



Shaping the Future of Protein

The Protein Challenge 2040:
Accelerating Innovation and Action

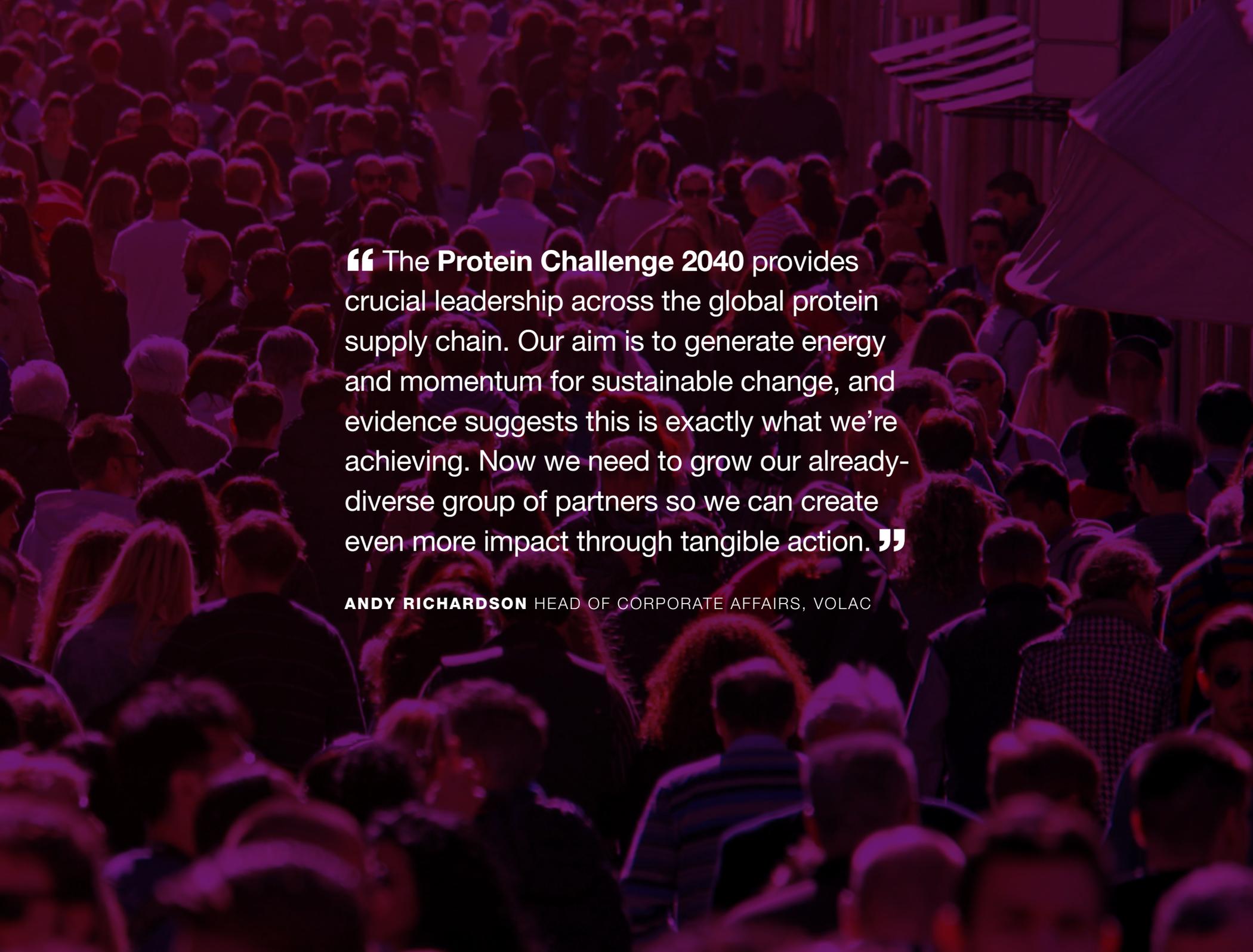


How can we meet the protein needs of **9 billion** people in a way that is affordable, healthy and good for the environment?

Don't sit on the side lines.
Do you want to get involved
in helping shape the future
of protein?

Get in touch.

S.billing@forumforthefuture.org



“ The **Protein Challenge 2040** provides crucial leadership across the global protein supply chain. Our aim is to generate energy and momentum for sustainable change, and evidence suggests this is exactly what we’re achieving. Now we need to grow our already-diverse group of partners so we can create even more impact through tangible action. ”

ANDY RICHARDSON HEAD OF CORPORATE AFFAIRS, VOLAC

Contents

The future of protein	5
The Protein Challenge 2040	6
Driving action	7
Our innovation process	8
What's shaping change?	9
A systemic view is needed	10

PILOT PROJECTS

Pilot Project 1: Feed Compass	14
Pilot Project 2: Chef's Challenge	18
Pilot Project 3: Plant Protein Stamp	20

Pilot Project 4: School Lunch Design Challenge	22
Pilot Project 5: Second Life Protein Innovation Competition	26
Pilot Project 6: Second Life Protein Innovation Hub	27

Our collaborators	28
The Futures Centre	29
Join us	30
About Forum for the Future	31
With thanks	32
References	33



The **future of protein**

Protein is an essential part of human and animal diets, but the ways we produce and consume it are unsustainable.

We envisage a future in which everyone has access to healthy, affordable nutrition, where sustainable animal protein is well-balanced with plant and alternative proteins on the plates of people all over the world, having been produced within environmental limits. The scope of the challenge is vast, but can be realised with collaborative action. We intend to achieve our vision by acting throughout the protein system, addressing critical areas of production and consumption across the value chain.

Do you want to be part of shaping this brighter future?



The Protein Challenge 2040

The Protein Challenge 2040, a ground-breaking international pre-competitive collaboration, has set out to address these challenges head-on.

This is the first time that the global animal, plant and novel protein industries are working together, with the aim of accelerating progress towards sustainable production and consumption of protein, and helping to scale impactful solutions.

Now is the time to put our plans to action and we are looking for leaders to join the challenge.

BY 2020, THE PROTEIN CHALLENGE WILL HAVE:



Raised the profile of protein as an integral and important part of a sustainable food system with key stakeholders, including business and government.



Changed the conversation around protein: from 'good' and 'bad' sources towards a better balance of sustainable protein.

