



Driving innovation in aquaculture

Presentation to
SEPA Finfish Advisory Panel

sustainableaquaculture.com



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Driving Innovation - A wider reach

SAIC exists for the benefit of the Scottish aquaculture sector.

Our reach and ambition is wide.

We help draw down external funding from the rest of the UK, Europe and further afield.

We aim to be part of the wider solution to global food production and climate challenges.



Our 3 workstreams

DRIVING INNOVATION



Enabling research
& development and
collaborative projects

SHARING INNOVATION



Facilitating knowledge
exchange, networks
and events

NURTURING INNOVATION



Supporting the next
generation of innovative
leaders

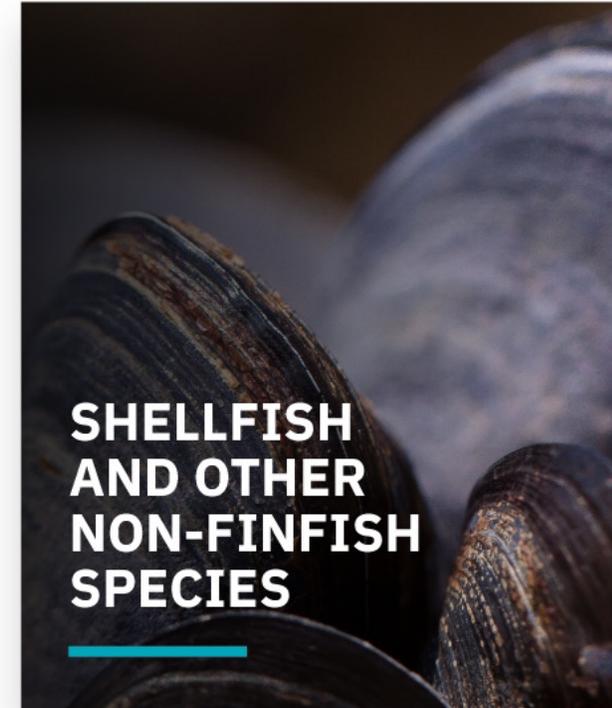
SAIC connects and collaborates with over 260 businesses and academic partners



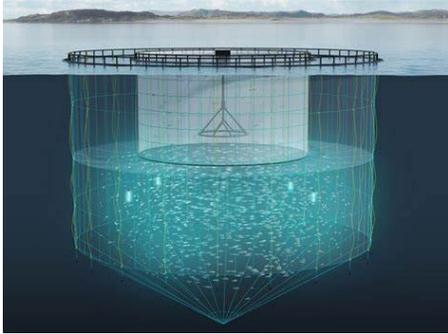
Priority Innovation Areas

Our work is focused on catalysing and co-funding innovation in the areas identified by the industry as being genuine priorities. We call them our priority innovation areas – or PIAs for short.

INNOVATION AREAS



SAIC funded projects



Tubenet™ technology for sea lice control in Scotland (TUBENET-PROOF).
£486,000



Use of serum biomarkers for early differential diagnostics of cardiomyopathies of Atlantic salmon: field and challenge assessment.
£531,000



Optimal *Aeromonas salmonicida* ballan wrasse vaccination through informed immunological assessment.
£352,000



Development of a rapid molecular tool for the identification and management of fouling epibionts in Blue Mussel farms. £209,000



The use of CleanTreat® to support the Integrated Pest Management to unlock additional site capacity, enhance fish health and welfare.
£632,000

Clean Treat trial in action



Already approved & authorized medicine
Driving towards greater efficacy in farming
Benefits fish welfare **AND** the environment

