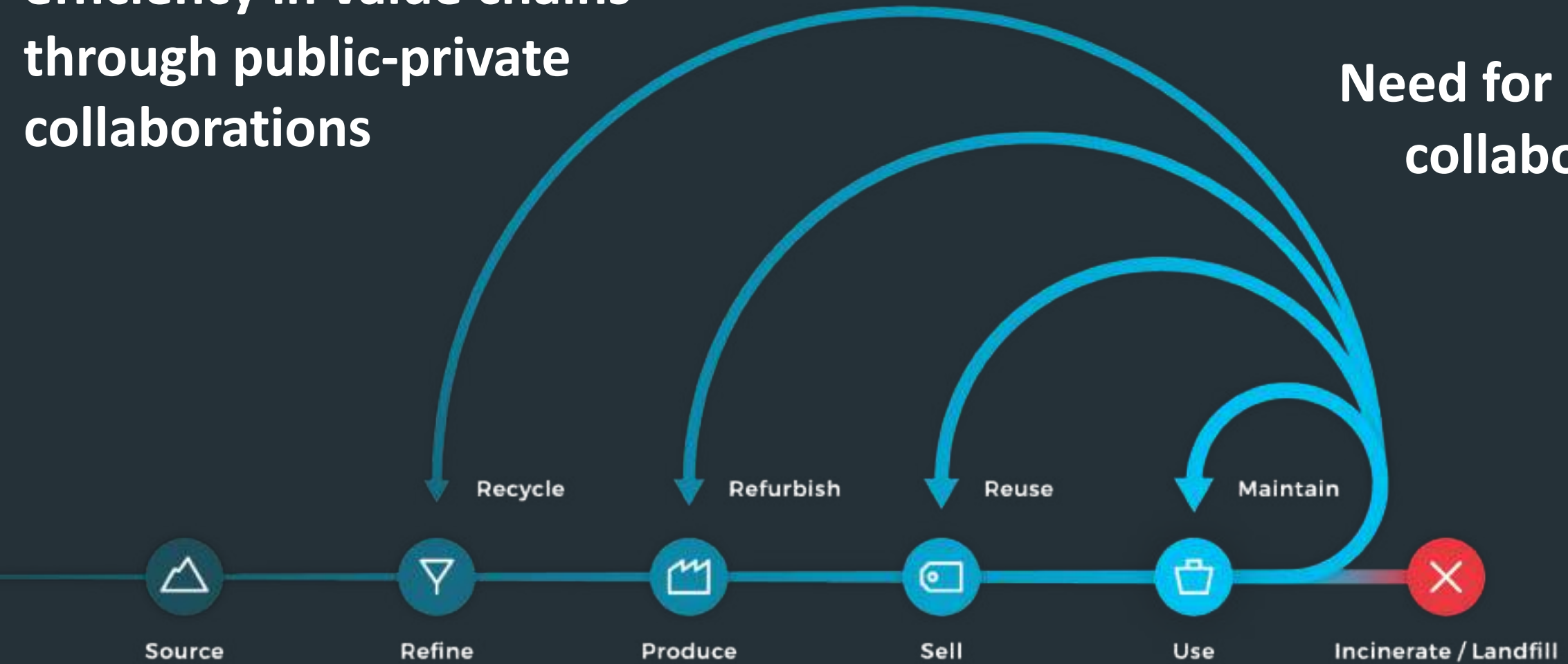


Improving resource  
efficiency in value chains  
through public-private  
collaborations

Need for “radical  
collaboration”





**PACE**

PLATFORM FOR ACCELERATING  
THE CIRCULAR ECONOMY

# Platform for Accelerating the Circular Economy

The formation of PACE was mandated at Davos in 2015 to drive public-private action on the circular economy



## VISION

Stimulate market transformation for a circular economy at scale and speed, regionally and globally

## MISSION

Drive collaborative projects to implementation, and scale learnings through global leadership

The specific scope and value proposition that PACE brings to the table is threefold:



Bring the **public and private sector into collaborations** to scale impact around circular economy initiatives, in mature, emerging and developing economies



Help to create and adjust **enabling frameworks** (e.g. policy, technology, business models) to address specific barriers to advancing the circular economy



Apply **blended financing models** on projects that incorporate a balanced contribution from public and private partners