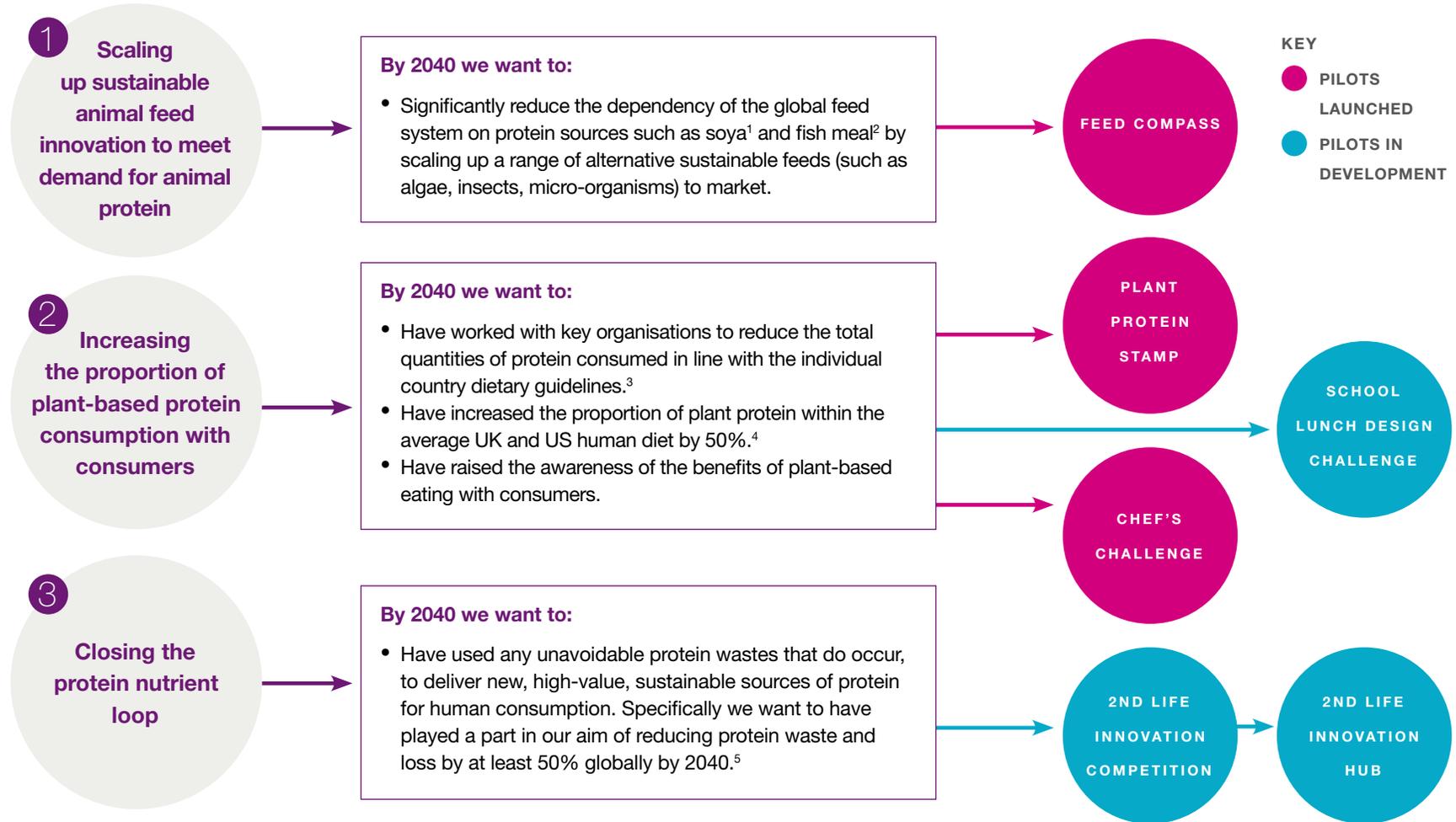


Catalysed action and increased investment in sustainable solutions, and influenced policy that address key hotspots across the system.



Driving **action**

We're focussing on three innovation areas for immediate action to help us achieve our 2040 goals. To accelerate progress, we have designed six pilot projects, featured in this report.



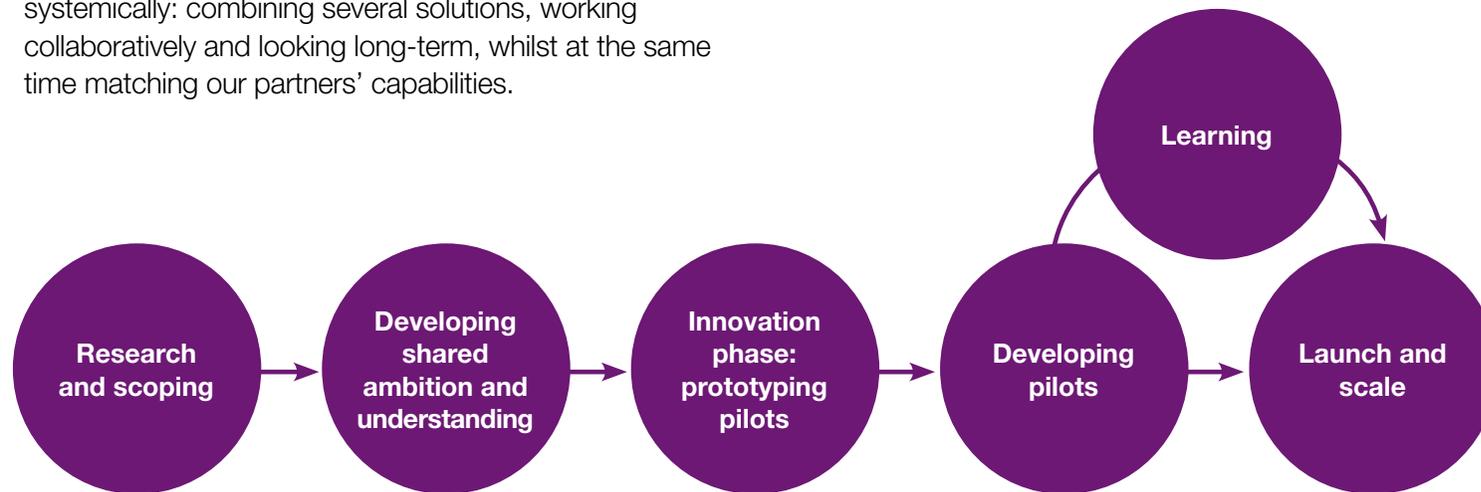
Our **innovation process**

The innovation areas were prioritised as points in the system where change would have the greatest impact.

Having set out our ambition, we investigated the barriers to progress and ran innovation processes with over 250 stakeholders to find the most creative and powerful solutions.

