

Sustainable Plastics Insights from the Global Expert Mission to South Africa

15 July 2025



Housekeeping

- Please note that this session is being recorded and will be shared on the Innovate UK BC website.
- The presentation will be share with you at the end of the session with a survey.
- All participants will be muted and cameras will be turned off.
- Should you have any technical issues during the session, please let us know in the chat box.
- Please feel free to use the Q&A tab to ask any questions.

Agenda - 9am to 10am

- Welcome
- Innovate UK & South Africa Relationship
- The UK landscape and the Smart Sustainable Plastic Packaging (SSPP) Challenge
- South Africa Plastic Landscape
- The Plastic Pact
- Insight on the Global Expert Mission and opportunities for Sustainable Plastics innovation
- Roundtable discussion on opportunities for the UK and South Africa Collaboration on Sustainable Plastics
- Q&A
- Conclusions and next steps

Innovate UK & South Africa Relationship

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Head of Global Alliance

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The UK's innovation agency

We are the UK's innovation agency

UKRI works with the government to invest over £7 billion a year in research and innovation by partnering with academia and industry to make the impossible, possible.

Through the UK's nine leading academic and industrial funding councils, it creates **knowledge with impact**.



**UK Research
and Innovation**

Innovate UK

- We are the UK's innovation agency
- We support business-led innovation in all sectors, technologies and UK regions
- A key delivery body of the Government's Innovation Strategy

Our Mission

To help UK businesses grow through the development and commercialisation of new products, processes, and services, supported by an outstanding innovation ecosystem that is agile, inclusive, and easy to navigate.



**UK Research
and Innovation**



Building the future economy

Plan for action for UK business innovation

inspire | involve | invest

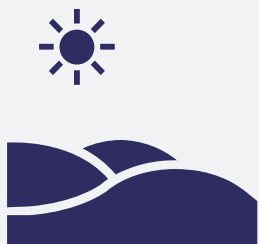
2021–2025



Theme 3: Global opportunities

More and more countries are looking to science and innovation to build their economies and meet global challenges. There is a major opportunity for international co-operation on research and development and innovation that builds on our world-class science and research capabilities and industry strengths.

Innovate UK Global Innovation Programmes



Global Expert Missions

The Global Expert Missions programme aims to increase understanding of the policy, research, economic and industrial landscape of a country in specific technology and sector areas, to inform future strategy, delivery and engagement and to highlight R&D and innovation opportunities for UK businesses.

A small group of experts from UK business, research, and government, visit a country to gather insights and produce mission reports.



Global Explorers

Grant funding to innovative UK SMEs of up to £21,000 together with IUK Business Growth support from an innovation and growth specialist for projects that help SMEs explore global R&D and innovation opportunities. The aim is to accelerate the development of their innovative ideas, products and services, and accelerate global market access. Projects which focus on exploring potential international collaboration and partnerships, rather than actual commercialisation of an innovation will be supported.



Global Business Innovation Visits

A three-phase 9-12 months programme focussed on a specific sector/technology area in a specific market/geography, helping a cohort of up to 15 innovative UK SMEs with the knowledge, insight and skills to build R&D and innovation partnerships and explore global markets. Each business is supported by a Innovate UK Business Growth innovation and growth specialist.



Global Incubators

A three-phase acceleration programme for innovative scaling SMEs interested in global expansion, to help them understand the requirements of different markets and build necessary partnerships, collaborations and networks through working with a world-leading incubator organisation (and its mentors) based in a global market. Cohorts of up to 8 small businesses. Programme over 12-18 months with 3 phases: Prepare, Pursue, Exploit.



Bilateral CR&D

UK businesses to undertake joint R&D projects with counterparts from a territory we are partnering with. Programmes can be focussed on a specific sector, technology area or theme, or be open scope. Intended for projects that will deliver new IP, products or services, supporting business growth and scale in a global context.

Lead Customer programme

UK and bilateral partner SMEs collaborate and demonstrate innovative viability of products, processes, service or business models to address challenges within a specific sector, through support/commitment of a company who presents a demonstrable deployment route for the innovation.

Open Innovation programme

Funding and support to UK businesses (as 'solution providers') to respond to challenges held and set by organisations in partner countries (as 'challenge holders').

Eureka

The largest international funding programme for SMEs wishing to collaborate internationally on R&D projects that create innovative products, processes or services for commercialisation. It is part of the European Partnership on Innovative SME and is co-funded by the European Union through Horizon Europe. There are 37 participating countries in Eurostars including the UK.