# PACE advances impact on the circular economy by driving projects, leveraging leadership, and sharing learnings



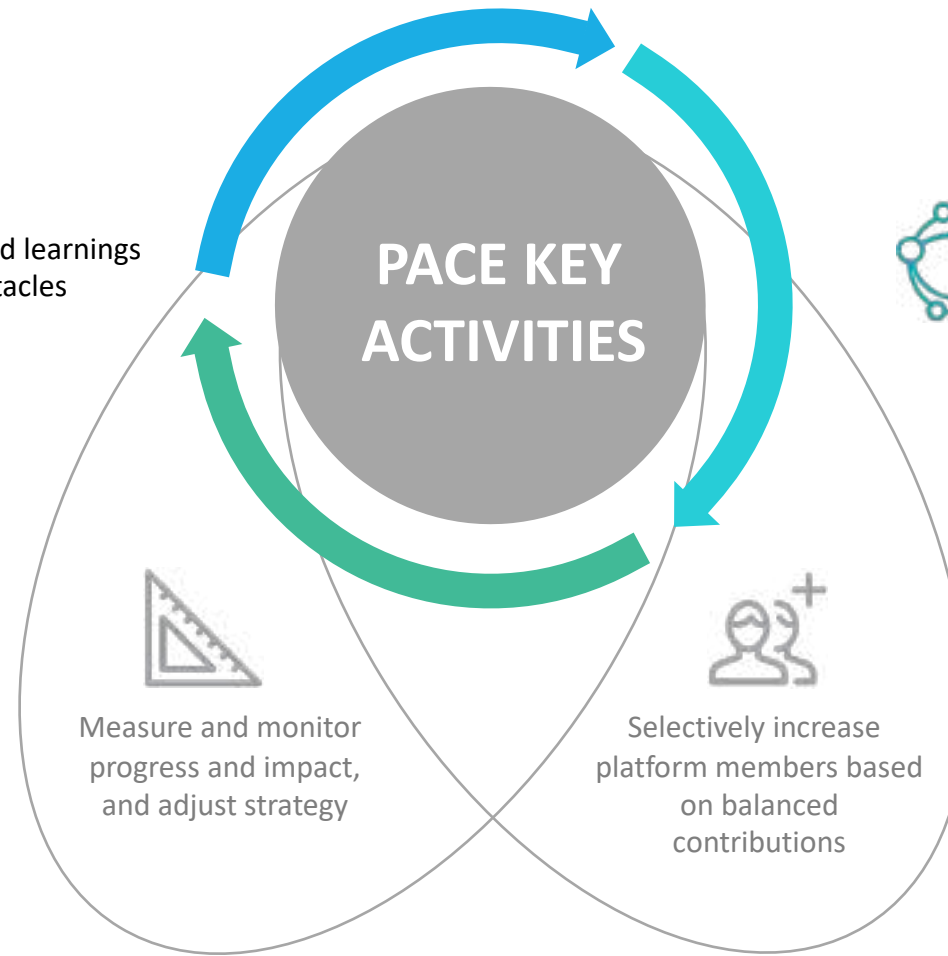
## Drive **PROJECTS**

- Initiate, lead and hand-over 3-4 core projects
- Lightly support projects led by affiliates:
  - Create visibility of project status, success and learnings
  - Respond to project requests to address obstacles



## Leverage global **LEADERSHIP** to drive action

- Identify scale-up and replication opportunities requiring leadership action
- Help individual leaders identify their potential contribution
- Agree on individual leadership commitments
- Reach out to peers to scale through adoption of learnings
- Drive impact at scale by smartly utilizing global, regional leadership venues, e.g., G7, G20, APEC, Davos, Club of Rome, Chambers of Commerce



## Capture and Disseminate **LEARNINGS** for Scaling

- Capture learnings from PACE projects and translate into replicable frameworks and approaches
- Leverage knowledge of PACE members and networks
- Disseminate learnings to relevant stakeholders to drive scale

PACE currently focuses on four key thematic areas with the aim to stimulate market transformation for a circular economy at speed and scale



## ELECTRONICS

- **\$55 billion of total value** in recoverable materials from e-waste is not captured
- **44.7 million metric tonnes of e-waste** is generated globally each year



## PLASTICS

- **95% of global packaging material value** is lost after first use
- By 2050 there will be **more plastics than fish** in the ocean



## FOOD & BIO

- The bio-economy represent **17% of our world's total GDP**
- **1/3rd of food produced is lost** or wasted while food demand surges



## MARKETS & MODELS

- There is a **\$4.5 trillion business opportunity** for moving towards a circular economy
- **Business model transformation, financing, technology innovation, procurement, measurement frameworks** and **supply chain optimization** can help obtain this



**LEADERSHIP** - 52 public and private organisations have joined PACE over the last 3 years with active leadership



Co-Chairs



**Naoki Ishii**  
CEO & Chair  
GEF



**Frans van Houten**  
CEO & Chair  
Philips

Knowledge  
Partners



Leadership Group

### COMPANIES

- **Frans van Houten, CEO & Chairman, Philips**
- Kees van Dijkhuizen, CEO, ABN AMRO
- Peter Lacy, Global Managing Director, Growth, Strategy and Sustainability, Accenture
- Eric Schmidt, Executive Chairman, Alphabet
- Lisa Jackson, VP Environment, Policy, Social Initiatives, Apple
- Greg Hodkinson, Chairman, Arup
- Malek Sukkar, CEO, Averda
- Chuck Robbins, CEO, Cisco
- Feike Sijbesma, CEO & Chairman, DSM
- Xu Kaihua, Chairman & President, GEM
- Leontino Balbo Junior, CEO, Grupo Balbo
- Dion Weisler, President & CEO, HP Inc.
- Jesper Brodin, CEO, IKEA
- Ralph Hamers, CEO, ING
- Carlo Messina, CEO, Intesa Sanpaolo
- Stefan Doboczky, CEO, Lenzing AG
- Arthur Huang, Founder & CEO, MiniWiz
- Lars Fruergaard Jørgensen, CEO, Novo Nordisk
- Jean-Louis Chaussade, CEO, Suez
- Christian Wessles, CEO, Sunray Ventures
- Tom Szaky, Founder & CEO, Terracycle
- James Quincey, President & CEO, The Coca Cola Company
- Gonzalo Munos, Co-Founder & CEO, Triciclos
- Paul Polman, CEO, Unilever
- Antoine Frerot, Chairman & CEO, Veolia
- Svein Tore Holsether, President & CEO, Yara International