The final projects are designed to address these barriers systemically: combining several solutions, working collaboratively and looking long-term, whilst at the same time matching our partners' capabilities.

We are now launching these pilot projects, enabling learning on the journey to scalable solutions that will shift the whole protein system.



What's shaping **change**?

This is a dynamic and fast-moving agenda, and we're not alone in our drive for action. Some key trends highlight that change is coming:



Governments advocate change through dietary guidelines away from meat protein.

China has committed to halving its meat consumption by 2050.⁶ The Netherlands now recommends that people eat no more than 500g of meat per week,⁷ and updated UK guidelines recommend that beans and pulses are consumed alongside meat and fish for protein.⁸



Investors focus on protein to lessen risks.

The FAIRR Initiative has brought together a \$1.25 trillion coalition of 40 investors urging global food businesses to develop strategies for diversifying investments into alternative and plant-based proteins, to mitigate the risks posed by animal production.⁹



The conscious consumer and the rise of the flexitarian.

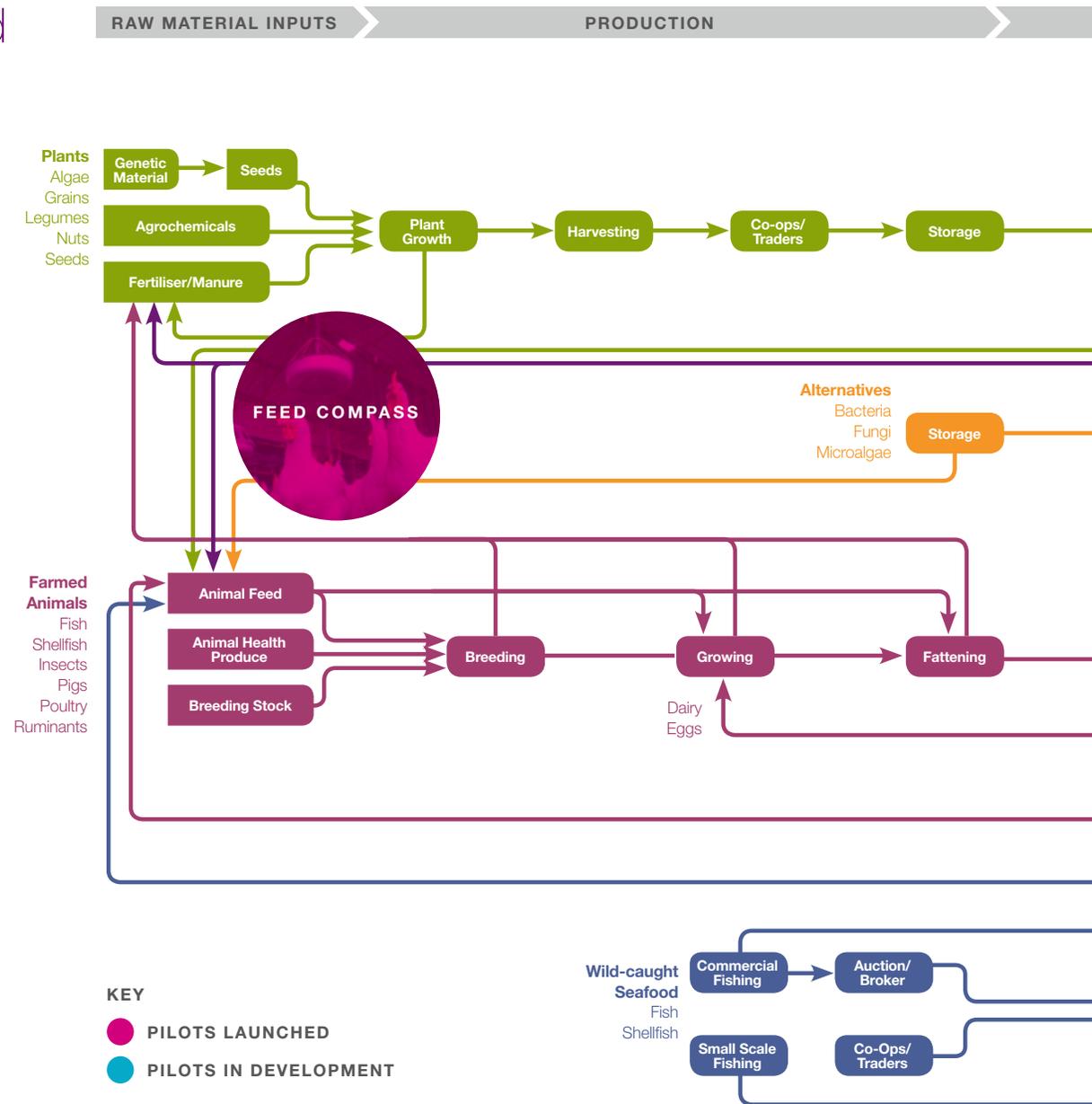
A third of people in Europe now identify as 'semi-vegetarian'. These flexitarians choose to eat meat less often and focus more heavily on plant-based diets. With their number set to rise by 10% in 2017, there is a rising awareness of the health and environmental benefits of a diet that is richer in plants and includes less meat.¹⁰ In the US, 42% of people know more about plant-based diets than five years ago and 63% have tried plant-based alternatives.¹¹

