

Tolaram/BHN Logistics - Information Session/Q&A



The UK's innovation agency

Global Alliance Africa

iuk-business-connect.org.uk/programme/africa/
[#GlobalAllianceAfrica](https://twitter.com/GlobalAllianceAfrica)

A white truck with a large orange tank is driving on a dirt road. The truck is viewed from the front, and the road is dusty. The background shows a clear blue sky and some vegetation. A purple vertical bar is on the left side of the image.

innovationexchange.ktn-global.org/challenges/372

Agenda

10.00 BST/11.00 WAT – Welcome and Housekeeping

10.10 BST/ 11.10 WAT – Introduction to Global Alliance Africa and Open Innovation

10.20 BST/ 11.20 WAT – Introduction to Tolaram/BHN

10.30 BST/ 11.30 WAT – Tolaram/BHN Open Innovation challenge

11.00 BST/ 12.00 WAT – Q&A

11.20 BST/ 12.20 WAT – Next steps

11.30 BST/ 12.30 WAT – Close

House keeping

The Information Session will last up to 1.5 hours

Please use Zoom chat for submitting your questions

There will be a survey towards the end

This session will be recorded and shared later

Innovate UK



The UK's innovation agency

About Us

Innovate UK exists to connect innovators with new partners and new opportunities beyond their existing thinking – accelerating ambitious ideas into real-world solutions.



Positive Change Commitments

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.

