



# Global Alliance | Africa

[iuk.ktn-uk.org/programme/africa](http://iuk.ktn-uk.org/programme/africa) #KTNGlobalAllianceAfrica

## FPEAK Innovation Challenge - Information Session/Q&A -



# Agenda

- 09.00 BST / 11.00 EAT – Welcome and Housekeeping
- 09.10 BST / 11.10 EAT– Introduction to Global Alliance Africa and Open Innovation
- 09.20 BST / 11.20 EAT– Introduction to FPEAK
- 09.30 BST / 11.30 EAT– FPEAK Open Innovation challenge
- 10.00 BST / 12.00 EAT– Q&A
- 10.20 BST / 12.20 EAT– Next steps
- 10.30 BST / 12.30 EAT– Close

# Housekeeping

- The Information Session will last up to 1.5 hours
- Please use Zoom chat for submitting your questions
- This session will be recorded and shared later

# Innovate UK KTN

[www.ktn-uk.org](http://www.ktn-uk.org)



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Africa

# Positive Change Commitments

## Positive Change

We create diverse connections to drive positive change

### Deep Expertise

We have wide-ranging expertise and convene the expertise of others

### Powerful Connections

We drive powerful connections with businesses at the heart of what we do

### Future Shaping

We shape the innovation communities of the future

## Our People

We provide an exceptional place of work for our exceptional people

We will collaborate globally to create valuable international connections for innovators.

We will extend our activity beyond economic prosperity to also deliver sustainable societal & environmental benefit.



# OUR STRATEGIC PRIORITIES

## OUR NETWORK

**TRULY  
CROSS-CUTTING  
NETWORK**

**+40K  
UNIQUE  
ORGANISATIONS**

**90%  
SMES**

**+273K  
INNOVATORS  
IN THE UK**

**OVER 30  
COUNTRIES**

## SECTORS

We create diverse **connections** in the following sectors and areas of focus to drive **positive change**

- AgriFood
- Biotechnology
- Chemistry
- Creative Industries
- Design
- Digital
- Electronics
- Energy
- Geospatial
- Health
- Industrial Maths
- Infrastructure
- Manufacturing
- Materials
- Photonics
- Quantum
- Robotics and AI
- Security and Defence
- Sensors
- Space
- Transport
- Water

## CROSS-CUTTING AREAS

**GLOBAL  
INNOVATION**

**DIVERSITY  
AND  
INCLUSION**

**PLACE**

**NET ZERO**

**ADOPTION  
AND  
DIFFUSION**



# Impact to innovation



**66%**

Introduced by  
KTN go on to  
**collaborate**



**42%**

Reach outcomes  
**faster** by 1-2  
years



**60%**

Increased  
**investment** in  
R&D as a direct  
result from KTN  
engagement



**£100m**

Per year  
increased  
**investment** in  
R&D



# Building UK-Africa Partnership through...



## Local to Global

Open Innovation

Place-Based Innovation



## Access to Funding

Collaborative R&D Funding

Strengthening the Investment Pipeline



## Connected Innovation

Global Innovation Network

## Deep Expertise

\* Manufacturing & Materials | Transport & Mobility | AgriFood | Health | Climate Technologies | Digital Economy \*

\* Sector coverage subject to funding level & project priorities

# Our Global Alliance Africa Team





# Open Innovation (OI) programme

# Local Empowerment Through Collaboration

Innovation Exchange is a KTN programme specially designed to introduce company with technical challenges to innovators who are already working on the solutions.