UK-South Africa Science & Innovation Delivery Partners

UK Government

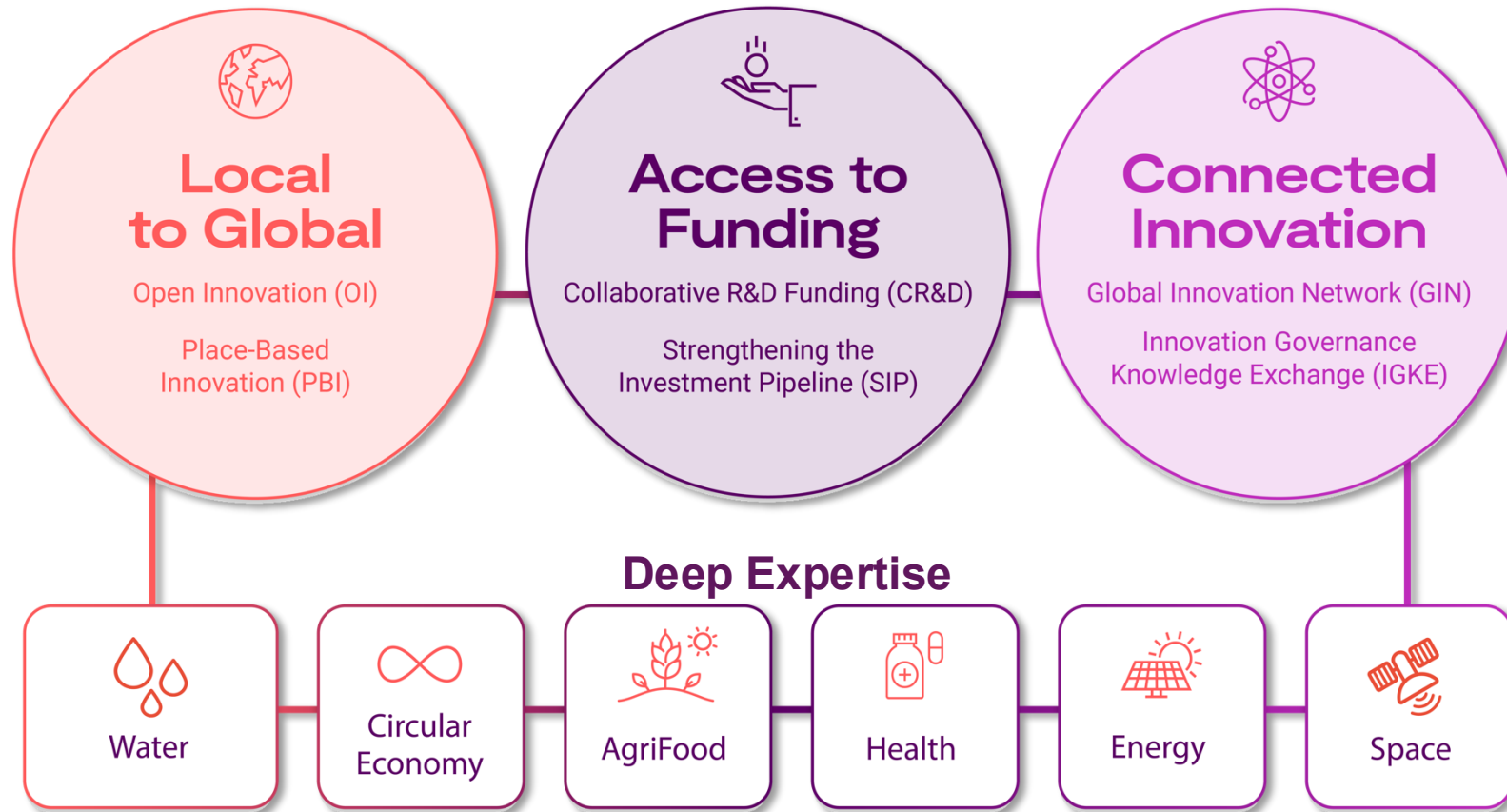


South Africa Government



Global Alliance Africa (GAA)

www.iukbc.org.uk/programme/africa



Challenge-driven, Demand-led by Partner Countries

Our Partners in South Africa

Public Sector

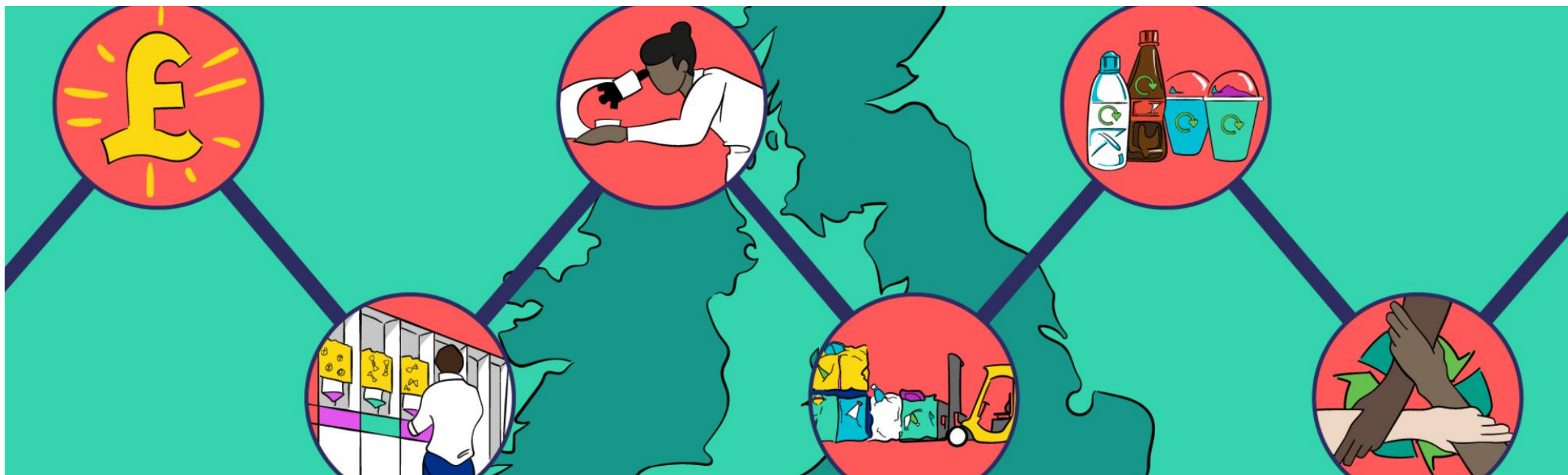


Business



Social Enterprises





Smart Sustainable Plastic Packaging (SSPP) Challenge



UK Research
and Innovation



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UK



Natural
Environment
Research Council

UK landscape

UK aims to recycle 65% of municipal waste by 2035 and eliminate avoidable plastic waste by 2042 by:

- New UK **Extended Producer Responsibility** for packaging (pEPR) legislation
 - Business have to record data about the packaging they supply or import in the UK (on year 2 of this).
 - From 2025 large businesses will have to also pay a waste management fee & scheme administrator costs.
 - PackUK is now the scheme administrator
- New **Simpler Recycling** policies
 - 4 core types: paper/card, food waste, dry recyclables (plastic, metal & glass), residual waste.
 - Kerbside **plastic film** collections March 2027
- **Deposit Return Scheme** for drinks containers by October 2027
- The UK has banned or restricted several **single-use plastic** items (e.g. straws, stirrers & cotton buds) and is considering additional bans.
- The UK is playing a leading role in the development of the **UN plastic treaty**.