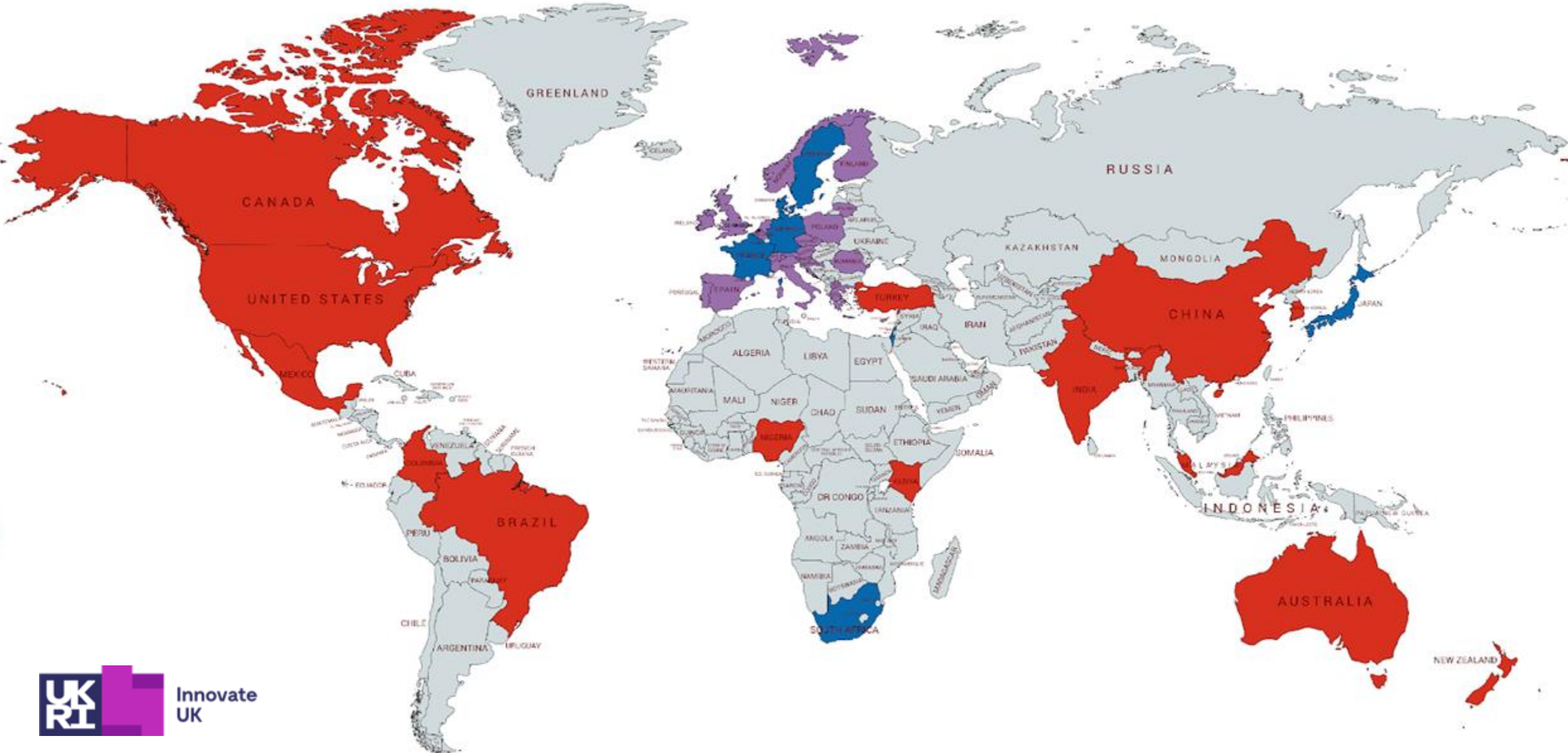


Welcome



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Our Reach



Global Alliance Africa



UKRI

UKRI convenes, catalyses and invests in close collaboration with others to build a thriving, inclusive research and innovation system.



Innovate UK

Innovate UK is the UK's national innovation agency. We support business-led innovation in all sectors, technologies and UK regions.



Global Alliance Africa

Global Alliance Africa is a six-year project designed to strengthen and scale local innovation and business environments in Kenya, Nigeria and South Africa.

Our Team



Open Innovation



The UK's innovation agency

Local Empowerment Through Collaboration

Innovation Exchange is a programme specially designed to introduce your company's challenges to the 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

Innovation Exchange

Innovative solutions *from all* 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



Solution Providers

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



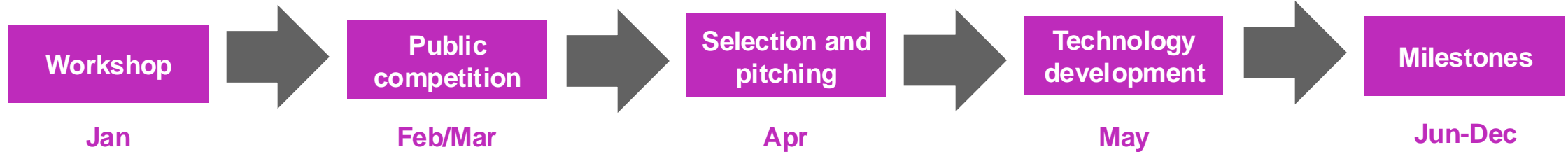
(4) Relationship building

Engage with chosen companies and identify routes for technology development



(5) Pilot project building

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

Innovate UK 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 Innovate UK throughout the challenge process and pitch training from our partners

Nigerian Open Innovation Challenges

Nigeria

Hinckley

- Lithium-Ion battery second life
- Battery management systems

TGI

- Crop protection from birds

Animal Care

- Manure valorisation

Berger Paints

- Expired paint valorisation
- Recycle plastic to resin

Hinckley Recycling
Battery Innovation
Challenges -
Live Launch and Virtual Tour

29 Sep | 10:00-12:00 BST



Tolaram/BHN Logistics



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BHN - MCPL

TOLARAM NIGERIA



1

INTRODUCTION

Overview of our operations in Nigeria.

2

BHN FOCUS

Fleet Decarbonization, TyreLife Optimization" (TLO)

3

CONCLUSION

BUSINESS ROADMAP

Joint Venture

Blackwood Hodge Nigeria was founded in Nigeria as a subsidiary of John Blackwood Hodge UK, in 1948

Ownership

The reigns of leadership passed on totally to Tolaram Group in 1991

Branch Opening

BHN opened first branch in Port Harcourt.

Branch Opening

BHN opened second branch in Kaduna.

Branch Opening

BHN opened third branch in Calabar.

Benchmark

BHN crossed fleet size of 1000 trucks.

Sustainable Transport

Introduced 170 CNG , 5 LNG and 1 Electric Vehicle (EV, first in Africa)

New Site

Ground breaking of new site development project

1948

1948

1973

LSE

In 1973 it was listed on Lagos Stock Exchange.

1991

2001

New Business Model

BHN's business model was re-engineered to its present vision **"To be the largest premium logistics solution provider in Nigeria"**.