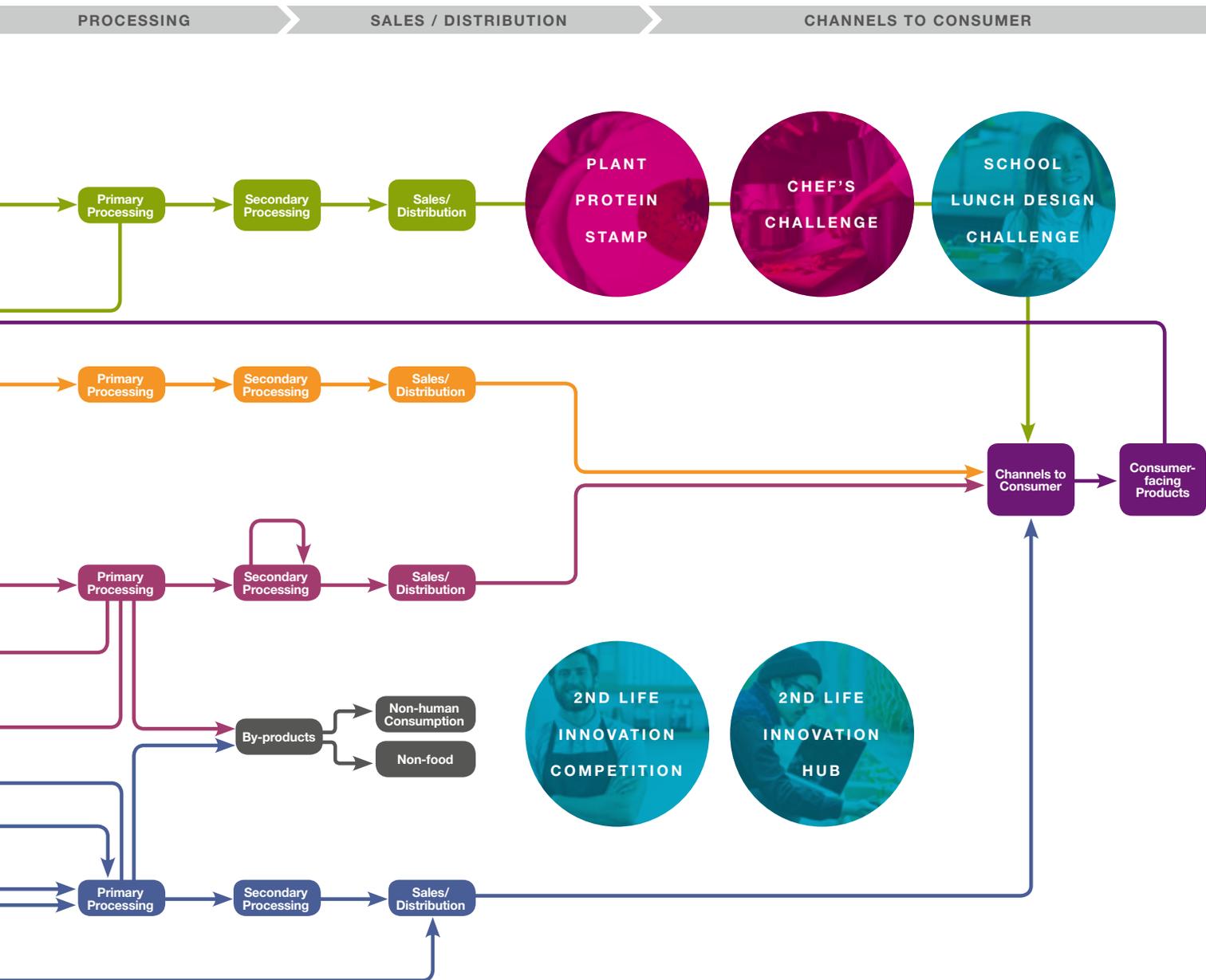
A **systemic view** is needed

We recognise that interventions and solutions are required across the protein system – from field or farm to plate – to change the way we produce, consume and value protein, both today and in the future.

Work has already started, and our projects aim to accelerate this. The innovation phase in 2016 identified six high-impact pilot projects, three of which have been prioritised for immediate action.

We are actively seeking partners and funders to help lead and scale all six projects.





Signal of change

New VC funds for plant and alternative proteins

Last year saw significant investments designed to support plant and alternative protein start-ups. The CQ Green Protein Fund is the first VC fund to focus on sustainable protein,¹² and Powerplant Ventures closed a \$42 million fund to back 'plant-centric' food.¹³ New Crop Capital is a US venture fund investing in companies replacing foods from traditional animal agriculture.¹⁴

Direct investments include Archer Daniels Midland Company's controlling stake in Harvest Innovations¹⁵ and Exo, the insect protein bar start-up receiving \$4 million from AccelFoods.¹⁶

INNOVATION AREA

Scaling up
**sustainable animal
feed innovation**
to meet demand for
animal protein



Over the last 60 years, farmed animals have increasingly been fed on grains, soy and fishmeal, causing serious environmental challenges and using high quality sources of protein that could be feeding humans directly.

Sustainable feed solutions include by-products, insects, microalgae, seaweed, fungi, and methane-fed bacteria. In-depth research across the feed industry highlighted the following key barriers to scaling these sustainable feed options:



PILOT PROJECT 1

Feed Compass



Feed Compass

We want to increase transparency and build demand for animal feed that optimises environmental, social and economic outcomes.

HOW?

We are developing a framework that captures the key criteria that make a feed sustainable, including environmental, economic and social considerations. We will then build an easy-to-use tool that uses the framework to assess the sustainability credentials of different animal feeds.

Upon development, we will invest in communications to gain credibility and promote take-up of the tool amongst key industries.

We want the assessment framework to be used as a communication and decision-making tool for a broader set of stakeholders, such as investors, feed manufacturers, policy-makers, retailers and consumers.

“ We believe that the growing demand for animal-based food can only be met using **feed produced sustainably**. To deliver this, alternative proteins in feed must be widely used. Feed Compass is critical for reaching a shared vision of feed fit for the future. ”

DR. THOMAS KAUFMANN SVP SUSTAINABILITY DEVELOPMENT NUTRITION, EVONIK NUTRITION & CARE GmbH

By the end of 2018 we will have:

- Developed a collaborative framework and tool alongside key industry influencers.
- Gained recognition from key stakeholders in the food industry (e.g. retailers, food companies, animal protein producers and feed companies) for the framework.



Signal of change

Laying the foundations of alternative proteins for animal feed

Calysta opened a new plant in the UK in 2016 to develop its new sustainable fish feed protein ingredient. FishKind™ offers a new alternative to fishmeal, lowering the footprint of the fishing industry.

Ynsect, a European pioneer for sustainable animal feed, is building its first large-scale factory in France to scale up production of its insect protein.