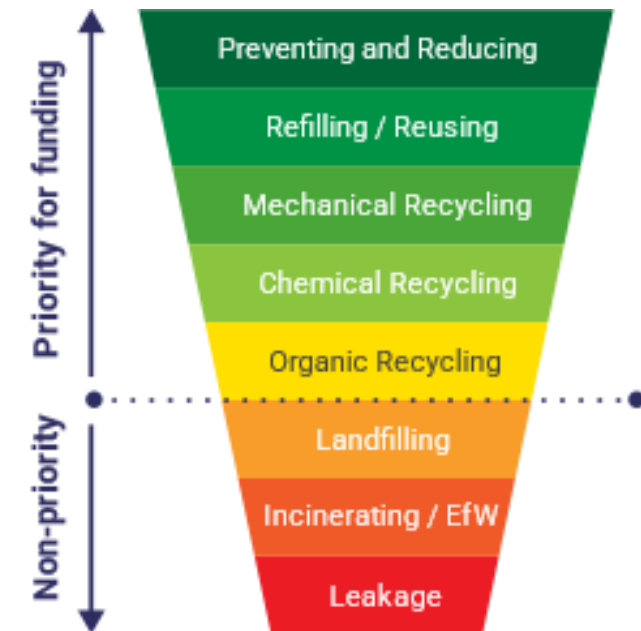
Key strengths of the UK

A strong research and innovation culture.

Smart Sustainable Plastic Packaging (SSPP) Challenge

A £60M public sector investment to establish the UK as a *leading innovator in smart and sustainable plastic packaging* for consumer products, delivering clean growth across the supply chain, with a dramatic reduction in plastic waste entering the environment by 2025.

- Drive R&I in support of the **UK Plastic Pact targets**
- Increase UK plastics packaging supply chain collaboration and international reach
- Secure **£274M** of private sector co-investment
- Innovative recycling technologies, plastic alternatives and reuse/refill models
- World/UK first: chemical recycling plant, food grade recycling, refillable milk bottle.
- Better system and behavioral understanding.



First of a kind demonstrators...



Mechanical recycling plant for **food-grade** polypropylene

First **refillable plastic** milk bottle



Large scale **Chemical recycling** demonstrator



Reusable & Refillable packaging, large-scale demonstrators instore and online

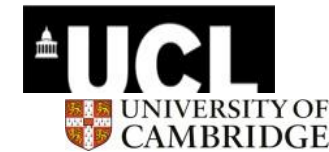


Pioneering Alternative Materials

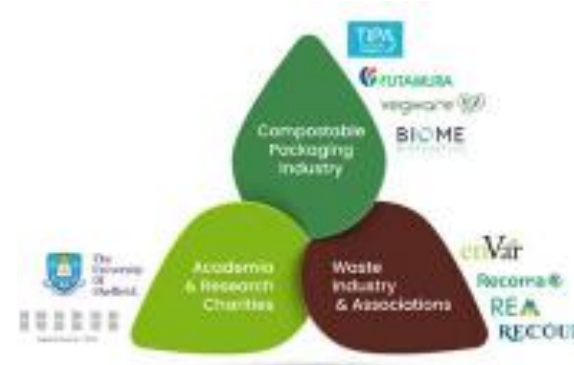
Plant-based films, coatings and microcapsules, including edible films



Seaweed-derived coatings and films as an alternative to plastics.



Compostable Coalition UK - focusing on collecting and recycling compostable packaging via UK's existing infrastructure.



Cutting edge sorting & detecting technology

Smarter sorting - a hybrid AI/Near-Infrared (NIR) waste recognition system



Water based sortation - density separation technology for laminated and multi-layer films.

Smarter sorting - robotic gripping to effectively handle films and flexible packaging and blockages.



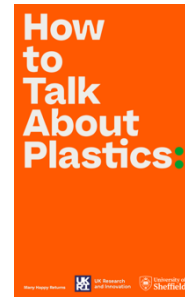
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**Mapping
marine plastic
pollution**

Systems and Behaviour Change

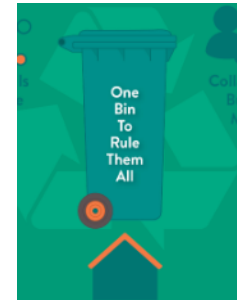
- Effective change requires shared, **multi-disciplinary understanding and collaborative action.**
- Behavioural insights are crucial to lead successful adoptions of new initiatives



Reactions to
reusable packaging
& the role of
language.



The
University
Of
Sheffield.



The **Human factor**-
understanding
plastic packaging
& recycling
behaviour.



Better data (**AI and models**) to support informed decision making and collaborative action.