## Sector Technical Challenges

Large organisations, OEMS and Local Authorities have:

- Confidential challenges to solve with no time to explore markets
- Low exposure to companies outside the traditional industry supply chain

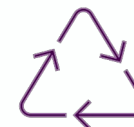
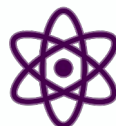
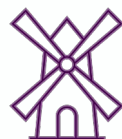


## Innovative solutions *from other* sectors

Solution providers find it difficult to:

- Open the right doors at a large org, OEM or local authority
- Prove the value proposition of products
- Understand customer's time constraints

## Challenge owners





# Previous Challenge Holders



# The iX process



## (1) Challenge translation

Identify and translate innovation challenges with KTN



## (2) Competition

Prepare and release competition to extended KTN and innovation networks



## (3) Solution selection

Filter and select responses by Solution Providers to the call



## (4) Relationship building

Engage with chosen companies and identify routes for technology development



## (5) Pilot project

Run collaborative pilot project with KTN seed funding



# Benefits for Challenge Holders

## Supply Chain Strengthening

It helps build a route for greater and more diverse innovation content in supply chains

## Quick and simple exposure to new technologies and markets

KTN delivers technology solutions from areas to which challenge holders do not normally have exposure (both in- and cross-sector)

## Time efficient

It requires little time commitment, with the bulk of the resource and time provided by GAA

## Expertise at no charge

We are fully funded by the UK Government and there is no charge to you for our professional services

# Benefits for Solution Providers

## **Immediate access to large business**

Successful applicants will be given the opportunity to pitch their solution to the Challenge Holder

## **Ongoing collaboration on project**

The selected Solution Provider/s will collaborate with the Challenge Holder and gain access to local facilities, eg: farmland to carry out trials for piloting the solution

## **Seed Funding provision**

Up to GBP 25,000 seed funding to work on the solution for this specific challenge in collaboration with the Challenge Holder

## **Pitching and development support**

Support from KTN and mentoring from our development partners throughout the challenge process



# Global Alliance Africa Open Innovation Challenges FY22/23

- **Kenya**

- **Flamingo Horticulture:**

- False Codling Moth detection
    - False Codling Moth control

- **WEEE Centre:**

- CRT recycling – new products
    - CRT recycling – energy reduction

- **South Africa**

- **Unilever:**

- Plastic packaging reuse for online retail
    - Plastic packaging reuse for small traders



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KTN Global Alliance Africa

### Rapidly find Innovative Solutions to Circular Economy Challenges

We are looking for Kenya, Nigeria and South Africa based companies wanting to find rapid innovative solutions to their industry challenges.

Deadline to apply: 14 September 2021

Connecting for Positive Change  
ktn-uk.org/programme/africa



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KTN Global Alliance Africa

### Rapidly find Innovative Solutions to AgriFood Challenges in Kenya

We are looking for large\* Kenya-based companies from the AgriFood Sector wanting to find rapid innovative solutions to their industry challenges.

Deadline to apply: 30 August 2021.

Connecting for Positive Change  
ktn-uk.org/programme/africa

# Global Alliance Africa Open Innovation Challenges FY23/24

## • Kenya

- **Kenya Airways:** airport navigation Web3 challenge
- **FPEAK:** improved packaging for sea freight
- **Unilever:** agrifoods challenges

## • Nigeria

- **Hinckley:** battery recycling challenges
- **TGI:** bird management challenge
- **Unilever:** agrifoods challenges

## • South Africa

- **Rand Water:** water treatment residue challenges
- **Veolia:** leachate and paper waste challenges

Funding Opportunity

Global Alliance Africa iX Challenges  
Innovative Solutions to  
Beneficiation of Water Treatment  
Residue

Opens | 16.11.22

Closes | 17.02.23



Hinckley Recycling  
Battery Innovation  
Challenges -  
Live Launch and Virtual Tour

29 Sep | 10:00-12:00 BST





# Introduction to FPEAK



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# Fresh Produce Exporters Association of Kenya

Presentation By: Hosea Machuki, CEO FPEAK





# About FPEAK

- Premier Business Member Organization representing growers, exporters and service providers in the horticulture industry in Kenya
- Formed in 1975, registered company limited by guarantee
- Members involved in growing and/or exporting fresh cut flowers, fruits, and vegetables.