Driving Innovation – a wider reach



UK Seafood Fund: Infrastructure Scheme

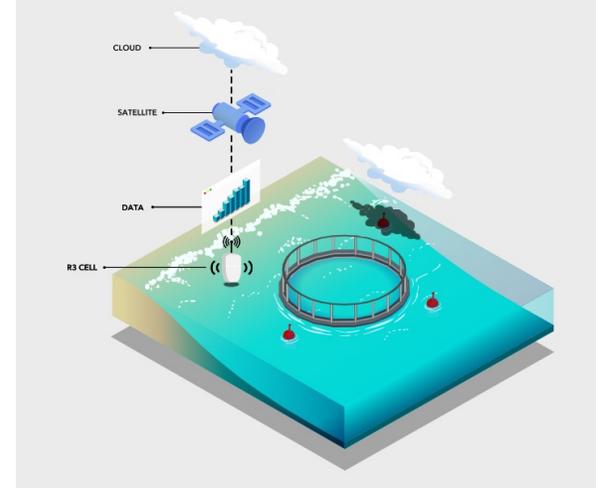


SIF & SAIC



Kelpring - A natural habitat for cleaner fish (Sgurr Services). Aiming at improve cleaner fish welfare and survival rates by providing them with their own natural kelp forest within the salmon pens.

SAIC supported feasibility study and now has received full R&D grant - £250,000



Connected Seafarm – an IoT project (R3 IoT). Aiming to connect world's fish farms via satellites, which will turn raw data into valuable and actionable information to enable farms to make effective decisions.

SAIC supported feasibility study and now has received full R&D grant - £250,000

Other examples – **Using sea cucumber as bio remediators** (Blue Remediation) & **Off shore salmon** (Impact 9)

EIT & SAIC



Enabling research
& development and
collaborative projects



EIT Digital - Open data platform for salmon aquaculture
- Aquaculture Insights (Uhuru United, Signify, Opstoscale, SB Telecom, Loch Duart, SAIC).

Aiming to build an Open Data Platform integrated with an end-to-end, sensor-to-cloud IoT solution to integrate data, sensors and facilitate visualization.

£1M grant



EIT Food – Breeze (University of Stirling, Norwegian University of Science & Technology, Aqua Pharma Ltd, Pulcea).

Innovative sea lice treatment system that combines hydrogen peroxide with acoustic-based technology to improve the efficiency of sea lice removal from fish.

£1.19M grant

BBSRC & SAIC



ROBUST-SMOLT (University of Stirling, University of Aberdeen, University of Exeter, Roslin Institute, Cefas, Mowi, Scottish Salmon Company, Scottish Sea Farms, Cooke, BioMar, Pharmq).

4 year project finishing December 2022, aiming to better understand impact of early life history in freshwater RAS on A. salmon robustness and susceptibility to disease at sea.

£1M grant



Insectrial Revolution (University of Warwick, Durham University, University of Stirling, Beta Bugs Ltd, Ab Agri Ltd, Entomics Ltd, Cooke, Fera Ltd, ZWS, Tesco).

3 year project finishing July 2022, goal is to establish a sustainable UK insect-farming sector to increase agricultural productivity and generate new commercial opportunities via the provision of sustainable, safe and secure supply of fertiliser for agriculture, and BSF-meal for UK aquaculture.

£9M grant

Many others...



Inflatable Tarpaulin Enclosure

£11,200 – SAIC facilitated & HIE funded (£9,100)