100,000 tonnes/year
of new UK recycling capacity funded

An increase of over

10%

in the UK's 2020 recycling capacity

Predicted
CO₂e
saving of

1.5m⁺ tonnes
between 2025
and 2030 as
SSPP projects
come online

Over **300**
new collaborations
enabled through



over
150,000 tonnes/year
overseas recycling capacity enabled

including

日本
Japan

Suomi
Finland

한국
Korea

भारत
India

Deutschland
Germany

over
100
academic
publications

and over
250 public
engagement
activities

from SSPP's Enabling Research projects



Committed
co-investment so far
of circa

£274 million

£5 in private sector co-investment leveraged

£ £ £ £ £ £

for every £1 in grant funding

SSPP projects
recognised
around the
world with



international
awards

nominations,
speaking
slots, and
consultations

Potential for

17 million

units of single-use packaging
to be replaced/avoided SO FAR

and

30kt

of CO₂e savings



through the development of alternative
bio-based packaging materials and new
reuse and refill models

UKRI GEM Feedback Session

South African Plastics Landscape

SAPRO - South African Recycling Organisation
Industry Association of Plastic Reprocessing Companies

Oliver Bonstein
General Manager

15 July 2025



TOGETHER TOWARDS
A CIRCULAR ECONOMY

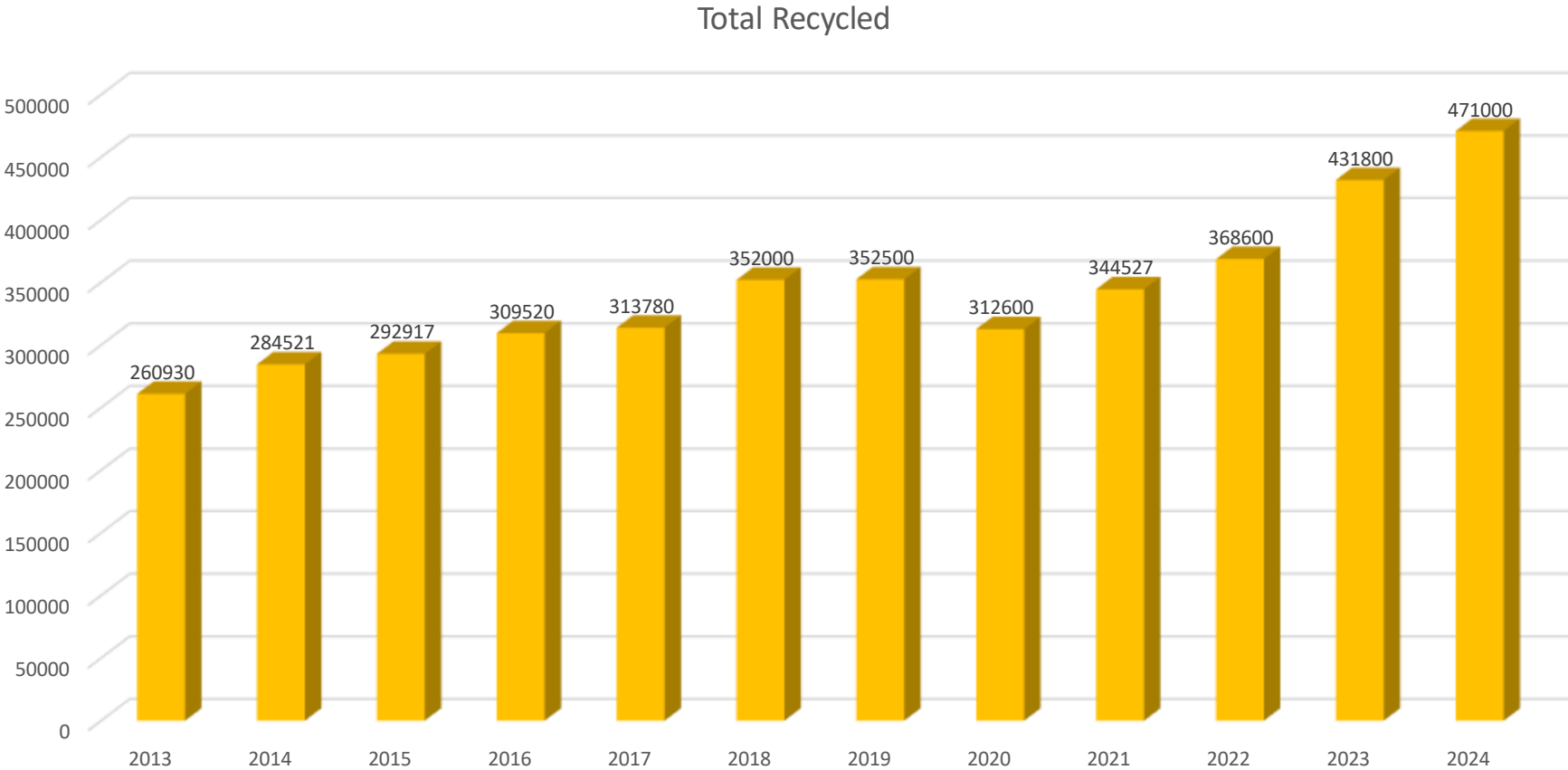
 plasticrecyclingsa #plasticrecyclingsa

www.plasticrecyclingsa.co.za

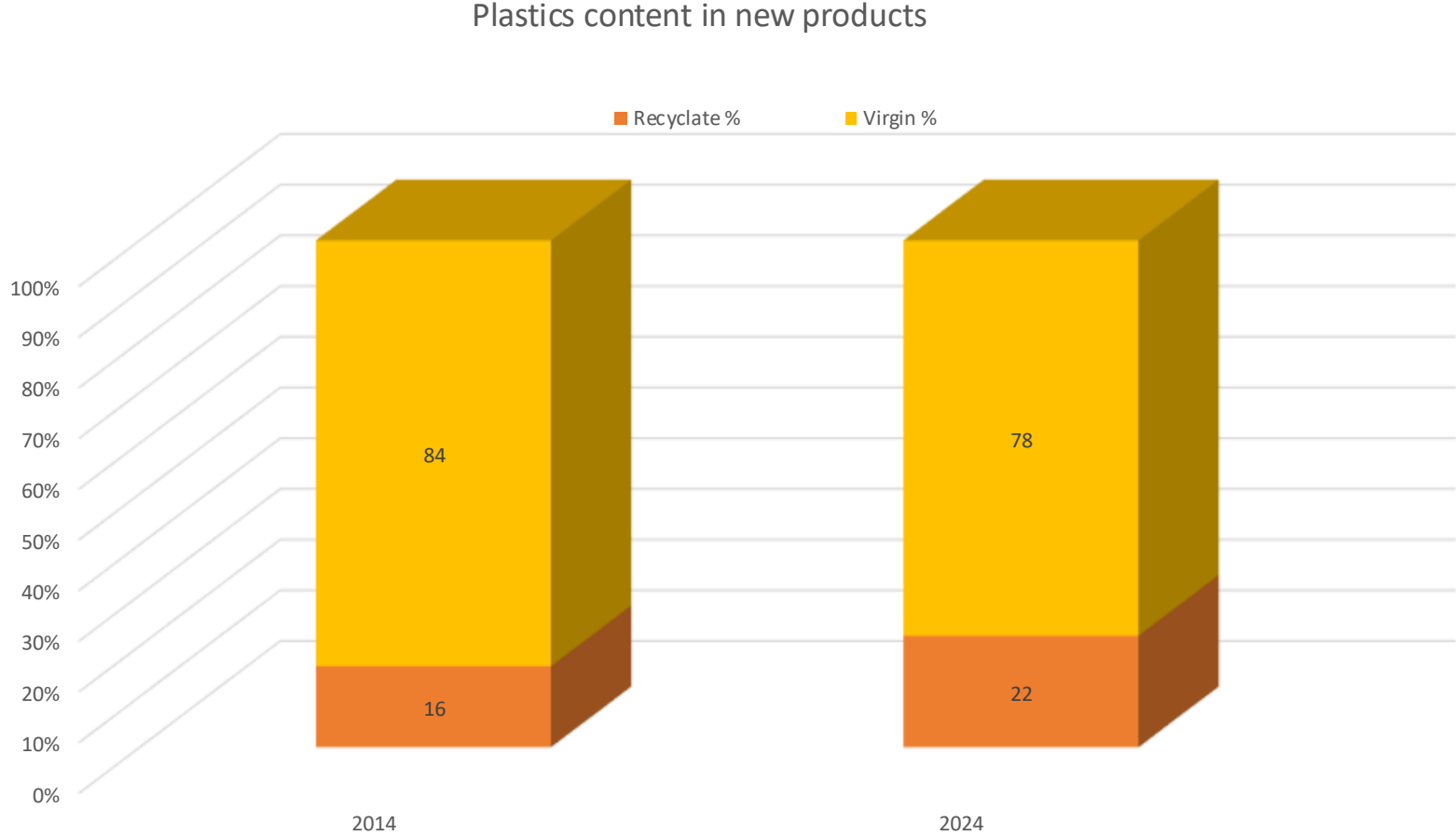
SA Plastics Landscape

- Population = 63.21 mil, pop growth rate = 1.3%, GDP growth = 0.7%
- Plastic consumption per capita ~26kg/a (= 2.114 mil tonnes, 2024)
- 10yr consumption growth:
 - Virgin polymer = 18% (~ matches population growth rate)
 - Recyclate = 67% (~ tonne for tonne as virgin)
- Informal sector collects most recyclables (est. 80-90%)
- ~270 plastic recycling facilities in RSA
 - Many closures (est. 30 in 1 yr)
 - Inc. energy & labour cost and dec virgin costs
 - Rejection of 15 – 40% of “recyclables” arriving on site – D4R problems