## Membership -173

- Ordinary – 139 ( 38 flowers & Ornamentals, 121 fruits & vegetables, herbs and spices).
- Affiliate – 14



# About FPEAK

## Our Vision

Making Kenyan Horticulture the Global Choice

## Our Mission

To develop, unite and promote the Kenyan horticultural industry in the global market with due regard to safety, good agricultural practices, social, ethical and environmental responsibilities





# What We Do

**Advocacy & Lobbying:** FPEAK influences and advocates for a conducive business environment for the horticulture industry in Kenya through public and private partnerships at both local and international level.

**Capacity Building:** FPEAK partners with development agencies and other stakeholders to enhance growers, exporters and service providers capacity along the value chain.

**Marketing:** FPEAK strengthens links between growers and members to national and international markets through creating direct market linkages, supporting members to attend national and international trade fairs and providing timely market information.

**Standards & Compliance:** FPEAK supports members to comply with national and international market requirements and conventions through participation in interpretation and harmonization of standards



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# FPEAK – Innovation Challenge for Packaging Solutions to Extend Shelf Life of Fresh Produce during Sea Freight



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# Challenge

The Fresh Produce Exporters Association of Kenya (FPEAK) seeks to find innovative ways to increase shelf life and enable longer transportation times for perishable goods. Their priority would be to use sea freight to transport fresh produce and flowers from Kenya to Europe, which is an increasingly attractive option when compared to air freight, which has reduced in capacity and is increasingly costly.

# FPEAK Background

The Fresh Produce Exporters Association of Kenya (FPEAK) is Kenya's premier trade Association representing **growers, exporters and service providers in the horticulture industry.**

FPEAK supports growers and exporters by providing technical and marketing information and training, acting as an information centre, and runs active lobbying and advocacy programmes to **enhance the sector's competitiveness.**

Its mission is to develop, unite and promote the Kenyan horticultural industry in the global market with due regard to safety, good agricultural practices, social, ethical and environmental responsibilities. **FPEAK's vision is to make Kenyan horticulture the Global choice.**

## Challenge Information

Currently beans, peas and other highly perishable crops are transported from Kenya to the UK/EU via air freight. There is a desire, due to the high costs and the environmental impact of air freight to **explore how sea freight could be used as an alternative.**

During the pandemic the cost to air freight cost of fresh vegetables, fruit and flowers from Kenya to the UK/ EU increased by about 100%, alongside significant capacity reductions. Even after 3 years, there has only been a paltry reduction, with **air freight rates remaining high and air capacity has not recovered** to its previous levels.

This pincer movement has caused issues for African exporters, and their peers worldwide. Sea freight is a much cheaper and more sustainable alternative; however, it takes 20-30 days to travel from Kenya to UK/EU which causes **freshness and perishability challenges** for any produce exported.



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# Key Challenges

Key challenges of doing bulk shipments include:

- Produce is sensitive to **different atmospheric levels** of oxygen and carbon dioxide
- Packaging must be **strong enough** to withstand transport and movement
- Processing and packaging at point of shipment should minimise the **intervention/repackaging** required at the final destination
- High risk of **fungal issues** occurring during transport
- Risk of **pest ingress** as processing or during transport would lead to whole consignments being destroyed
- **Stacking** produce can lead to damage, moisture ingress and rot



# Possible Innovations

Innovations could include, but are not limited to, food grade coatings, alternative packing materials for transport (i.e. cold chain logistics, vacuum seals, packing in H<sub>2</sub>, enzymes removing O<sub>2</sub>), novel designs of customer-facing end-user packaging and monitoring/data logging devices. These could be integrated with **alternative packaging systems** for in-container transport and/or **specific container environments**.

As a priority, packaging solutions are sought for **green beans, sugar snaps and snow peas**. Furthermore, solutions are sought for fruits (avocados, mangoes), herbs (basil, rosemary) and flowers (rose, mixed flowers).

FPEAK are open to adopting/scaling solutions used successfully for other export crops and geographic locations. To work on this challenge, Innovate UK KTN is working with FPEAK member organisation **Interveg Exports EPZ** to pilot innovative solutions.

