

# Agenda

**10.00 BST/11.00 SAST** – Welcome and Housekeeping

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

**10.20 BST/ 11.20 SAST** – Introduction to SITA

**10.30 BST/ 11.30 SAST** – SITA Open Innovation challenge

**11.00 BST/ 12.00 SAST** – Q&A

**11.20 BST/ 12.20 SAST** – Next steps

**11.30 BST/ 12.30 SAST** – Close

# 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.

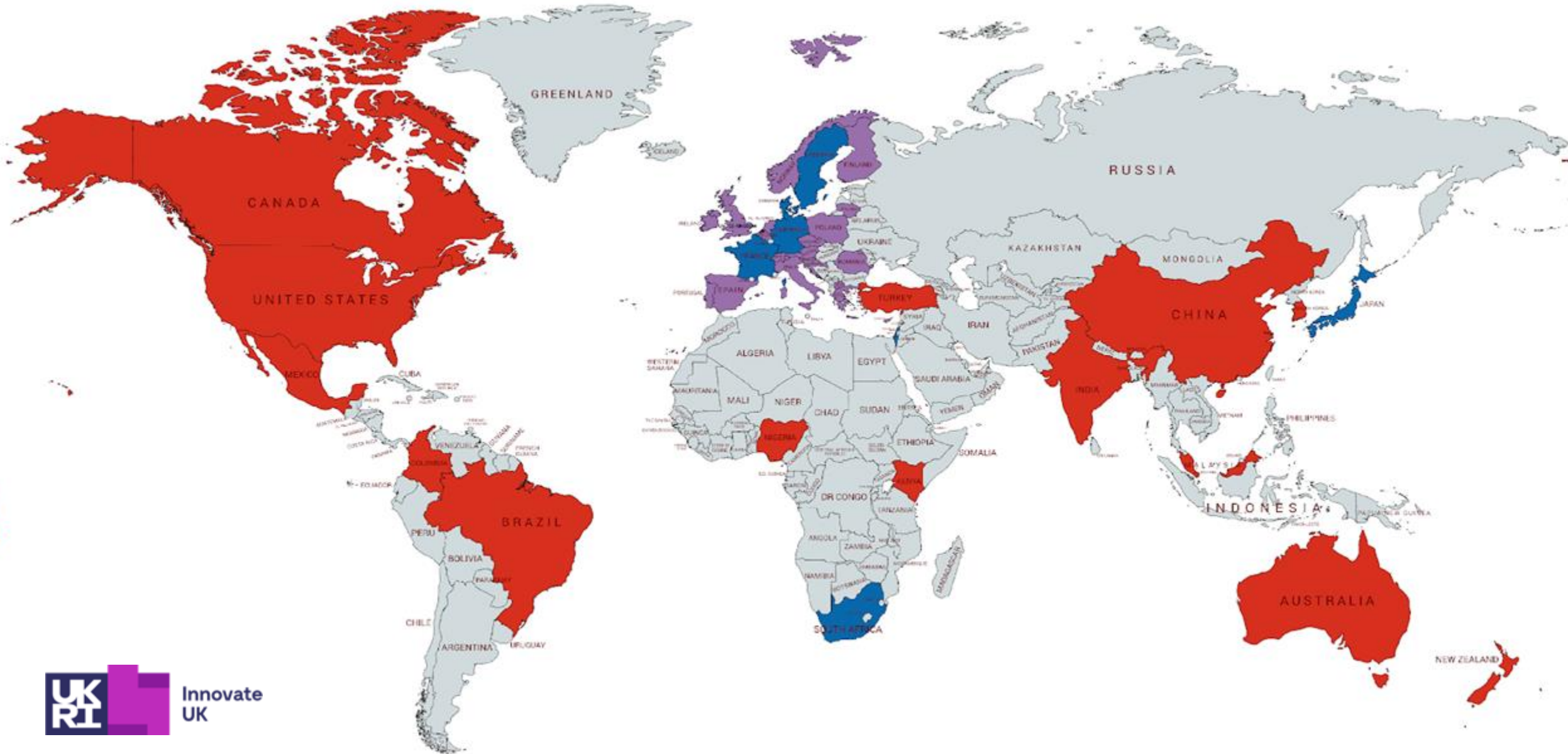


# Global Alliance Africa



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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



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# Local Empowerment Through Collaboration