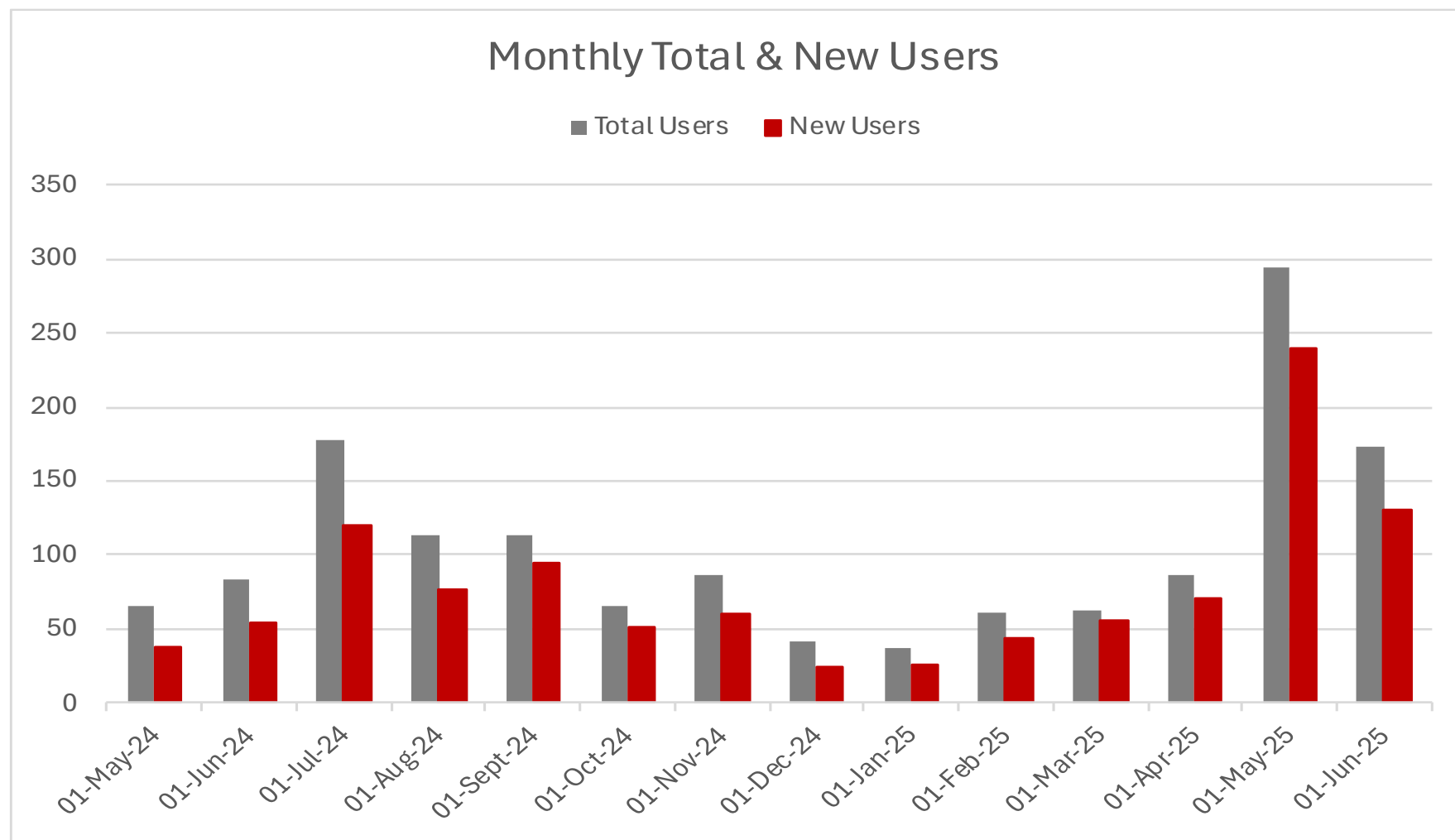
SA Plastics Landscape



SA Plastics Landscape



Design for Recycling Tool Usage



THE UK
PLASTICS
PACT



WRAP

UK & South African Plastics Pacts

15th July 2025 | Adam Herriott

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The Plastics Pact Network



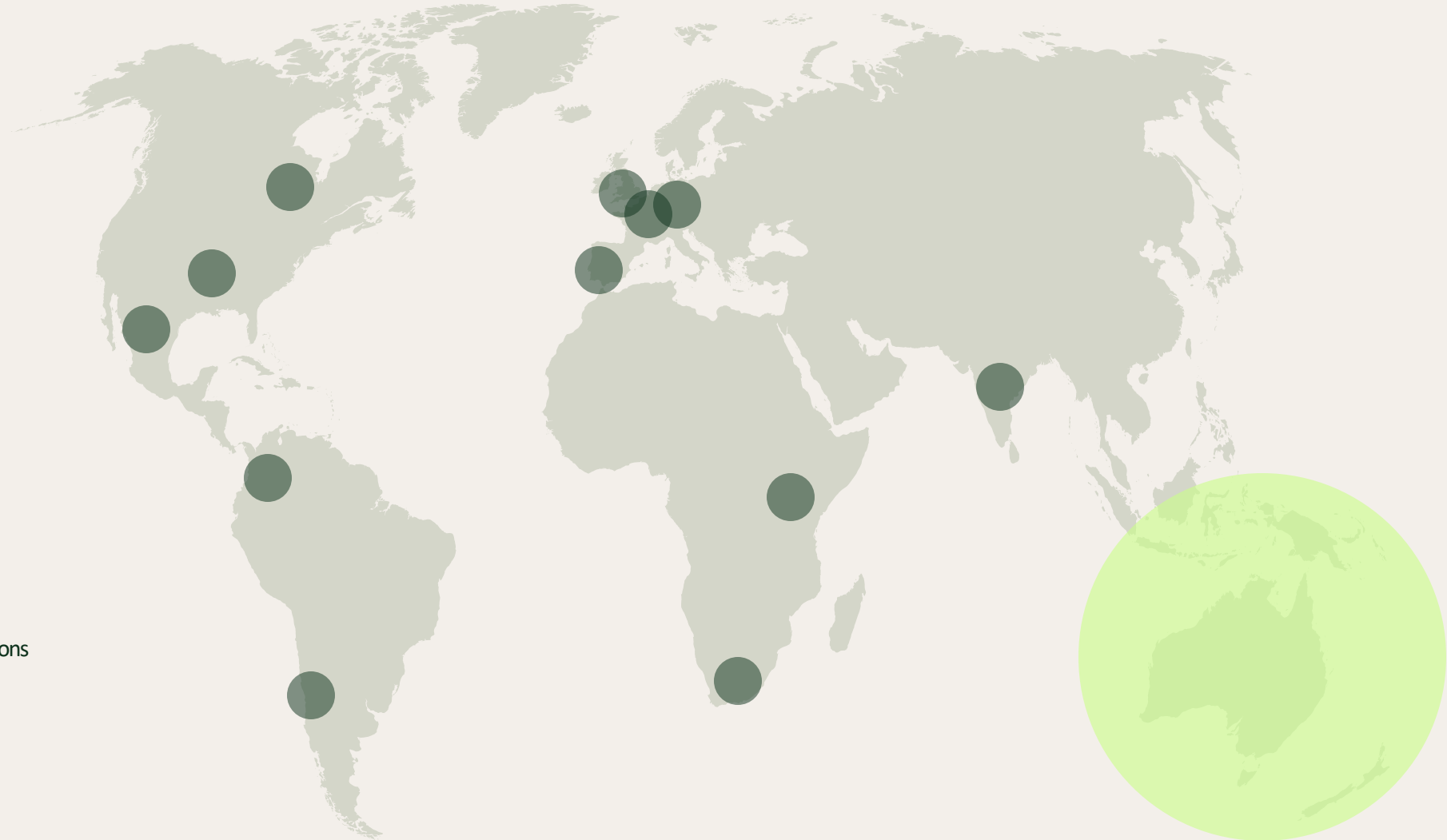
National Pacts

- Canada
- Chile
- Columbia
- France
- India
- Kenya
- Mexico
- Poland
- Portugal
- South Africa
- United Kingdom
- United State of America