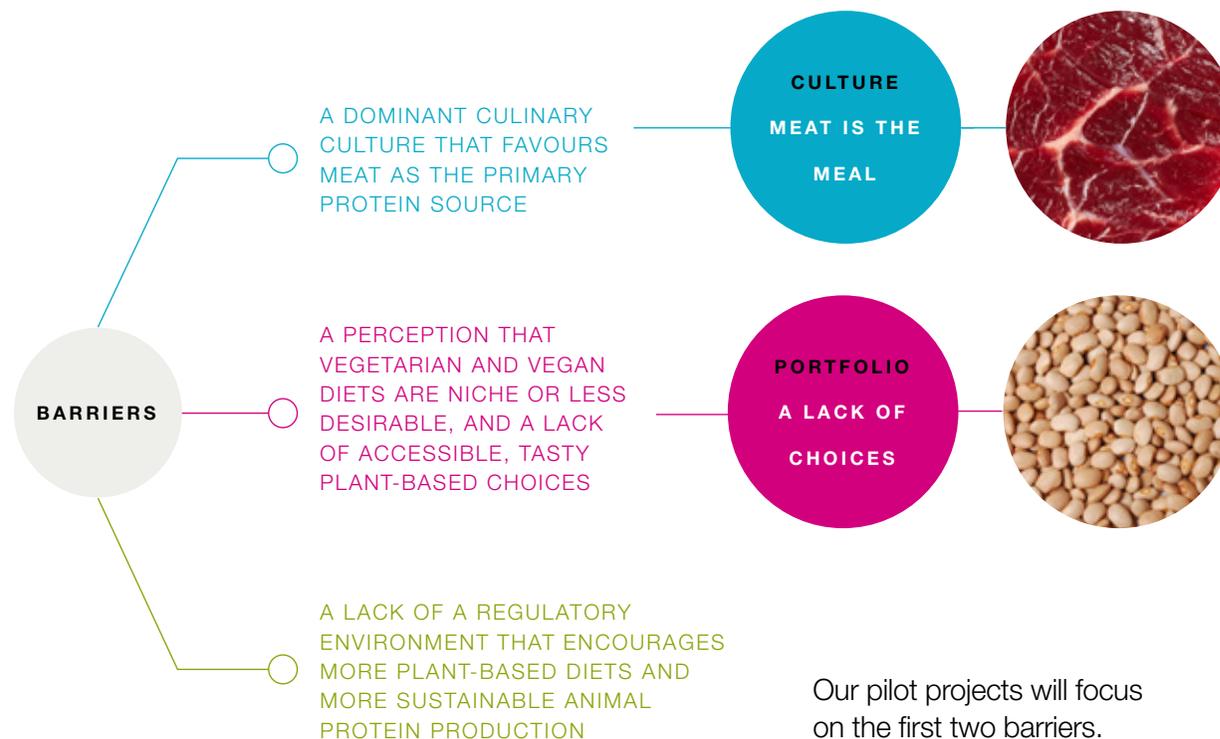
INNOVATION AREA

Increasing the proportion
of **plant-based protein**
consumption with consumers



In the developed world we consume more protein than needed, most of it animal. Estimates suggest Western diets need to reduce meat consumption by half to be within planetary boundaries.

Our research identified three primary barriers to plant-based protein consumption in developed markets:



Our pilot projects will focus on the first two barriers.



Signal of change

New groups formed to drive plant-based eating

New alliances and associations are being formed to support the growth of plant-based protein, including The Green Protein Alliance in the Netherlands, The Plant Based Foods Association in the US and the World Resources Institute's Better Buying Lab.

PILOT PROJECT 2

Chef's Challenge



Chef's Challenge

We want to encourage people to increase their consumption of plants and grow the availability of tasty plant-based meals.

HOW?

We are recruiting leading chefs in the UK, who are influencers of food trends, and who have a direct impact through providing in-demand food to consumers.

Their involvement will drive a peer-to-peer communications strategy, with chefs leading the conversation with other chefs, influencing food caterers to increase their tasty plant-based meal options.

The campaign will also harness the international profile of some of these chefs and we will develop approaches which can be tailored to different global contexts in the future.

“Every day we reach thousands of people through the food service venues we operate across the UK; a great chance to **communicate the importance of sustainable diets**. In particular, the opportunities for more plant-based protein options, vital to reducing environmental impact whilst supporting health, social and commercial needs.”

MIKE HANSON HEAD OF SUSTAINABLE BUSINESS, BAXTER STOREY

By the end of 2018 we will have:

- Curated a portfolio of plant-based recipes and techniques from influential chefs.
- Supported influential food catering businesses to trial successful plant-led dishes that are rolled out across their businesses.
- Supported the development of the curriculum to create transformation in a leading culinary college.



Signal of change

Pret goes green

After trialling as a pop-up in London's Soho, high street chain Pret a Manger has decided to make its all-vegetarian and vegan shop permanent.

Despite expecting sales in Veggie Pret to drop 30%, after two weeks, they were 70% up on the previous year.¹⁷ Pret is now looking to replicate this success with a recently-opened second London branch in Shoreditch, before launching a new veggie range in all their US shops.¹⁸

PILOT PROJECT 3

Plant Protein Stamp



Plant Protein Stamp

We want to help people easily identify and choose more plant-based protein options, so that they see them as a viable or even preferred alternative.

HOW?

We will create a nationally recognised on-pack plant protein label in the US, indicating the amount of protein in consumer packaged goods.

After testing the criteria and the branding of the stamp, and once an initial group of food manufacturers are using it on packaging, it will be launched with a consumer communications campaign.

A third-party organisation will be enlisted to administer the stamp in the long term, to continue to influence consumer choices.

“ Providing consumers with an **easy-to-understand, trustworthy indicator** of a good source of plant-based protein stands to make shopping easier and lead to more diverse, great-tasting diets. ”

LISA BOYD DIRECTOR, WELLNESS STRATEGY, TARGET

By the end of 2018 we will have:

- Recognition of the stamp amongst key stakeholders.
- The stamp launched, and a consumer campaign activated.
- The stamp featuring on a range of consumer packaged goods.
- Raised profile and increased recognition of the health benefits of plant-based eating in the US.



Signal of change

New plant-based alternative products are launched

In 2016, Impossible Foods and Beyond Meat both launched plant-based burgers that aim to replicate the look and taste of meat. Boosting the range of dairy alternatives, Ripple Foods launched a plant-based milk from pea protein that contains more protein than other non-dairy alternatives like almond or coconut milk.

PILOT PROJECT 4

School Lunch

Design Challenge



School Lunch Design Challenge

We want to influence childhood food preference by getting more plant-based protein meal options into the US school lunch program.

HOW?

We plan to engage school administrators and lunch directors, who are responsible for menu creation and food purchasing.

By introducing a range of current options available from food company providers, we will raise their awareness of the availability and accessibility of plant-based food.

This work will help us provide a stronger business case to food business providers for developing plant-based menu options.



Signal of change

Big Meat gets into plants

US meat giant Tyson Foods has invested in plant-based meat alternative start-up Beyond Foods.¹⁹

This could signal greater collaboration between traditional animal protein companies and innovative alternatives, to give the consumer wider choice.

By the end of 2018 we will have:

- Launched a design challenge focussed on plant-based protein options for school lunches that meet USDA requirements.²⁰
- Created a strong portfolio of cost-effective plant-based protein foods for school lunches.
- Created a number of new options for school lunches by food companies.
- Increased demand for plant-based proteins as part of school lunches.