Our Open Innovation programme is 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

## Open Innovation

## 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



# Open Innovation Process



## (1) Challenge translation

Identify and translate innovation challenges with IUK

Workshop

Aug



## (2) Competition

Prepare and release competition to extended IUK and innovation networks

Public competition

Sep/Oct



## (3) Solution selection

Filter and select responses by Solution Providers to the call

Selection and pitching

Nov



## (4) Relationship building

Engage with chosen companies and identify routes for technology development

Technology development

Dec



## (5) Pilot project

Run collaborative pilot project with IUK seed funding

Milestones

Jan-Jun

# 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

# Global Alliance Africa Open Innovation Challenges

## South Africa

### Unilever

- Refill & recycle for small traders
- Refill & recycle for online retail

### Rand Water

- water treatment residue concentration
- Water treatment residue valorisation

### Veolia

- Leachate solidification
- Pulp paper valorisation

Funding Opportunity

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

Opens | 16.11.22

Closes | 17.02.23



# SITA



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**SITA**

# About SITA

SITA MEA Transformation

© SITA October 2024

We're the air transport industry's IT provider

Our technology powers more seamless, safe and sustainable air travel

Our customers include airlines, airports, ground handlers, governments, border agencies, and more



We work with Air Traffic Control, Air Navigation Services Providers, as well as aerospace, aircraft, and airframe manufacturers

We're bringing our IT and expertise to the rail and maritime industries, and the emerging Urban Air Mobility market



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Created 75 years ago...

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Born from a partnership of airlines, we're collaborative by nature

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Industry owned, we're driven by industry needs

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Unique in our understanding of travel processes

# IT and expertise for air transport and the wider travel industry

Nearly every passenger trip relies on our technology

We support almost every airline and airport in the world

We keep the wheels of the industry in motion ...

... with a 1,750-strong global team of service professionals & field engineers 'on the ground', 24/7/365

400

members own SITA, representing air Transport and related industries across the globe

4,900+

SITA staff across the world representing 130+ nationalities – one of the most international companies on the planet

2,500

customers – almost every airline and airport in the world, as well as governments, ground handlers, and more

95%

of international destinations served – over 200 countries and territories

1000+

airports use our technology and expertise to drive operational efficiencies

18,000+

aircraft receiving mission-critical connectivity

70+

governments – including all G20 nations – use our digital border solutions to strike the balance of secure borders and seamless travel

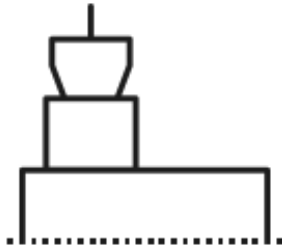
45%

of the air transport community's data exchange bridged

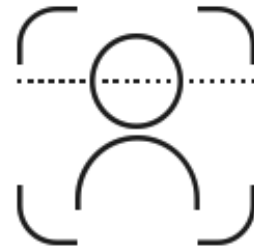
4,800+

biometric touchpoints revolutionizing the passenger journey across 40+ airports worldwide

# Our businesses, expertise and portfolios



**Airports**



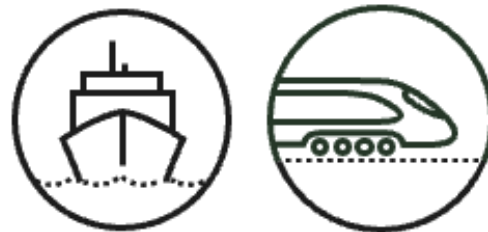
**Borders**



**Aircraft**



**Communications &  
Data Exchange**



**Transport &  
Travel**



**Partnerships, JVs  
and Acquisitions**

# Our innovations



## Shaping tomorrow's travel

### Innovating collaboratively

- Tackling pressing travel industry issues
- Working with airlines, airports, governments, industry bodies, innovative technology partners
- Proofs-of-Concept (PoCs) and trials
- Innovations through early-stage ventures and universities,
- Mergers, acquisitions and new launches

### 26% growth year-on-year

in spend on **R&D, design and testing** for new/improved products and our growth areas.

This is in addition to our other collaborative innovation initiatives with industry stakeholders around the world.



### 377 patents

granted to SITA by the end of 2023 for innovation. We continue to safeguard our investments in key technologies to meet the new era of growth in travel. We have another **276 patent applications** in the pipeline.