2006

Relocation

BHN Head office was moved from Abuloshun to Lagos - Ibadan Expressway, Mowe.

2010

2012

Benchmark

BHN crossed a benchmark of 700 trucks, making it the biggest corporate transporter in Nigeria.

2015

2017

Benchmark

BHN crossed fleet size of 1500 trucks.

2020

2023

Completed their state of the art head office at Mowe.

2024

BUSINESS OVERVIEW



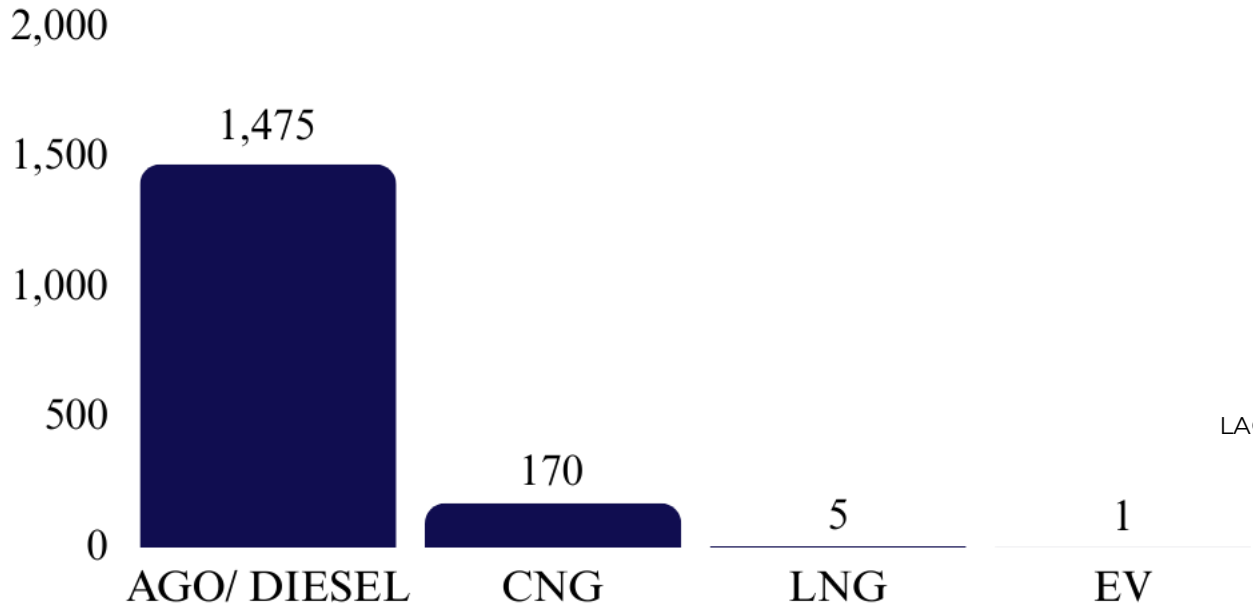
FLEETS
1,651



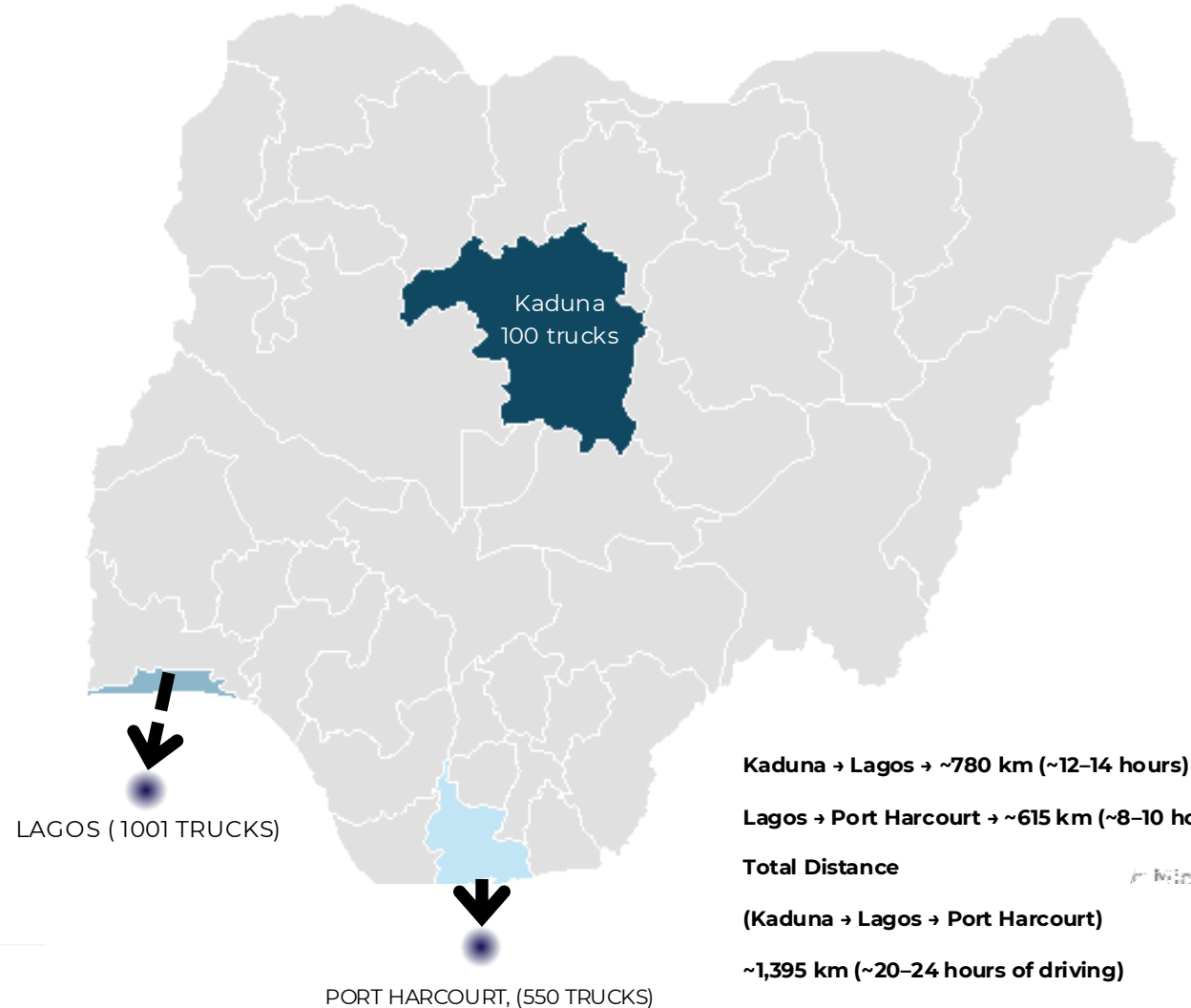
MANPOWER
2,728
Motor Boy
1,920



VEHICLE MAKE
Volvo
Faw
Howo
Shacman



BHN LOCATION/ FLEET DISTRIBUTION IN NIGERIA



VEHICLE EMISSION TYPE

Number of Vehicles (N0)					
Emission Type	0 - 1 Years	1 - 2 Years	2 - 3 Years	4 - 5 Years	Above 5 Years
Euro 2	2	70	208	192	900
Euro 5	103	30	-	-	22
Euro 6	-	-	-	-	123
Zero Emission	-	1	-	-	-
Total	105	101	208	192	1,045

BHN -MCPL TYRE WASTE

VEHICLE TYPE	<u>2023 Sum of Weight (kg)</u>	2024 Sum of Weight (kg)	2025 Sum of Weight (kg)
TRUCK	329,888	94,400	44,064
TRAILER	202,816	157,888	25,024
Total	532,704	252,288	69,088



Problem 1

Fleet Decarbonization:

BHN's fleet averagely contributes *76,000 tCO₂e annually, accounting for its direct (Scope 1 and 2) emissions from fuel combustion.



Problem 2

TyreLife Optimization" (TLO):

Tyres contribute to both Scope 1 and Scope 3 emissions, and we are exploring sustainable solutions to enhance their longevity.



Questions & Discussion

Challenge



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Challenge

BHN Logistics (part of Tolaram Group) is seeking innovative solutions for reducing emissions and cutting operational costs by retrofitting their diesel truck fleet. As well as shifting to alternative fuel types, they are open to innovative solutions to improve efficiency.