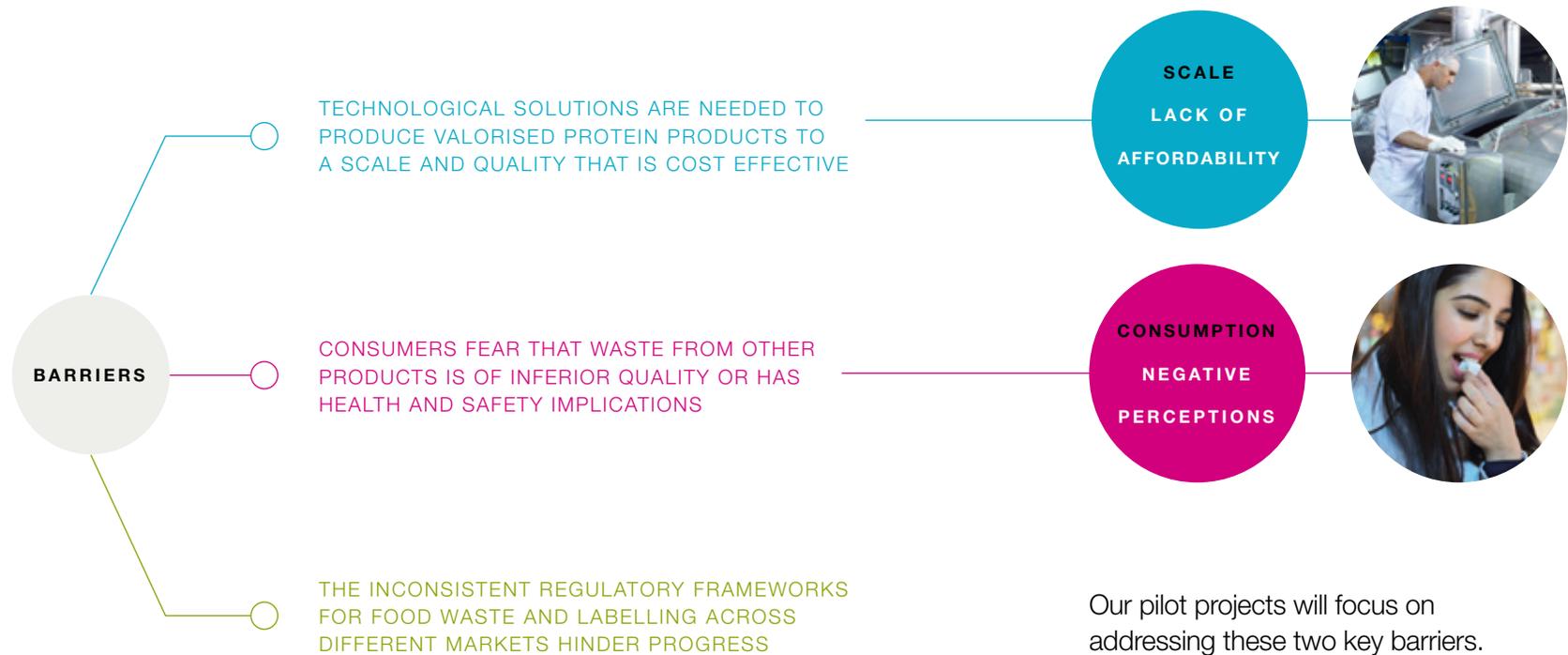
INNOVATION AREA

Closing the protein nutrient loop



Approximately 30% of all food grown globally is wasted. Protein waste makes up a significant proportion of these losses. As a precious resource, avoiding protein waste and loss and then capturing these valuable nutrients to feed humans is the focus of our work.

Our research identified three barriers to valorising protein for human consumption.²¹



PILOT PROJECT 5

Second Life Protein Innovation Competition

We want to encourage the development of new valorised protein food products at a scale and quantity that is both cost effective and attractive for retailers and consumers.²¹

HOW?

We want to launch a competition which offers a fund, in-kind support and an associated communications package to develop a new valorised protein product (or potentially a new business model that is successfully launched within the marketplace).

The focus of the competition will be how a specific product – using second life proteins – can be successfully commercialised.

We will then use the competition and fund to build case studies demonstrating how food waste can be transformed into nutritious foods for humans, to share and apply lessons more widely.

By the end of 2018 we will have:

- Successfully run the competition, where the winning team is in progress to launch to market.
- Demonstrated that food loss can be used to feed humans, and raised the profile of valorised protein products amongst consumers.
- Helped a retailer create a successful market/brand proposition around a valorised protein product.
- Developed a powerful set of communications messages plus recommendations to tackle negative consumer perceptions.



PILOT PROJECT 6

Second Life **Protein Innovation Hub**

We want to address some of the challenges associated with investment in technological, social, process or economic solutions, so we can produce high-quality, healthy and nutritious valorised protein products for humans, at scale.²¹

HOW?

We plan to establish a European online innovation hub that will bring together stakeholders working on protein valorisation solutions.

This innovation hub would facilitate knowledge exchange, build an easy-to-access evidence base around the benefits of protein valorisation and develop a number of case studies which demonstrate a clear return on investment.

By the end of 2018 we will have:

- Designed and launched the innovation hub. This will include a toolbox of key resources for innovators, investors and businesses working in this space.
- Engaged with and gained support from retailers and food manufacturers with a commitment to drive innovation and product development.



Our **collaborators**

The Protein Challenge is led by a dynamic partnership of forward-thinking organisations including Ahold Delhaize, Evonik, Firmenich, Hershey, Quorn, Seeding the Future, Target, Volac, Waitrose and WWF.

This leadership group has been joined by other leading organisations who have committed resources, their best expertise and commitment to driving forward the pilot projects, including Alpro, Baxter Storey, Calysta, General Mills, Impossible Foods, Nestlé Research, Pret a Manger and TerraVia.

We are looking for more organisations who can bring resources, expertise and influence to drive forward innovation and action across the protein system.



The **Futures Centre**

We established a project hub for the Protein Challenge 2040 on Forum for the Future's Futures Centre platform to track trends, innovation and signals of change in protein production and consumption, and to build a community of stakeholders ranging from food and agriculture experts to innovators interested in the solutions.