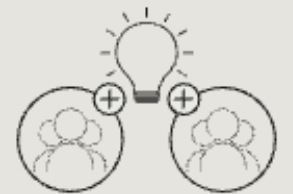


### New patents

covering a wide range of emerging technology in areas such as biometric touchpoints, flight optimization and predictions, mobile travel, aircraft monitoring, digital re-flighting of baggage, and many more.

### 100+ co-innovation projects

by the SITA Lab since its launch in 2008 (approx.) These include trials and Proof-of-concept for use cases meeting industry challenges, complementing innovation in SITA's portfolio teams.



# Our collaborative innovations, examples at-a-glance

## Solving today's travel challenges ... shaping tomorrow's travel



Operational efficiencies  
sustainability, safe and smooth journeys that meet passenger expectations

New technologies  
to overcome future challenges and create more sustainable and intermodal passenger journeys

## Examples of areas where we're focusing our innovations



Optimized  
processes and digital transformation  
for efficiency

with Large Language Models in  
airport operations

Transition  
to Cloud and Software-as-a-Service models

Data analytics  
and insights for correlation,  
prediction and sustainability

Total Airport Management  
for greater efficiencies, and revenue

'Walkthrough' Digital Travel  
with biometrics and on-and-off airport touchpoints

Urban Air Mobility  
for communication, digital-first passenger experiences

Intelligent baggage tracking  
plus curb-side tracking with Computer Vision

Simpler  
operations, through automation

Optimized aircraft turnaround  
saving significant times and costs

Digital Identities  
with world first success using ICAO's  
Digital Travel Credential

Sustainable travel  
tracking energy consumption and emissions

# Our sustainability product offering

We're putting ourselves at the heart of the industry's sustainability challenges

Bringing innovative sustainable solutions for airports and airlines

Main focus: reducing our carbon footprint, enhancing energy management, and ensuring compliance with ESG regulations

## Airports



Environmental Management  
• Carbon Manager  
• Energy Manager

Airside Optimizer  
• Pre-Departure Sequencer  
• Taxi Analytics

## Airlines



OptiFlight



Key focus: help aviation reach carbon net-zero

- Reduce environmental footprint and run more through data, AI, and flight optimization services

Pioneering sustainability products:

- SITA Environmental Management
- SITA Sustainability Management Solution
- SITA OptiFlight

Working with rail, maritime and Urban Air Mobility industries

- To monitor energy usage, emissions, and carbon footprint in real-time



New ways

of doing things: building self-service kiosks, gates, and bag drops, with sustainable, modular design.

Using less power and helping reduce carbon emissions.

## Partnerships

to drive innovations for sustainability across multiple sectors.