The proposed solutions should bear in mind Capex considerations and align with, or support, sustainable infrastructure. A straight switch to electric, CNG or hydrogen fleets is not viable due to limited resources and built infrastructure available.

A flexible, scalable solution would be preferred to benefit Nigerian business operations directly.

Tolaram/BHN Background

Tolaram is a global company, headquartered in Singapore, with significant business operations in Nigeria. Their three main areas of business in are:

- **Consumer goods** including Minimie noodles, Dano milk powder and brand partnerships with Kelloggs, Colgate and Guinness.
- **Fintech** including Amar Bank, Tunaiku and Insureka
- **Infrastructure and industrials** including Lagos Free Zone, Lekki Port and BHN Logistics

BHN Logistics is a market leader in logistics and haulage, with 4,000+ vehicles serving the distribution needs of Nigeria's biggest brands. These include companies within the Tolaram group and external partners such as Olam, Lafarge Africa, Hypo and Munch.

Their effective working process and commitment to efficiency over 30+ years ensures their customers' goods are transported seamlessly in a cost-effective way.

Current Situation

BHN has 1,600+ heavy trucks (30+ tons) with engine sizes of between 142HP and 500HP. There are 105 new trucks (under 1 year) and 90 trucks over 9 years, with the fleet's average age being 4.5 years. The fuel efficiency difference of older trucks is approximately 10% lower than newer trucks.

The fleet has a variety of Euro V, Euro-2, Euro-6 and Zero Emission engines. About 10% of the newer trucks run on cleaner fuel such as CNG and LNG, and there is one EV truck. The other **90% of trucks run on diesel**.

Diesel is currently the most efficient and affordable fuel, but there are many reasons to look at alternatives for future needs. BHN is keen to **explore a wide range of solutions**, and willing to trial the most promising ones.

Possible Benefits

BHN's goal is to have a completely **diesel-free fleet within 6 years** and this innovation challenge will provide a first step towards this goal. The company has explored retrofit technology previously but without success. The purpose of this challenge is twofold:

- **Economic benefits.** The price of diesel is no longer subsidised in Nigeria and is an increasingly heavy expense for transport operators. Alternative solutions will allow flexibility in fuelling choices.
- **Environmental benefits.** In an effort to reduce carbon emissions and limit local pollution, moving away from fossil fuels will be beneficial to both staff and the general public.

Either of these benefits are desirable, and both of them are ideal, via a **practical and affordable solution**. Diversity is a strength in communities and also in fleets. Additional fuelling options will support more robust logistics.

Truck Information

The fleet of Volvo and Chinese trucks range from **30t to 45t to 60t capacity**, with various engine and gearbox types. Different trucks suit different customer uses, eg: noodles have higher volume and lower weight vs juice or cement having lower volume and higher weight.

In terms of costs, a typical CNG truck costs \$70,000 to purchase. A typical diesel truck costs \$46,000 to purchase, and \$45,000 to convert to CNG. Once converted, there are ongoing cost savings as, per litre, diesel costs 1,200 Naira vs CNG at 700 Naira.

BHN has been slowly increasing their CNG/LPG fleet, but the lack of **infrastructure capacity** is already leading to 48 hour waits to refuel trucks, causing significant operational delays. Increasing the number of fuel cylinders on a truck extends delivery range but decreases load capacity.

Logistical Information

BHN has three main hubs, in **Lagos, Port Harcourt and Kaduna**. A range of 21 contract partners are responsible for recruiting drivers and managing sub-fleets. Truck crews usually comprise of one driver and one team member. There are 1,800 drivers in all, including standby drivers.

Fuel theft and fraud are ongoing problems, so keeping track of supplies and usage is essential. There is a checking schedule, and spot checks, on the fleet.

Initial cost, recurring costs and lifespan are critical factors for any solution, so please consider these in your application. Also compare current and possible emission rates. For any fuel additives, consider their lubricity effects also.

Additional Considerations

Related areas that are being considered include:

- **Retrofitting** BHN's fleet from diesel-powered to CNG-powered vehicles.
- Explore potential solutions for **hydrogen/biogas** to power the fleet
- Using Tolaram's **manufacturing by-products** to produce sustainable, alternative, low cost, combined fuels?
- Implementing a **satellite-based** tracking system for the fleet
- Valorisation of **worn-out tires** (considering pyrolysis) for reuse
- Valorisation of used **engine oils**
- Developing solutions to estimate **fleet emissions** from diesel usage

Some of these may be included alongside and/or within your solution if they help to solve the **main challenge requirements**.