### GOVERNMENTS

- Fang Li, China Council for International Cooperation on Environment & Development
- Jyrki Katainen, VP, Jobs, Growth, Investment and Competitiveness, European Commission
- Luhut Pandjaitan, Coordinating Minister of Maritime Affairs, Indonesia
- Stientje van Veldhoven, Minister for the Environment, Netherlands
- Thani Ahmed Al Zeyoudi, Minister of Climate Change and Environment for the United Arab Emirates
- Yoshiaki HARADA, Minister of the Environment, Japan
- Jakob Ellemann-Jensen, Minister for Environment and Food, Denmark
- Ibrahim Jibril, Minister of Environment, Nigeria
- Vincent Biruta, Minister of Natural Resources, Rwanda
- Derek Andre Hanekom, South African Minister of Tourism
- Miro Cerar, Ministry of Foreign Affairs, Slovenia

### REGIONAL / DEVELOPMENT

#### INVESTMENT BANKS

- Werner Hoyer, President, European Investment Bank
- Luis Moreno, President, Inter-American Development Bank
- Kristalina Georgieva, CEO, World Bank

### ORGANIZATIONS

- **Naoko Ishii, CEO, Global Environment Facility**
- Zhao Kai, Secretary General, China Association on Circular Economy
- Harald Friedl, CEO, Circle Economy
- Ellen McArthur, Founder, Ellen MacArthur Foundation
- Scott Vaughn, President, International Institute for Sustainable Development
- Guy Ryder, Director-General, International Labour Organisation
- Janez Potočnik, Co-Chair, International Resource Panel
- Izabella Teixeira, Co-Chair, International Resource Panel
- Janis Jones, CEO, Ocean Conservancy
- Peter Bakker, President, World Business Council for Sustainable Development
- Andrew Steer, President, World Resources Institute
- Marco Lambertini, CEO, World Wildlife Fund

To date, PACE has achieved concrete results across its pillars and themes



## PROJECTS

- 3 core public-private partnerships launched
- 10 affiliate projects supported

**>\$25m** project investment catalyzed



## LEADERSHIP

- Built balanced membership base of:

**>50** global leaders

**11** new platform funding partners



## LEARNINGS

- Learning strategy developed

**11** thought leadership products **150** network experts



## ELECTRONICS

- Built PRO in Nigeria with **\$15M** in public and private co-financing
- Published New Circular Vision report establishing an **eWaste baseline**
- Published Circular Capital Equipment Coalition learnings on **business case modelling** and **employee engagement**



## PLASTICS

- Launched the Global Plastic Action Partnership (GPAP) with **9 partners**, **\$10m funding** and **2 pilot countries** committed for 2019



## FOOD & BIO-ECONOMY

- Built a Cities and Circular Economy for Food consortium with **>60 partners** and a **\$2,7tr opportunity** identified



## MODELS & MARKETS

- Published whitepaper with **37 experts** establishing a **baseline on 4IR potential for circular** consumer electronics and plastics packaging

# CIRCULAR ELECTRONICS IN NIGERIA

Lead: James Pennington (World Economic Forum)

## LONG TERM AMBITION

Create one model for a circular electronics system to be applied in Nigeria and replicated across other countries in Africa



## CONTEXT

- In 2018, 50 million metric tonnes of e-waste was generated and
- E-waste is one of the fastest-growing waste streams globally
- Only 20% of e-waste is recycled through appropriate channels
- E-waste contains high value materials, with an estimated value of \$55 billion
- Informal e-waste processing poses significant health and environmental hazards

## OBJECTIVES

- Stimulate the development of a sustainable and circular management system of electronics products in Nigeria
- Develop model for scaling to other African countries

## PROJECT DESCRIPTION

This project aims to advance a systemic change in the way the value of electronics is captured in Africa. By convening public and private partners, it supports: (1) the recovery of valuable materials contained in electronics at the end of their use for their reuse in local production processes; (2) the safe handling of the hazardous components included in electronics waste; and (3) strengthen the enabling conditions for a self-sustaining system of extended producers responsibility legislation for the electronics sector in Nigeria.

## ROADMAP

2018

2019

Secure private sector funding

Explore scaling opportunities

Initiate PRO activities

PHILIPS



Microsoft



Computer Warehouse Group





# GLOBAL PLASTICS ACTION PARTNERSHIP

Lead: Antonia Gawel (World Economic Forum)

## LONG TERM AMBITION

Avert plastic pollution from source to sea by 2025, by fast-tracking circular economy solutions and catalysing concerted solutions



## CONTEXT

- We are on a path to having more plastics than fish in the ocean by 2050
- In low and middle-income countries, waste is often disposed in unregulated dumps or openly burned, creating health, safety, and environmental risks
- The past year has seen a wave of growing interest and commitment to tackling plastic pollution from global to national, business and small-scale initiatives
- To maximize impact and advance systemic change, scaled action and collaboration between the diverse stakeholders and efforts are needed

## OBJECTIVES

- Build and grow a public-private partnership to help translate political and corporate commitment to address plastic pollution into tangible strategies and investible actions plans
- Translate into national platforms that develop fact-based national action plans
- Conduct pilots in three countries and scale up to other countries
- Capture and exchange insights for rapid replication and scale

## PROJECT DESCRIPTION

The Global Plastics Action Partnership (GPAP) was forged as a structured global public-private partnership for action on plastic that enables public, private and civil society sectors and their initiatives to come together. As such, GPAP provides a platform for discussion and collaboration amongst the range of emerging efforts to jointly support governments facing plastic pollution challenges – particularly in developing or emerging economies. To enable this, GPAP will also advance structured action through focused proof-of-concept partnerships in ASEAN, Africa and SIDS. Representing three different “archetypes”, these focused partnerships will demonstrate the varying approaches to tackling plastics pollution in profoundly different geographies and economic contexts.