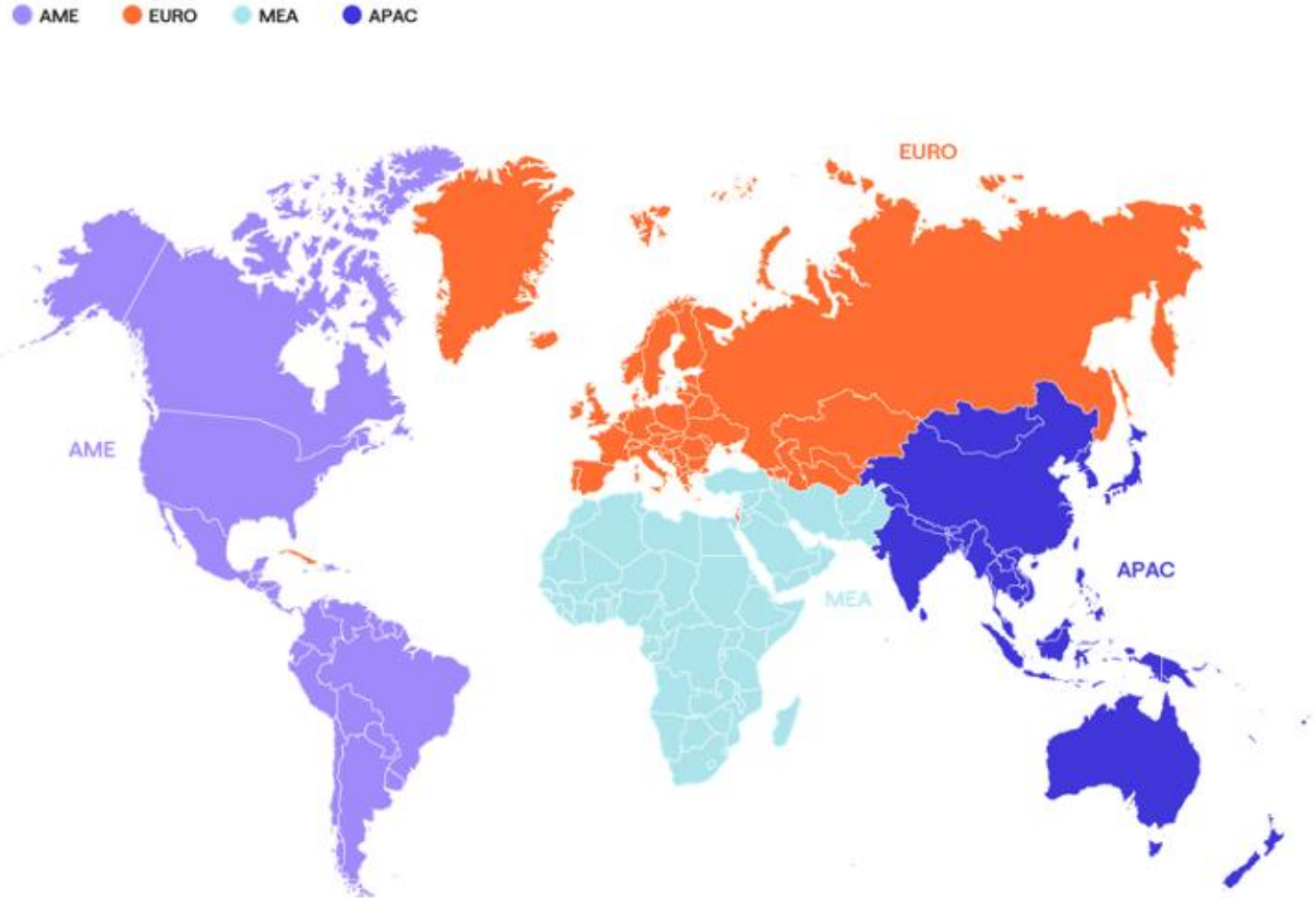


Example: IATA's ONE Record standard (through CHAMP Cargosystems) for efficient and sustainable practices in air cargo.

# Where we are

Grouped into four 'Geographies', we deliver services in around 200 countries and territories

<b>130</b> Nationalities represented	<b>4900</b> Staff
<b>&gt;60+</b> Different languages	<b>258</b> Cities
<b>&gt;115</b> Countries with a SITA presence	<b>41%</b> Customer-facing staff
<b>363</b> Locations	<b>1000</b> Airports with a SITA presence





**SITA**

# Challenge



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# Challenge

**SITA is looking to optimize aircraft turnaround times at regional African airports as a way to reduce emissions.** There are many systems available for larger airports, but these are not economically or technologically suitable for smaller airports with less advanced infrastructure, which must also deal with signal and power issues.

Their goal is to **reduce CO2 emissions and wasted resources** (primarily caused by additional use of aircraft APUs: Auxiliary Power Units) by 20% by enhancing efficiency and streamlining turnaround logistics.

Innovative solutions should have real-time functionality, measurement ability and be capable of dealing with the reduced amount of data collected by smaller airports. The solutions will initially be **triated in South Africa, Nigeria and Kenya** and should be scalable regionally.

# SITA Background

**SITA is the world's leading specialist in air transport communications and information technology.** Back in 1949, 11 visionary airlines came together to create SITA and transform travel forever. From the beginning, their mission has been clear: to revolutionize the industry.

Since then, they have constantly been adding more and more **innovations that work for every airline and every airport** across the world. They are here to help pilots talk to ground control. Make check-in easier. Track down lost bags and build a safer and more sustainable future of travel for everyone.

From the very beginning, their vision has been to reinvent travel and transport, pioneering innovations that touch the lives of billions of people. That's why they say they don't just build networks; they build pathways to the future.

# Motivation Behind the Challenge

**Sustainability through reduced emissions:** This challenge directly contributes to sustainability by reducing greenhouse gas emissions. Increased aircraft turnaround times can lead to extended ground operations, increased taxi times, air traffic congestion and disruptions to overall airport efficiency - all of which have a concomitant CO2 emissions impact.