Visit the 'Future of Protein' project hub to join the conversation, and sign up to our newsletter to stay up to date on the latest innovations.

www.thefuturescentre.org/project-hub/7252/protein-challenge-2040



Signal of change

Cellular agriculture gains ground

New Harvest, the non-profit that funded the development of the world's first cultured beef burger, led the first global cellular agriculture conference in San Francisco in 2016.

Start-ups including Memphis Meats and MosaMeats have attracted significant investment to engineer molecularly identical meat and dairy products in the lab.²²

Join US

We are looking for more ambitious and pioneering collaborators to help us accelerate the change to a sustainable protein system, through the development and practical delivery of our exciting pilot projects.

WHY GET INVOLVED?

Knowledge & Innovation

Bringing in knowledge and insights from outside your organisation, to inform business strategy and innovation for future commercial opportunity.

Leadership & Influence

A chance to demonstrate leadership and innovation, whilst influencing the growing dialogue on the protein system.

Relationships & Collaboration

Opportunities for new or greater collaboration amongst customers, suppliers or new initiatives, and to extend stakeholder dialogue.

Sustainable Development Goals

Helping your business deliver against its goals and ambitions under the SDG process.

“ Ahold Delhaize recognises sustainable protein as an important theme across many dimensions: from healthier eating to animal welfare to climate impact. The debate on sustainable protein affects many of our stakeholders across different geographies. Ahold Delhaize joined the Protein Challenge 2040 to engage in pre-competitive collaboration on the **global challenge** of sustainable protein. Ultimately, our goal is to **collaborate** across the chain, **drive** innovation and help our customers make **better choices** both for their health and for the environment. ”

MEGAN HELLSTEDT VP SUSTAINABLE RETAILING,
AHOLD DELHAIZE

To be part of this ground-breaking international collaboration, contact Simon Billing
s.billing@forumforthefuture.org

About Forum for the Future

We are an international non-profit working with business, government and civil society to solve complex sustainability challenges.

Like the members of The Protein Challenge 2040 consortium, Forum believes it is critical to transform the key systems we rely on to shape a brighter future and innovate for long-term success. We have a track record of over 20 years of working with pioneering partners in one-to-one partnerships, and also as part of multi-stakeholder collaborations to address system-wide challenges.

Forum's Protein Challenge 2040 team is led by Principal Sustainability Advisor Simon Billing, and includes Sarah Tulej, Mark Driscoll, Stephanie Draper, Kat Campbell, Alisha Bhagat and Jacqueline Culleton. The production of this report was led by Alison Silk.

Find out more at forumforthefuture.org



With thanks

We would like to thank everyone who has generously taken the time to join us on this journey and contribute to the development of our pilot projects by sharing their expertise and knowledge.

Leadership Group

Ahold Delhaize

Karin Bogaers, Director Product Sustainability & Innovation

Evonik

Thomas Kaufmann, SVP Sustainability Development Nutrition

Firmenich

Birgit Schleifenbaum, Director Discovery Natural & Sustainable, Innovation, Flavors