## ROADMAP

2018	2019
Establish global platform	Conduct pilot in Indonesia
	Confirm other pilot countries



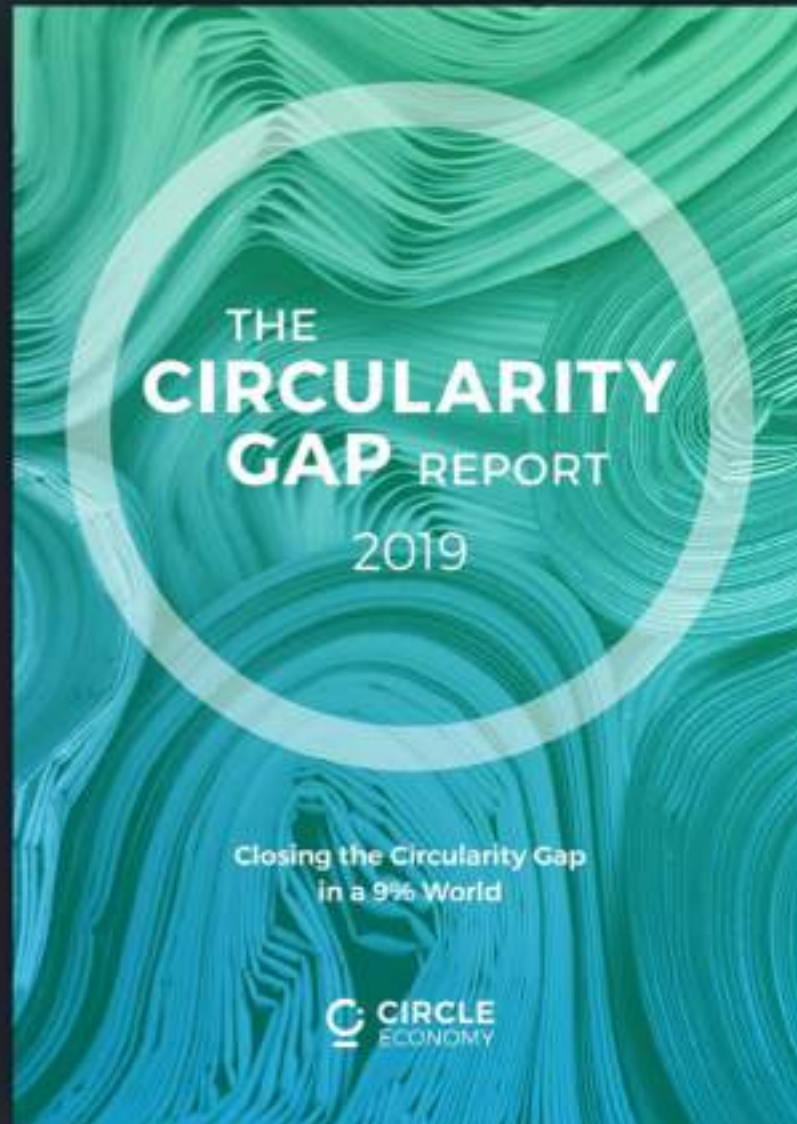
# Public Private Collaborations

## The case of “Circular Holland 2050”

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- 2003: Starting to talk about a necessary shift
- 2011: A world in transition, sustainability fatigue
- 2013: **Green Deal**: 50 projects to be started under "Netherlands Hotspot for a Circular Economy" (supported by the government, cities and non profits, think tanks)
- 2014: **Leading CEOs & Circular Entrepreneurship**: bring the business community together (programmes with government funds: 2 mio EUR/year)
- 2016: **Launch Netherlands Roadmap**: "A circular economy in the Netherlands by 2050"
- 2016: Within Dutch EU presidency campaign "Netherlands as a circular hotspot"
- 2016: **City Deal**: signed by Amsterdam and 8 other Dutch cities, government agencies, universities, and companies
- 2017: Translation into Transition Agendas