# Target Audiences

Solutions are invited from, but not limited to, the following sectors:

- Agriculture
- Packaging
- Manufacturing
- Refrigeration
- Marine & railways
- Transport logistics
- Food & food safety
- Gas supply
- Data capture
- Design

# Functional Requirements

The identified solution must/should address the following:

- Solution must be suitable for 40ft and other sized **sea containers**
- Packaging materials must be **robust** to eliminate any ingress, infection or rot
- Solution must involve **circular** economy/design thinking (to reduce waste/minimise carbon impact)
- Solution must be **viable** for green beans, sugar snaps and snow peas (minimum)
- Solutions also **applicable** for fruits, herbs and flowers will be preferred.

# Technical Requirements

- Solution must be viable for **30+ days** shipping time
- Solution must result in **99%** produce remaining fresh
- All solutions must satisfy **food grade** requirements
- There must be **50%** reusable or recyclable materials within new innovations
- A process/logistics **map** of stages involved in the solution is required (clear flow of stages)

# Operating Conditions 1

- Solution should operate in context of **normal temperatures and light levels** (outside)
- **Internal** temperatures, humidity and light levels may be adjusted as required
- **24/7** operation during transportation period
- Solution must cope with the **changing conditions** between supply chain stages as required (farm, pack house, truck, ship, wholesaler, retailer and consumer transitions)

## Operating Conditions 2

- Produce is harvested in the morning from **farms** outside Nairobi. Then transported in insulated trucks to **packhouses** close to the airport. The fresh produce is processed and quality checked and packaged before being stored between 6-8C for the remainder of the day. Transferred to **airport** for overnight travel to **overseas** markets.
- Currently produce is transported to the packhouse in **plastic crates**. Beans/snow peas/sugar snaps to be sold in bulk are packed in **cardboard boxes** (1.5-5.0kg). Produce to be sold direct to domestic/retail consumers (pre-packs) are packed into smaller **perforated plastic bags** (150g-1kg) or **trays/punnets** (150g-500g).



# Cost Requirement & Market Opportunity

- The solution's operation should aim to be **cost-effective** in terms of ROI
- Winning solution providers may become **long-term partners**, gaining access to FPEAK members supply chains
- Innovative **funding models** will be considered if appealing to FPEAK members

# Out of Scope

Proposed solutions will not be viable if they are:

- Unable to be **energy efficient**
- Unable to use **Circular Economy** thinking
- Unable to be **produced locally**
- Unsuitable for **Kenyan market conditions**



# Application Information



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# Deployment Timescale

- 08 Aug 2023 - Competition Launch
- 29 Aug 2023 – Information session/Q&A
- **22 Sep 2023 - Deadline for applications**
- Oct 2023 - Selection and notification of finalists
- Oct 2023 - Pitch days and Selection of Winners
- Nov 2023 – Collaboration Discussions
- Dec 2023 – Pilot programme activated

# Eligibility

## Applicants must be:

- **Established** businesses, start-ups, SMEs, individual entrepreneurs or academics.
- **Collaborative** solutions (Business to Business B2B and B2R&D) are valid applications. If collaborative solutions are being submitted, a single lead organisation (industrial or academic partner) needs to register the application.
- **Africa-based entrants, UK-based entrants and those from RoW are invited to apply**



# Assessment

## Applications will be assessed on:

- **Relevance** to the topic
- **Innovative** nature of the subject
- **Coherence** of the proposed business model
- **Feasibility**/economic viability
- **Development potential**
- **Maturity** of project/solution
- **Ease of implementation**/ability to launch project quickly
- **Suitability** for the African Market

# Rewards & Benefits

- Up to **GBP 25,000** seed funding (Subject to T&C)
- Opportunity to pitch your solution and **collaboration/partnership** with FPEAK member
- **Access to materials** and FPEAK member facilities
- **Technical support** from FPEAK members
- **Mentorship programme** facilitated by IUK KTN
- **Sector expertise** from IUK KTN
- **Support in the development** of a prototype or pilot
- Invitation to attend or present at **IUK KTN events**
- **Investor** introductions (if investment is required)



# Q&A Session



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# Thank you.



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