**Economic Impact:** Boeing's research indicates that reducing turnaround times by just 10 minutes can increase airplane utilization by 8.1 percent and lower airplane-related operating costs by 2 percent, crucial for Africa's rapidly growing aviation sector.

**Regional Growth and Connectivity:** Enhanced turnaround efficiency fosters better connectivity across the continent, aligning with Africa's infrastructural developments and the rise of low-cost carriers flying point-to-point routes.

# Regional African Airports

Many regional African airports **lack the infrastructure for efficient data capture and analysis** for aircraft turnaround, leading to operational delays locally, while also spilling over into interconnected hub-airport operations.

These infrastructural limitations make traditional optimization approaches less effective. We seek **innovative, adaptable solutions that respect the infrastructure and process constraints** of small airports and deliver tangible reductions in carbon footprint and resource utilization.

Solutions for large European airports do not suit small African airports. Existing products are too expensive, both in terms of capital expenditure and in terms of running costs. Smaller airports may lack basic tracking technology, instead relying on manual recording of movements and quantification of essential data. Solutions are sought with a suitable balance of automated and manual interactions.

# Turnaround Cycle

The basic turnaround time flight cycle consists of:

- **Landing**
- **Parking**
- **Turnaround**
- **Take-off**

Optimisation of each of these elements (reducing gate time, fuel use, staff time, etc.) should be considered as part of an integrated solution. Every delay creates costs and knock-on effects for the principal and partner airports.

Primary factors impacting turnaround are passengers disembarking/boarding, luggage and freight loading/offloading, re-fuelling, catering and cleaning, and potentially line maintenance.

Solutions should align with industry cybersecurity protocols and interface with any other airport systems required (eg: flight updates, ticketing, baggage, etc).

# Potential Tech & Considerations

- **Blockchain:** Secure, transparent, and efficient
- **Video Analysis/Computer Vision:** Real-time monitoring and decision-making
- **Business Intelligence/Forecasting:** Dynamic forecasting with real-time data
- **User-Centric Design:** Practical and user-friendly for ground staff
- **Sustainability Metrics:** Quantifiably improve turnaround times
- **Scalability and Adaptability:** Scalable and adaptable to different airport sizes and capacities
- **Scope of Solution:** Servicing less than 10 airlines and under 1 million passengers pa.
- **Realtime Tracking:** Preferably track aircraft across airport, not stand only



# 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:

- Aviation
- Transport
- Telecoms
- Digital & Creative
- AI and Blockchain
- Machine Learning and Computer Vision
- Data
- Design
- Sensors & Imaging
- Business intelligence and Forecasting

# Functional Requirements

The identified solution must/should address the following:

- Solution must **align with existing airport systems**
- Solution must be applicable in **modular format**, to scale progressively
- Solutions must **operate securely** with data privacy aligned with existing SITA policies

# Technical Requirements

- Solution may be integrated with SITA's existing systems or may operate as separate systems alongside it.
- Solutions should include the ability to **measure relevant metrics**, allowing the setting of baselines and monitoring of improvements.
- Please detail any new infrastructure requirements for your solution
- Technological maturity: preference for **late-stage solutions (TRL 7+)** that have passed proof of concept stage, are in pilot, ready to commercialise or commercialised. However lower TRL ideas will also be considered.

# Operating Conditions

- 24/7 operation to cover all African time zones
- Able to cope with climate extremes
- Solution should be able to cope with power and signal outages

# Out of Scope

## **Proposed solutions may not be viable if they are:**

- Unable to interface with existing airport systems
- Unsuitable for African regional airports in practical or technical terms
- Very expensive to fit and operate in terms of ROI

# Application Information



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# Deployment Timescale

- 12 Sep 2024 – Competition launch
- 11 Oct 2024 – Information session/Q&A
- **25 Oct 2024 – Deadline for applications**
- Nov 2024 – Selection and notification of finalists
- Nov 2024 – Pitch day & selection of winner
- Dec 2024 – Collaboration discussions
- Jan 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

**SITA 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 optimising logistics at regional airports. 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

- Up to GBP 25,000 seed funding (Subject to T&C)
- Opportunity to pitch your solution to SITA
- Collaboration/partnership with SITA
- Technical support from SITA 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 Innovate UK or similar competitions

# Thank You



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