Our economy is only 9% circular and the trend is negative

A 1.5°C world is circular



The  
**CIRCULARITY**  
GAP report  
AUSTRIA

# Lao PDR an alternative development perspective

- Sustainable growth
- Lower carbon
- ...to enable human development

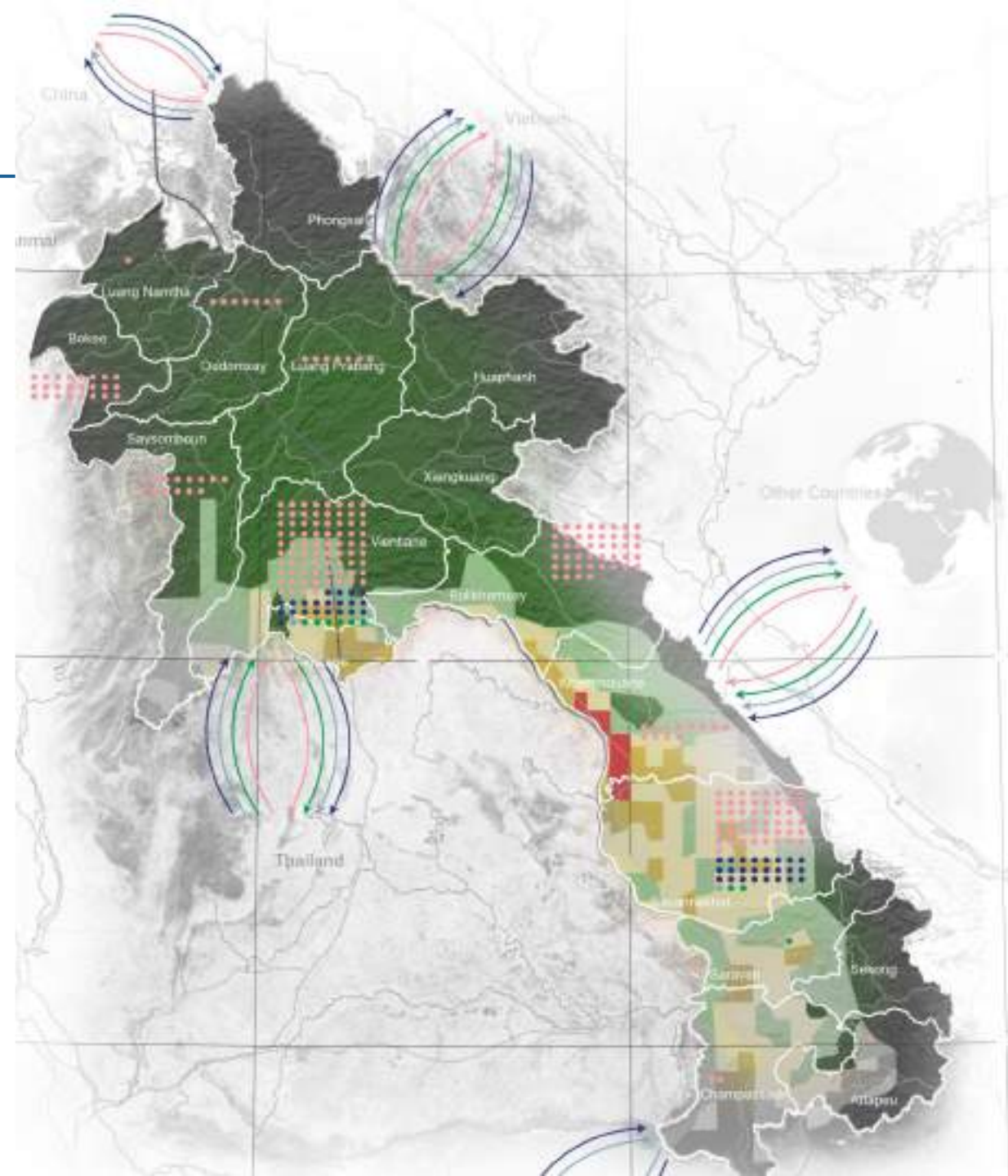


*Initiative with UNDP*

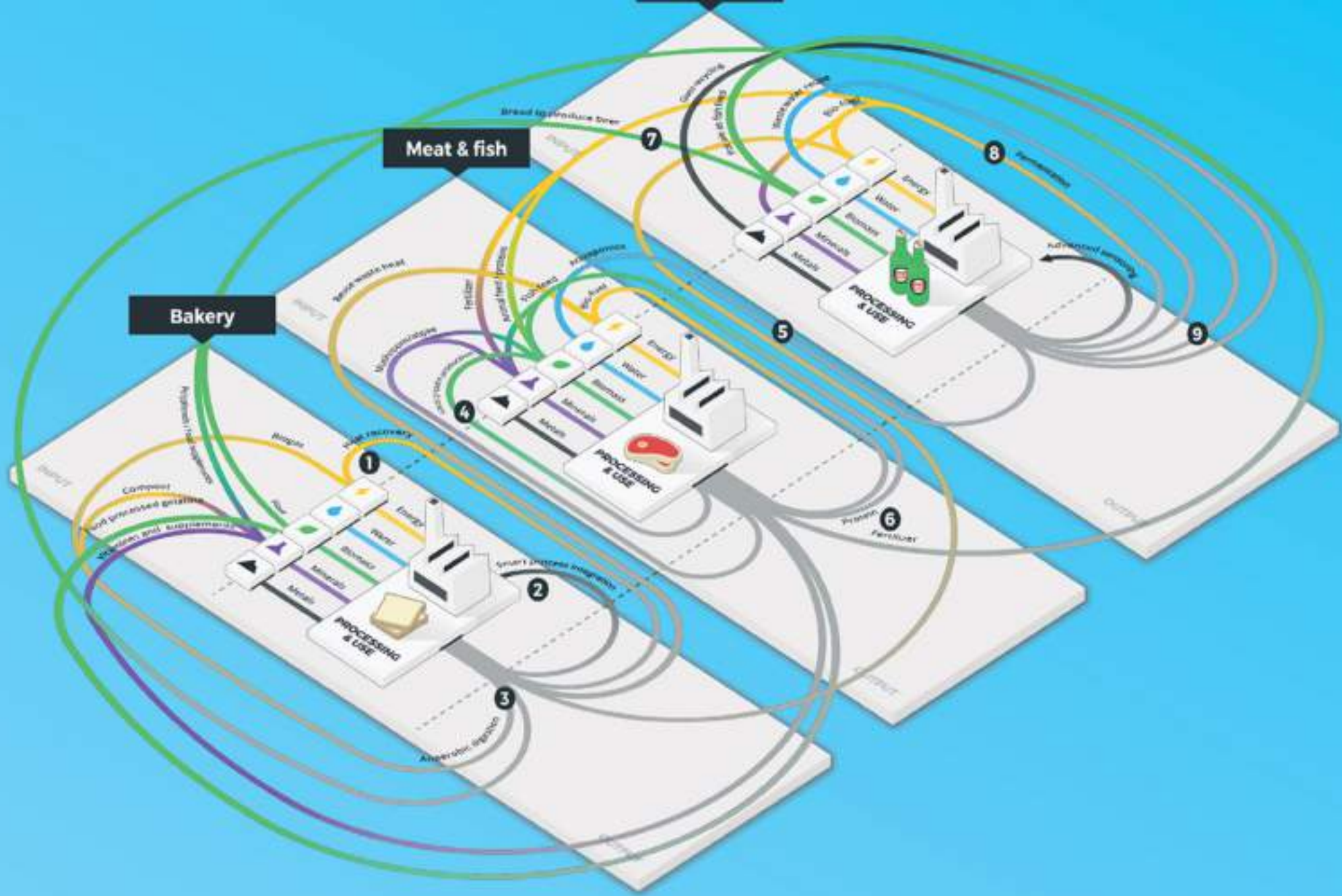
## Mapping stocks and flows of:

- Agriculture and forestry
- Energy
- Metals
- Tourism

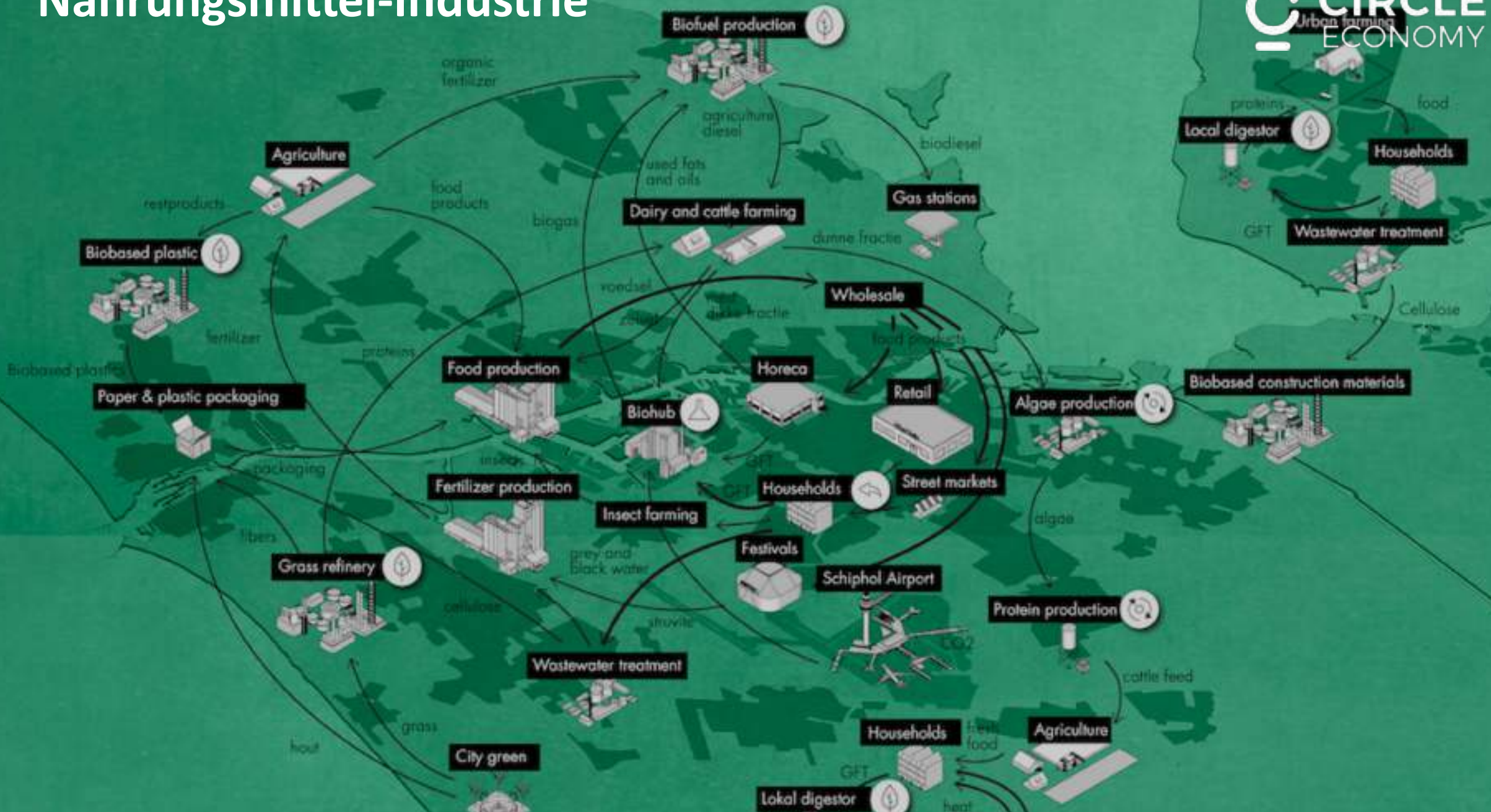
## Opportunities (based on development plan)