Hershey's

Steve Hess, Director, Snacks and Refreshment Technology

Quorn

Tim Finnigan, Technical & Innovation Director
Peter Harrison, Marketing Director

Seeding the Future

Bernhard van Lengerich, Founder & CEO

Target

Lisa Boyd, Director, Wellness Strategy

Volac

Andy Richardson, Head of Corporate Affairs

Waitrose

Moira Howie, Manager, Nutrition & Health

WWF

Duncan Williamson, Food Policy Manager

Acknowledgements

AFC Yeast

Don McLellan

AgriProtein

David Drew

Jason Drew

AGT Foods

Eric Bartsch

Ahold Delhaize

Megan Hellstedt

Alpro

Greet Vanderheyden

Kate Arthur

Koen Bouckaert

Aqua-Spark

Amy Novogratz

Mike Velings

Baxter Storey

Mike Hanson

Gabriella Roberts

BBSRC

Sian Rowland

Behaviour Change

Rob Moore

Beyond Meat

Ethan Brown

Biopower Technologies

Limited

Phil Metcalf

Biorenewables

Development Centre

Helen Shiels

Joe Bennett

Mark Gronnow

BioVale Ltd

Maggie Smallwood

Blonk Consultants

Hans Blonk

Bühler

Andreas Baumann

Anna Kreis

Peter Böhn

Business Inspired Growth

Gesa Reiss

Calysta

Lynsey Wenger

Alan Shaw

Allan LeBlanc

Josh Silverman

Renee Saville

Chicago Public Schools

Leslie Fowler

Clara Foods

Arturo Elizondo

Compass Group

Leanne Hewitt

Robert Brown

The Culinary Institute

of America

Sophie Egan

DSM

Jacobine Das Gupta

Lukas Hoex

Eating Better

Sue Dibb

Eimlea

Paul Hart

Entocycle

Kieron Whitaker

ETANTE

Julian Walker-Palin

Evonik

Michael Binder

Fat Duck

Jonny Lake

FEFAC

Nicolas Martin

Firmenich

Dattatreya Banavara

Catherine Trillo Blanco

Mark Smith

Forster Communications

Peter Gilheany

General Mills

Erika Smith

Global Pulse

Confederation

Andrew Jacobs

Green Chemistry Centre

of Excellence

Katie Privett

Tom Dugmore

Hershey's

Julie Mann

Hodmedods

Nick Saltmarsh

Hubbub

Gavin Ellis

Tessa Tricks

Humane Society

Claudia Tarry

Kristie Middleton

Impossible Foods

Jordan Sadowsky

Nick Halla

Reed McCord

Ingredion

Alan MacDougall

Chris Lightfoot

Innovate UK

Nick Cliffe

Institute of Food Research

Keith Waldon

Knowledge Transfer

Network

Simon Baty

Lihme Protein Solutions

Bodil Lindved

Lucid Insight

Lucinda Tolhurst

Marine Conservation Society

Dawn Purchase

Nesta

Oliver Usher

Nestlé Research

Christophe Schmitt

Diane Zimmermann

Maxime Saffon

New Food Innovation

Alan Marson

Oldways

Caroline Sluyter

PBL Netherlands

Environmental Assessment

Agency

Henk Westhoek

Planet Hemp

Tony Reeves

Plant Based Foods

Association

Elizabeth Kucinich

Michele Simon

Plum Organics

Tiffany McNeill

Pret a Manger

Caroline Cromar

John Isherwood

Proti-Farm

Heidi de Buin

Quorn

Tony Davison

Ben Sussna

Rabobank

Karen Heuvelmans

Anke van Kempen

Olaf Brugman

Ripple Foods

Adam Lowry

Samworth Brothers

Mark Shippey

Seven Generations Ahead

Diane Chapeta

Lydia Mills

ShareAction

Juliet Phillips

Clare Richards

Sodexo

Edwina Hughes

Wan Mak

Sustainable Restaurant

Association

Juliane Caillouette Noble

Target

Jeanne Mayland

Lisa Linnell

Genet Garamendi

TerraVia

Jill Kauffman Johnson

Jim Woodger

Luke Townsend

Howard Wright

Tesco

Jonathan Gorman

Laurence Lebb

Thinkstep

Sabine Deimling

Upton Naturals

Nicole Sopko

Volac

John Newbold

Suzane Leser

Wageningen University

Theun Vellinga

Imke de Boer

Waitrose

Riyaz Dhalla

Welsh Assembly Government

Adrian Jones

Westminster Kingsway

College

Paul Jervis

World Resources Institute

Daniel Vennard

Woven Network

Nick Rousseau

WRAP

Nina Sweet

Mike Falconer Hall

Ruta Dauksaite

Andrew Pary

Bojana Bajzelj

WWF

Brigitte Alarcon

Piers Hart

Marcella Navarro

Kate Wolfenden

WWF US

Sandra Vijn

Carlos Siavanni

Ynsect

Antoine Hubert

Benjamin Armenjon

References

1. In 2012, 212 million tonnes of soya was grown globally, 75% of which goes to animal feed. WWF. Accessed on March 15, 2017. http://wwf.panda.org/what_we_do/footprint/agriculture/soy/facts/.
2. In the period 2008–2012, fish meal represented about 9–12% of total fisheries production and 16–20% of total capture fisheries production.
3. The Reference Nutrient Intake (RNI) for protein in the UK is set at 0.75g of protein per kilogram bodyweight per day in adults. At the moment we are eating on average 70% more protein than required.
4. As compared to 2011 Defra figures which show we are eating 800g meat/week as compared to WHO recommended figures that we should be eating a maximum of 500g meat/week.
5. Target 12.3 of the Sustainable Development Goals (SDGs), calls on all nations to halve food waste and reduce food loss by 2030.
6. 'China's plan to cut meat consumption by 50% cheered by climate campaigners.' The Guardian. June 20, 2016. Accessed March 14, 2017. <https://www.theguardian.com/world/2016/jun/20/chinas-meat-consumption-climate-change>.
7. 'Food-based dietary guidelines – the Netherlands.' FAO. 2015. Accessed March 14, 2017. <http://www.fao.org/nutrition/education/food-based-dietary-guidelines/regions/countries/netherlands/en/>.
8. 'Food-based dietary guidelines – United Kingdom.' FAO. March 2016. Accessed March 14, 2017. <http://www.fao.org/nutrition/education/food-based-dietary-guidelines/regions/countries/united-kingdom/en/>.
9. 'Protein Shake-up: \$1 trillion investor coalition turns up the heat on meat – press release.' FAIRR. September 26, 2016. Accessed on March 14, 2017. <http://www.fairr.org/news-item/2019/>.
10. Forum for the Future. 2016. Report: 'What is the role of plant-based foods in future diets?' [https://www.forumforthefuture.org/sites/default/files/files/Role_of_plant_based_diets_Oct16_FINAL_2\(1\).pdf](https://www.forumforthefuture.org/sites/default/files/files/Role_of_plant_based_diets_Oct16_FINAL_2(1).pdf).
11. 'New Study Reveals More Americans Embracing Plant-Based, Organic and Non-GMO Foods.' PR Newswire. September 7, 2016. Accessed on March 28, 2017. <http://www.prnewswire.com/news-releases/new-study-reveals-more-americans-embracing-plant-based-organic-and-non-gmo-foods-300323573.html>.
12. Corpeq. CQ Green Protein Fund. Accessed on March 14, 2017. <http://www.corpeq.nl/companies/cq-green-protein-fund/>.
13. 'Powerplant Ventures Raises Largest Animal-Free Food Fund to-date with \$42m Close.' AgFunder News. August 10, 2016. Accessed on March 14, 2017. <https://agfundernews.com/plant-based-foods-sector-sews-deeper-roots-with-42m-powerplant-ventures-fund.html>.
14. New Crop Capital. 2017. Accessed on March 28, 2017. <http://www.newcropcapital.com/>.
15. 'ADM Enhances Plant Protein, Gluten-Free Ingredient Portfolio with Purchase of Harvest Innovations.' ADM. February 2, 2016. Accessed on March 14, 2017. http://www.adm.com/news/_layouts/PressReleaseDetail.aspx?ID=706.
16. 'Exo secures \$4m in financing round led by AccelFoods, plans move beyond cricket bars.' Food Navigator. March 7, 2016. Accessed on March 14, 2017. <http://www.foodnavigator-usa.com/Manufacturers/EXO-cricket-protein-co-receives-4m-plans-move-beyond-bars>.
17. 'Pret a Manger's veggie restaurant in London is so popular it's being made permanent.' Business Insider. September 6, 2016. Accessed on March 14, 2017. <http://uk.businessinsider.com/veggie-pret-in-soho-is-being-made-permanent-2016-9?r=DE&IR=T>.
18. 'Veggie Pret is growing.' Pret a Manger. March 28, 2017. Accessed on April 5, 2017. <https://www.pret.co.uk/en-gb/veggie-pret-is-growing>.
19. 'Why I am welcoming Tyson Foods as an investor to Beyond Meat.' Beyond Meat. October 10, 2016. Accessed on March 14, 2017. <http://beyondmeat.com/whats-new/view/why-i-am-welcoming-tyson-foods-as-an-investor-to-beyond-meat>.
20. The Food and Nutrition Service of the USDA implements the National School Lunch Program (NSLP) at the federal level. At the state level it is implemented by state education authorities who work with school food authorities.
21. Valorisation is defined as capturing waste and loss (in this case across the protein system from field to plate) and turning it into a product which has a commercial and financial value. Regrained is an example of a second life protein or a valorised product. Using spent grain from the brewing industry, Regrained has turned a potential waste into a snack bar and branded this Eat Beer.
22. 'A Closer Look at Cellular Agriculture and the Processes Defining It.' AgFunderNews. July 5, 2016. Accessed on March 14, 2017. <https://agfundernews.com/closer-look-cellular-agriculture-and-the-processes-defining-it.html>.



Forum for the Future is an international non-profit with a track record of over 20 years in driving change towards a sustainable future.

www.forumforthefuture.org
[@forum4thefuture](https://twitter.com/forum4thefuture)