Collaborative Pilot

- A collaborative pilot project will be scoped together with the winning solution provider. This pilot may take any suitable form, with suggested timeline of a **3-6 month project with 1-2 trucks fitted out** with the new solution. This may involve using new parts/engines or retrofitting/converting old engines.

Target Audiences

Solutions can engage with **any suitable touchpoint** (hardware, software, device, infrastructure, etc.) and are invited from, but not limited to, the following sectors:

- Transport
- Energy
- Logistics
- Manufacturing
- Data
- Sensors
- Design
- AI
- Satellite
- Materials

Functional Requirements

The identified solution must/should address the following:

- Solution must apply to **diesel trucks**
- Solution may be **integrated** at any point in the supply chain
- Solution must be **sustainable** and reduce emissions
- Solution must provide a **flexible** energy solution
- Solution must involve **cost reduction** overall (break-even as minimum)

Technical Requirements

- Solution may be **delivered** by external contractor or via in-house team
- Solution must comply with local transport **regulations**
- Any additional **infrastructure** required should be identified
- Solutions that can be **implemented** by trained local staff are preferred
- Solution may address some or all of the challenge, though **holistic** solutions are preferred
- Solution should eventually support **1,000km range** for trucks
- Compare current and possible **emission** rates
- For any fuel **additives**, consider lubricity effects also

Operating Conditions

- Solution should operate in the context of normal **temperatures and humidity**
- Solution should be applicable during normal **working hours**
- Solution must not increase time/frequency of **maintenance** required
- **Versatility** and capacity to scale are desirable
- Solution must be **safe** to operate
- Solution must apply to **Nigeria** (initially)

Out of Scope

Proposed solutions may not be viable if they are:

- Unable to supply robust technology
- Unable to create reliable supply chain
- Not cost effective
- Unsuitable for Nigerian transport regulations
- Unsuitable for Nigerian operations

Application Information



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Deployment Timescale

- 27 Feb 2025 – Competition launch
- 20 Mar 2025 – Information session/Q&A
- **11 Apr 2025 – Deadline for applications**
- Apr 2025 – Selection and notification of finalists
- May 2025 – Pitch day & selection of winner
- Jun 2025 – Collaboration discussions
- Jun 2025 – Pilot programme activated

Eligibility

Entrants to this competition must be:

- Established businesses, start-ups, SMEs, academics or individual entrepreneurs
- Africa-based entrants, UK-based entrants and those from RoW are invited to apply

Due Diligence requirements for seed funding:

- UK applicants must ensure that receiving the £25k seed funding will not exceed the £315,000* state aid threshold under UK Minimal Financial Assistance regulations over the current and last 2 fiscal years [or *200,000 euros for applicants affected by EC de minimis regulations]
- Further information will be required later relating to company policies, financial history and recent grant funding received.

Your Application

Applicants should include relevant details as attachments, such as:

- Process diagrams
- Technical data
- Business model
- Usage metrics

Tolaram/BHN is seeking innovative ideas that can be tailored for their needs and tested collaboratively (not just a straight product purchase). The key ask is for innovative ways to overcome the current challenges to reducing emissions of their truck fleet. This can be via any suitable touchpoint (hardware, software, device, infrastructure, etc.)

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
- Ability to launch project quickly/ease of implementation
- Price/quality ratio
- Suitability for the African Market

Rewards & Benefits

Sub heading here in lower case

- Up to **GBP 25,000 seed funding** (Subject to T&C)
- Opportunity to **pitch your solution** to Tolaram
- **Collaboration/partnership** with Tolaram
- Technical support from Tolaram team
- Sector expertise from Innovate UK
- Support in the development of a prototype or pilot
- Invitation to attend or present at Innovate UK events
- Investor introductions (if investment is required)
- Application support for any related competitions that are relevant.

Q&A Session



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Survey



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A white truck with a large orange tank is driving on a dirt road. The truck is viewed from the front, and the road is dusty. The background shows a clear blue sky and some vegetation. A purple vertical bar is on the left side of the image.

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Thank You



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