acceleration has enabled us to further develop our sustainable initiatives and enhance our overall business operations."



CASE STUDY: INTERNATIONAL REACH



<u>Nutri-San</u> are an innovative biotechnology and seaweed technology company, introduced to Growing Kent & Medway through Locate in Kent.

Their animal feed supplements are produced from sustainably produced seaweed blends (wild and cultivated) with the aims of delivering environmental and health benefits, alongside employment opportunities including in marginalised coastal areas across the globe. Nutri-San work through and with their supply chains to support local and rural communities and enhance producer livelihoods across coastal communities in the Philippines, Indonesia, Vietnam and Zanzibar.

Together with the University of Kent's BioTech Hub, Nutri-San were awarded an Algae UK/ BBSRC grant to conduct research on their seaweed blends and enable them to explore alternative uses for the by-products of their production processes, including as horticultural and agricultural bio-stimulants.

Subsequently they were awarded a Business Innovation Voucher to investigate a method of reducing the environmental impact of commercial seaweed cultivation using biofilms. The continued collaboration between the business and academia has gone from strength to strength, including a recent collaboration with the Biotech Hub looking at developing new techniques for transforming seaweed extracts into a plant based thickening agent for food and pharmaceuticals.

Nutri-San are an active member of Growing Kent & Medway, supporting and engaging with many of our events. Dr Michelle Marin Chau, Communications Director at Nutri-San, also acts as one of our volunteer business mentors to support our startups and businesses looking to scale up, as well as having recently become an honorary member of staff at the University of Kent as one of the Board of Advisers at Kent Business School.



Dr Michelle Marin Chau



Nutri-San CEO, San Chau and the Nutri-San team together with University of Kent's Dr. Rob Barker and stakeholders in Zanzibar at the signing of the Joint Venture Framework agreement with Zanzibar's state-owned seaweed company, ZASCO.



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