Pec Shetland Ltd & 4C Engineering



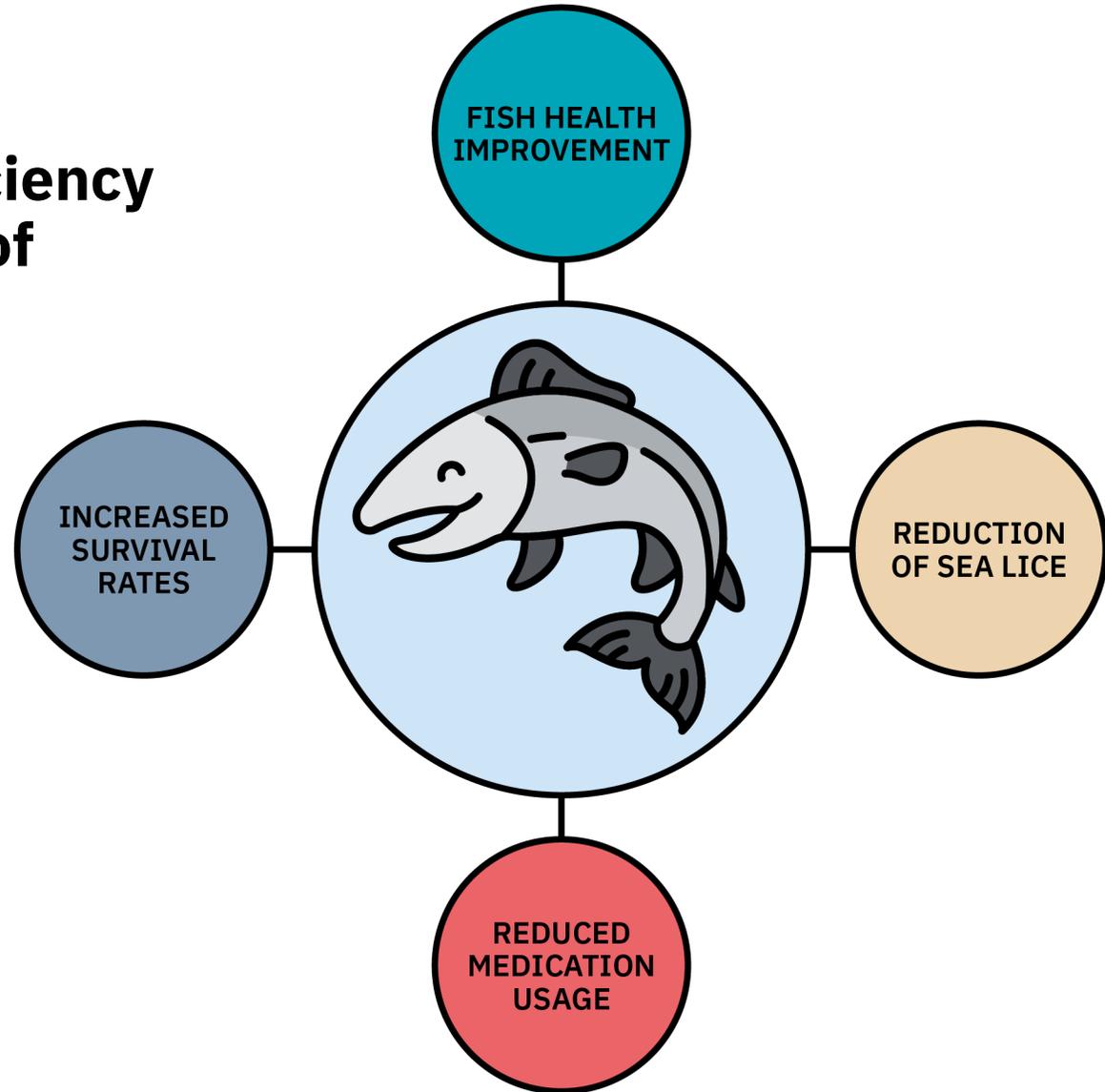
Marine Fund Scotland

SAMS & SAIC

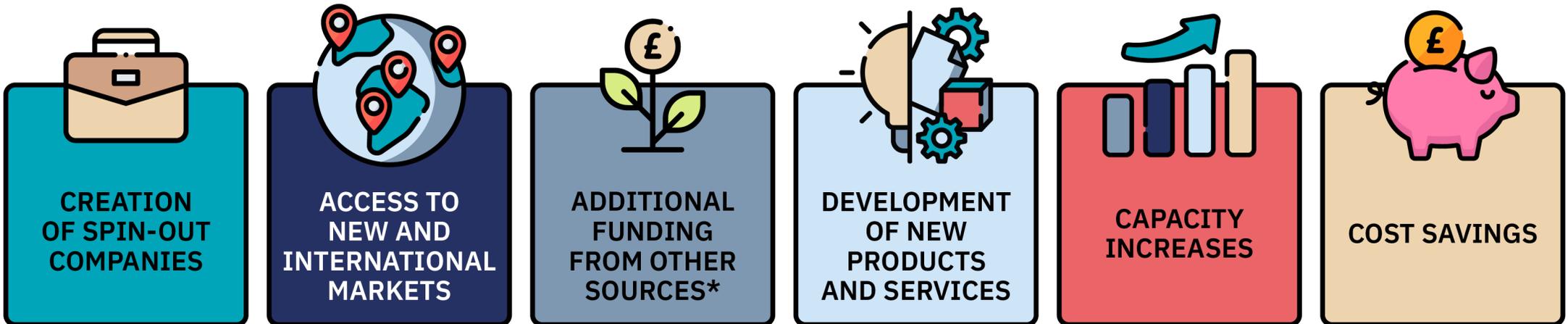
FFHF Dissolved Oxygen

FFHF Phytoplankton

SAIC projects generate both economic and environmental benefits, through improved efficiency and lower environmental costs of production