Regional Plastics Pact

- Australia, New Zealand and the Pacific Island Nations (ANZPAC)



Plastics Pact Targets

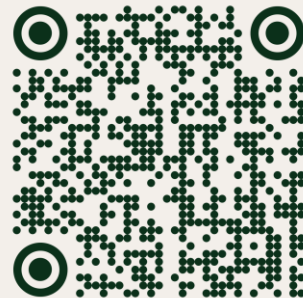


Target 1	Eliminate problematic or unnecessary single-use packaging through redesign, innovation, or alternative(reuse) delivery models	Taking action on problematic or unnecessary plastic packaging
Target 2	100% of plastic packaging to be reusable, recyclable or compostable	100% of plastic packaging to be reusable, recyclable or compostable
Target 3	70% of plastic packaging effectively recycled	70% of plastic packaging effectively recycled
Target 4	30% average recycled content across all plastic packaging	30% average recycled content across all plastic packaging

Plastics Pact Progress



Target 1	99.8% eliminated since 2018	29% eliminated since 2020
Target 2	70% of plastic packaging is now reusable or recyclable	72% of plastic packaging is now reusable, recyclable or compostable
Target 3	59% of plastic packaging effectively recycled	54% of plastic packaging effectively recycled
Target 4	26% average recycled content	18% average recycled content



Download the
annual reports for the details



Outcome of the Mission and Opportunities for Collaboration.

Geraldine Durand
Innovate UK Business Connect

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Sustainable Plastics GEM technical areas of interest

The purpose of the Global Expert Mission is to identify areas and programs that will **enable UK innovators to collaborate more effectively with South African partners** to deepen research & development and innovation collaboration on Sustainable Plastics.

The mission predominantly seeks to explore the cross-sector applications of Sustainable Plastics in:

- **Upstream Innovation: Examples**
 - Flexible film packaging
 - Reusable packaging and refill business models
 - Alternative materials and new designs
- **Downstream Innovation: Examples**
 - Collecting, cleaning, decontaminating, sorting, separating
 - End Market Development



Experts - UK Delegation



Helen Clements
Director & Innovation Lead
GoUnpackaged



Steve Fletcher
Director,
Revolution Plastics
Institute
University of Portsmouth



Pierre Paslier
Co-Founder and Co-CEO
Notpla



Pilar Bolumburu
Materials Designer & Researcher
Materiom



Sophie Walker
CEO and Co-Founder
Dsposal



James Donaldson
Managing Director
Sortology



Robbie Staniforth
Innovation and Policy Director
Ecosurety

From the organisation side



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Durand**

*Global Alliance
Mission Lead
Innovate UK
BC*

Nick Cliffe

*Deputy
Director, Smart
Sustainable
Plastic
Packaging
Innovate UK*

Heather Birch

*Innovation
Lead – Smart
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**Oliver
Bonstein**

*General
Manager
SAPRO*

Loice Alusala

*Senior
Science &
Technology
Officer
British
Consulate-
General
Pretoria*

Mission overview - Stakeholders

Companies

- PepsiCo South Africa
- Unilever South Africa
- Myplas
- Superthene
- Tuffy Brand
- EnviroServ, Chloorkop
- Premier Plastics
- Reusefy
- Sonke Refill Solutions
- Pikitup
- Heineken Beverages
- Zibo Containers
- Shoprite Checkers
- Inwaste Green EMET
- Polyethylene Recoveries
- Extrupet

Governmental bodies

- Council for Scientific and Industrial Research (CSIR)
- Department of Science and Innovation (DSI)
- The Department of Trade, Industry and Competition
- Technology Innovation Agency (TIA)

Non-profit Organisation and Association

- African Reclaimers Organisation
- WWF
- Green Cape
- Plastics SA
- South African Plastics Recycling Organisation (SAPRO)
- South African Plastics Pact





Global Expert Mission Report – Sustainable Plastics in SA

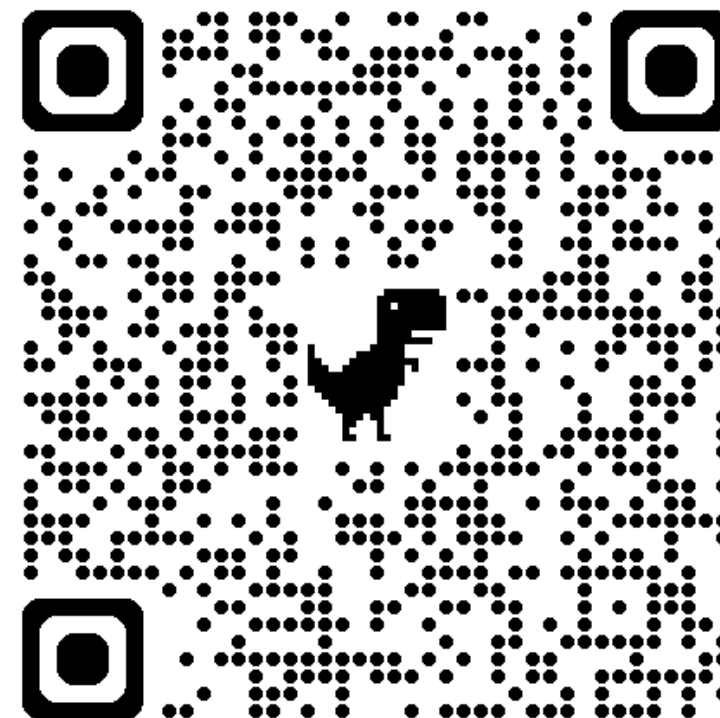


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UK

Innovate UK Global Expert Missions

Sustainable Plastics in South Africa

March 2025



Innovate UK Global Expert Mission Report
Sustainable Plastics in South Africa



Innovate
UK

Key outcomes from the Mission

Data, Transparency & Standards

Challenges

Limited existing data

Data controlled by industry (Plastics SA)