# Nahrungsmittel-Industrie



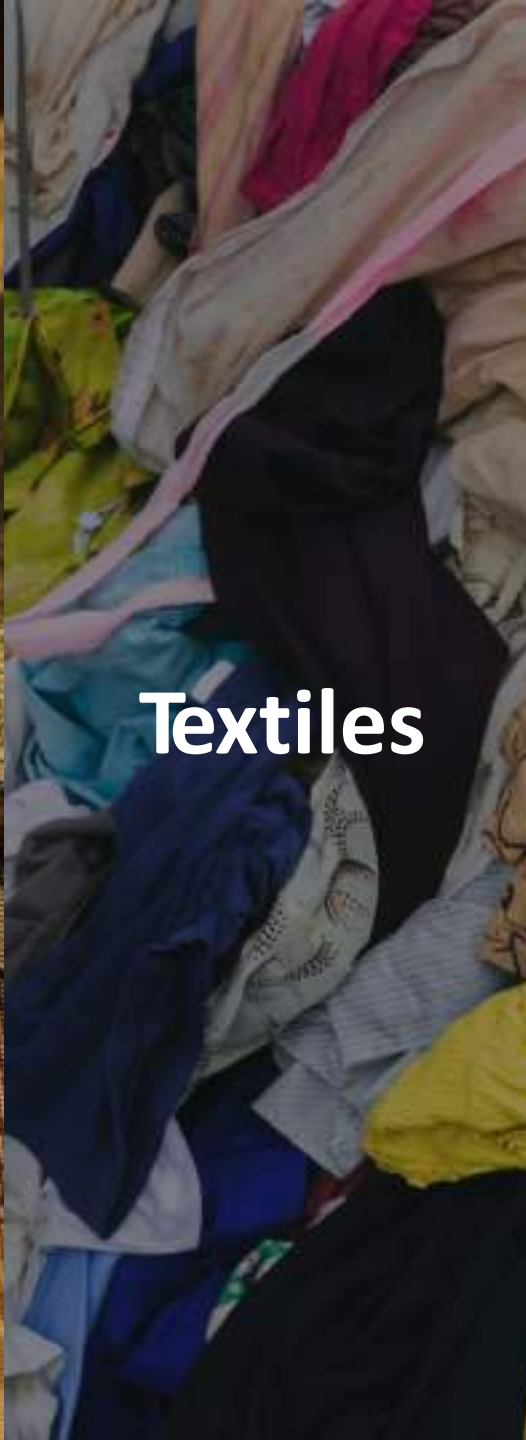




**Cities**



**Finance**



**Textiles**



**Design**

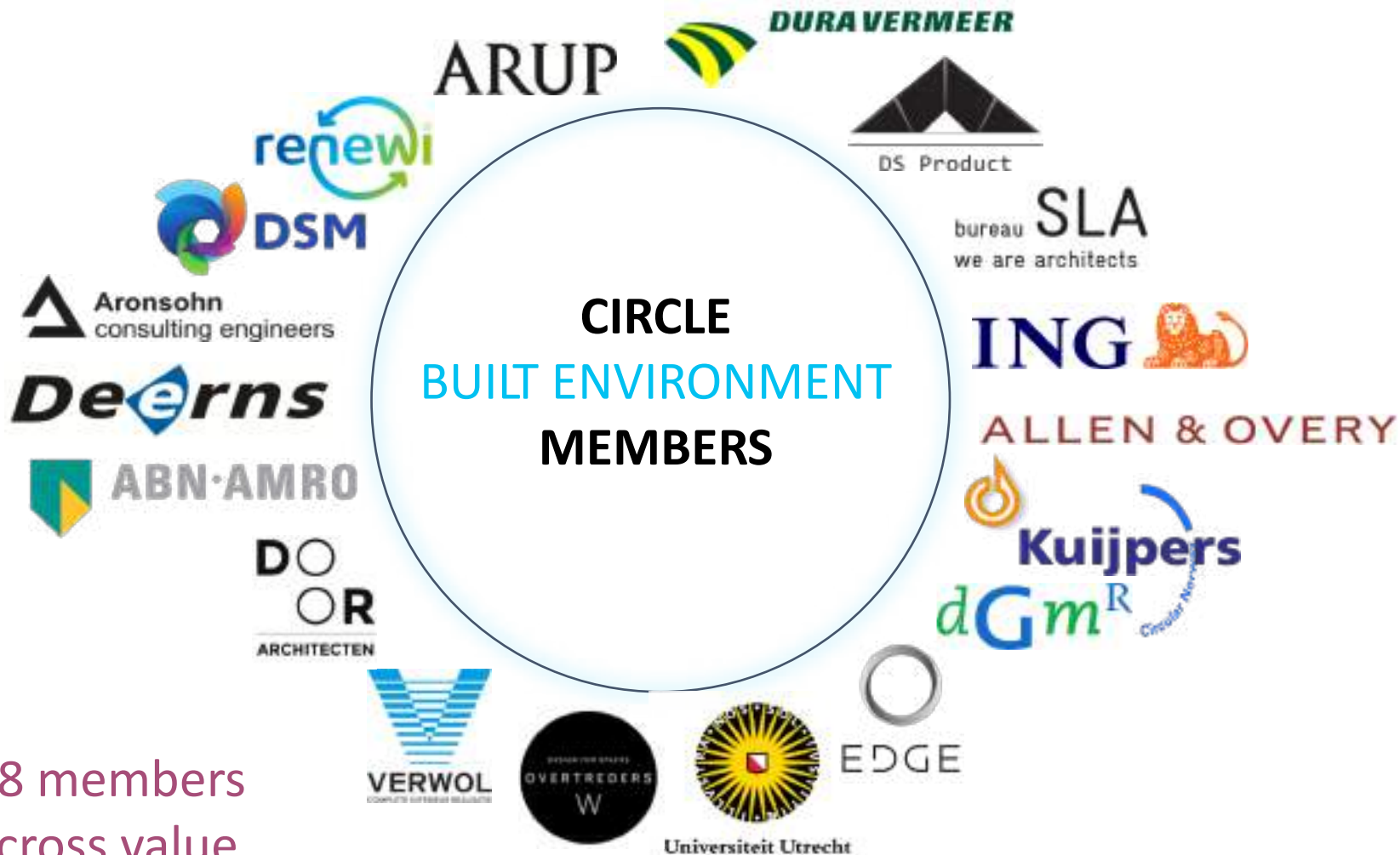


**Built  
environme  
nt**

# THE CIRCLE ECONOMY MEMBER COMMUNITY



# BUILT ENVIRONMENT COMMUNITY



18 members  