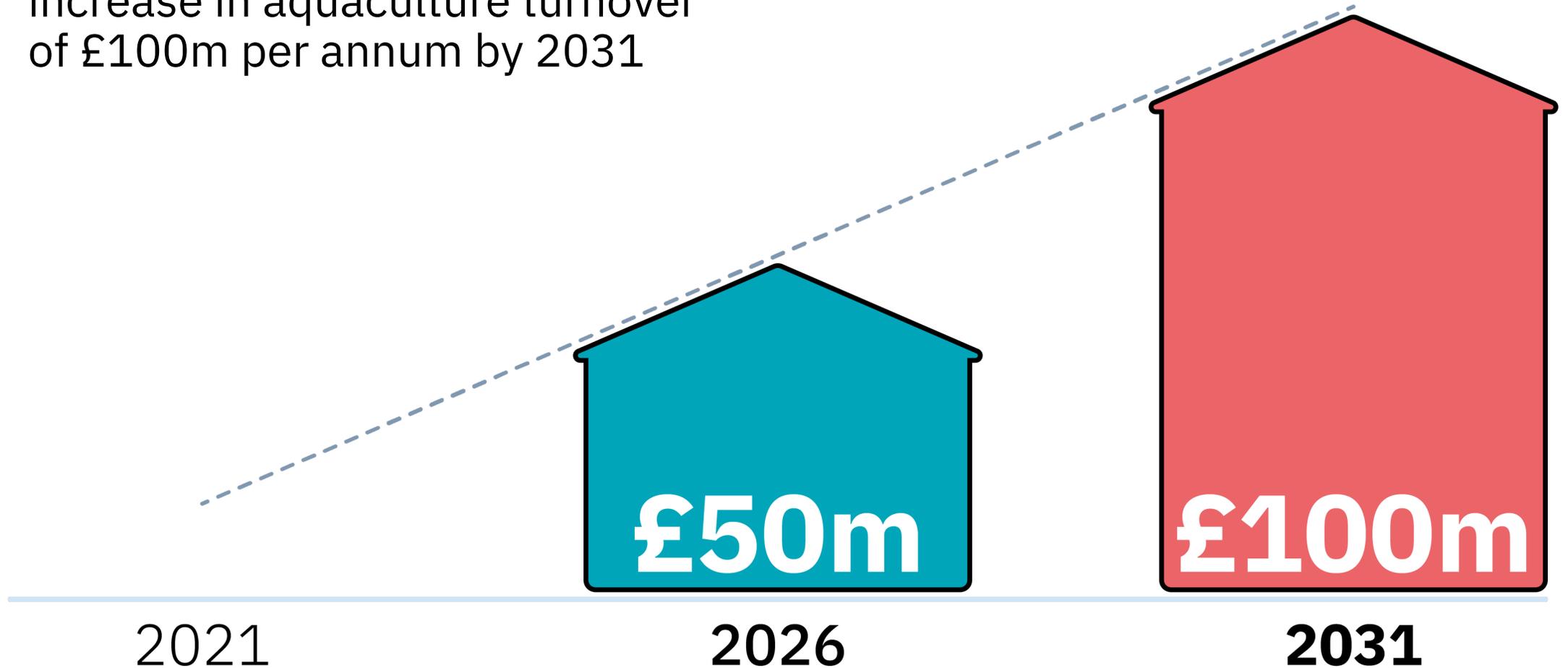


SAIC projects lead to long-term impacts

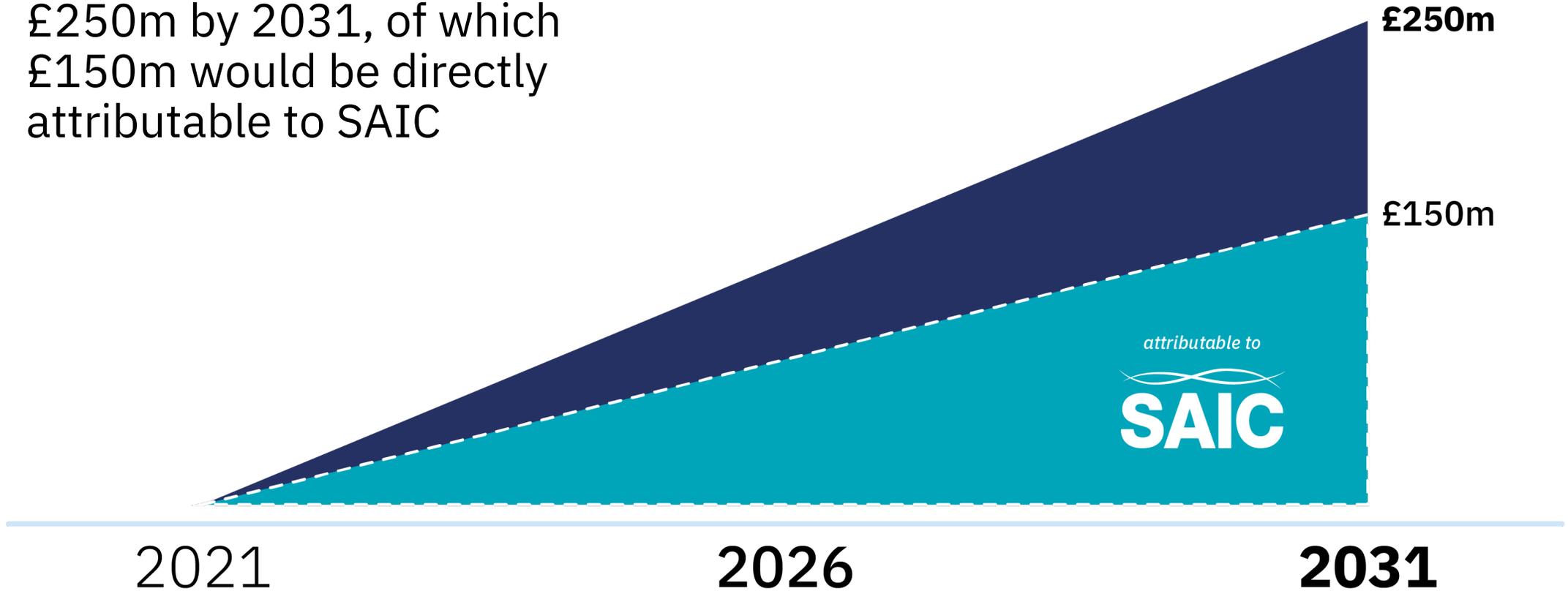


**European, City Deals,
UK Research Bodies*

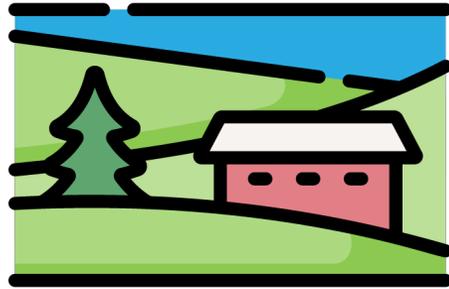
SAIC's 60 projects funded to date could generate a net increase in aquaculture turnover of £100m per annum by 2031



Cumulative production value from SAIC projects may reach £250m by 2031, of which £150m would be directly attributable to SAIC



600



additional FTE* jobs
potentially created in rural
and fragile communities
by SAIC projects

**full time equivalent*

Sharing Innovation

INTERNATIONAL BALLAN WRASSE CONFERENCE 2021



SAIC | INTERNATIONAL
EVENTS | GILL HEALTH
CONFERENCE 2021

In collaboration with  FHF NORWEGIAN SEAFOOD RESEARCH FUND  BioMar  AQUA PHARMA

 MOWI  Cargill  PATOGEN  Scottish Salmon
PRODUCERS ORGANISATION



Aquaculture UK
AVIEMORE, SCOTLAND
3-5 MAY 2022