Opportunities

Interest in improved waste data & open standards

SA seen to be a CE testbed

Potential Collaborations

Joint data standards & tracking frameworks

UK support in data systems

Reuse & Refill Systems

Challenges

Retailer hesitancy (branding, fraud, user experience)

Infrastructure & logistics gaps

Limited policy incentives

Opportunities

Consumer interest in reuse/refill

Entrepreneurial potential for refill initiatives

Sharing of successful UK models

Reusable secondary packaging in existing supply chains

Potential Collaborations

Knowledge-sharing on UK trials

Collaborative pilots

UK pre-fill model sharing

Innovation & Market development

Challenges

High cost of recycle

Unclear market demand

Opportunities

Food-grade plastics & high-value recyclates

Difficult-to-recycle plastics into wood replacements

Investment in innovations

Potential Collaborations

Feasibility studies on market opportunities

Investment funding & incubation programmes

Sharing of UK technology and knowledge

Policy, Regulation & Governance

Challenges

Weak EPR enforcement & unclear regulations

Fragmented municipal policies

Opportunities

Opportunity to shape EPR policies

Desire for standardised (and governed) recycling labels

Scope for policy refinement

Potential Collaborations

Knowledge exchange on policy design & enforcement

Collaboration/knowledge exchange on standardised On Pack Recycling Labels

UK-SA regulatory collaboration

UK-SA voluntary EPR scheme/fund



Socio-economic & Informal Sector Engagement

Challenges

Deep social inequalities

Informal reclaimers marginalisation

Concerns over job automation

Opportunities

Informal sector vital for recycling

Local job creation

Modular processing & economic benefits

Potential Collaborations

Inclusive business models

Policy for informal sector integration

Socio-economic focused programmes

Biobased & alternative materials

Challenges

Resistant from traditional plastic stakeholders (seen as a inhibitor to recycling).

Lack of infrastructure for compostables or bioplastics.

Opportunities

Strong potential from natural resources (seaweed, agricultural waste)

Interest in sustainable alternatives to fossil plastics

Regenerative agricultural support

Potential Collaborations

Joint UK-SA R&D on bioplastics

Feasibility studies & pilot programmes

Develop value chains around bio-based, complementary to existing streams

Ocean Plastics & Environmental Tracking

Challenges

Limited tracking technology & implementation

Lack of data on environmental impact

Opportunities

A lot of coastline for plastics tracking

Increased Environmental awareness

Potential Collaborations

Joint educational programmes/ campaigns

UK-SA collaboration on Ocean plastics tracking

Recycling Infrastructure & Technologies

Challenges

Poor Infrastructure & contamination issues

Lack of (widespread) advanced recycling technologies

Microplastic leakage into wastewater

Opportunities

Modular/localised recycling plants near to waste streams

Advanced recycling technologies (de-inking, chemical recycling etc)

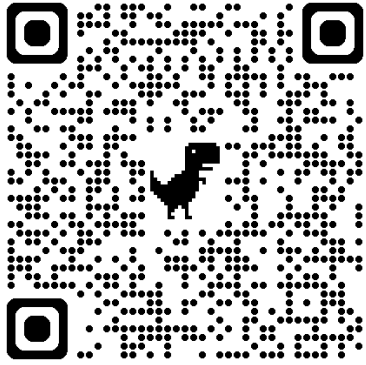
Microplastics capture & filtration

Potential Collaborations

Join investment in modular & advanced recycling technologies

Technology transfer & co-development solutions





Round Table Discussion

Opportunities for collaboration

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Roundtable Discussion - Next steps for collaboration



Lorren De Kock
Senior Technical Specialist - Circular Economy
WWF South Africa



Robbie Staniforth
Innovation and Policy Director
Ecosurety



Roan Snyman
Expert Analyst - Circular Economy
GreenCape



Sophie Walker
CEO and Co-Founder
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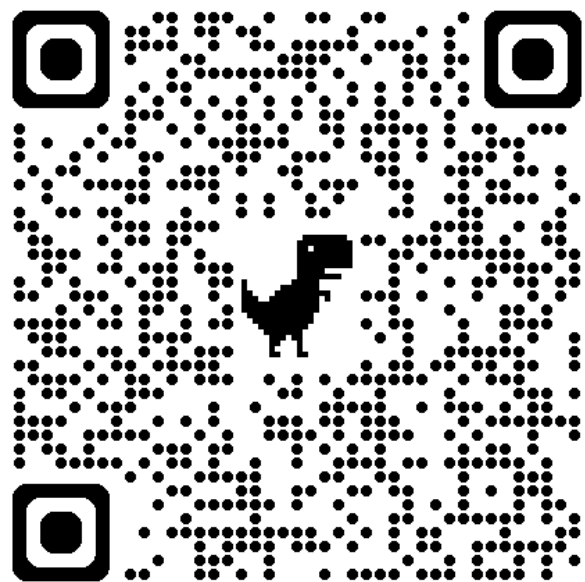
James Donaldson
Managing Director
Sortology

Conclusion and Next steps

Nick Cliffe- Innovate UK

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Innovate UK Global Expert Mission Report
Sustainable Plastics in South Africa

Thank you

Sustainable Plastics Insights from the
Global Expert Mission to South Africa