across value  
chain





# THE FIBERSORT

Insights and Analysis +  
Community Building +  
Business Transformation

- Optimizing and commercialising
- Developing working groups, guides & reports to ensure market uptake.



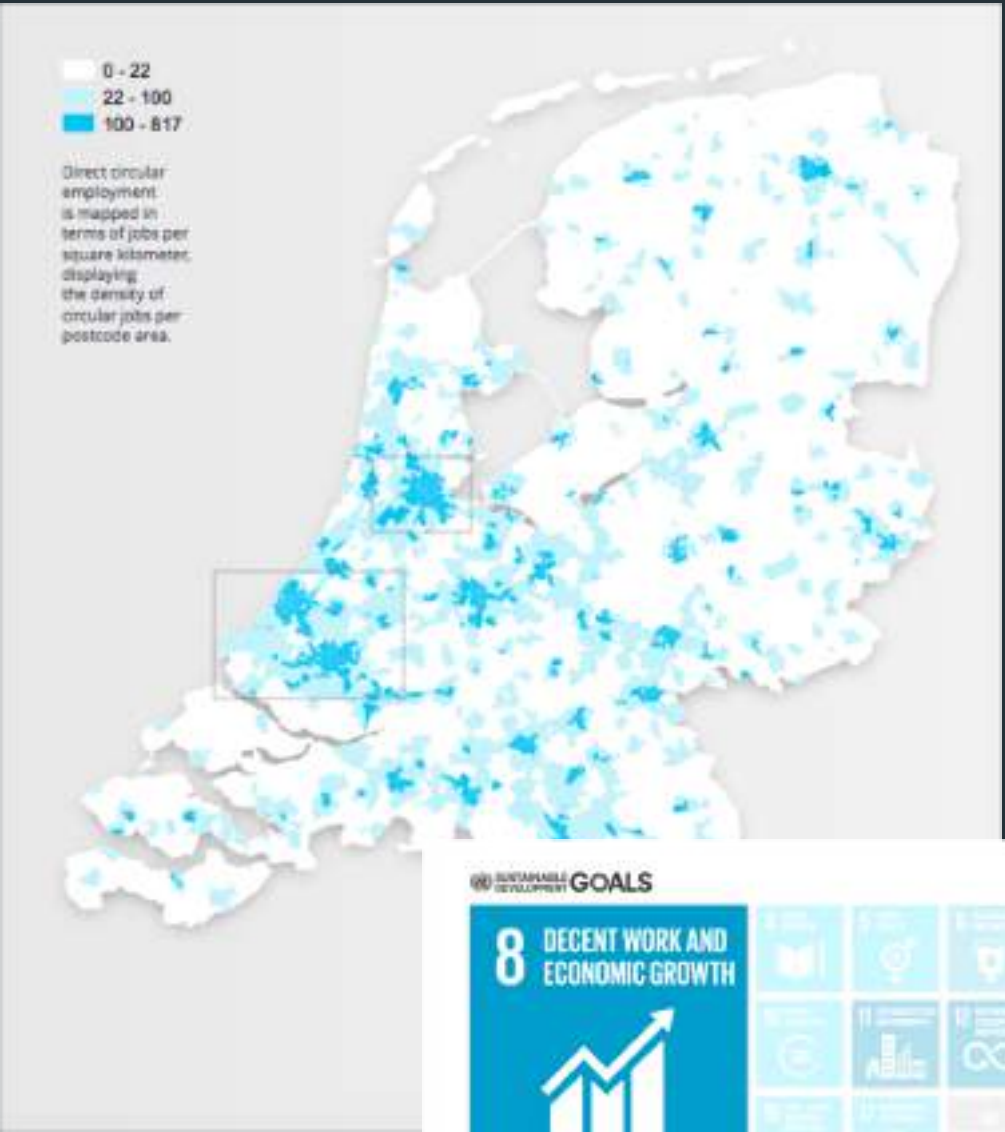
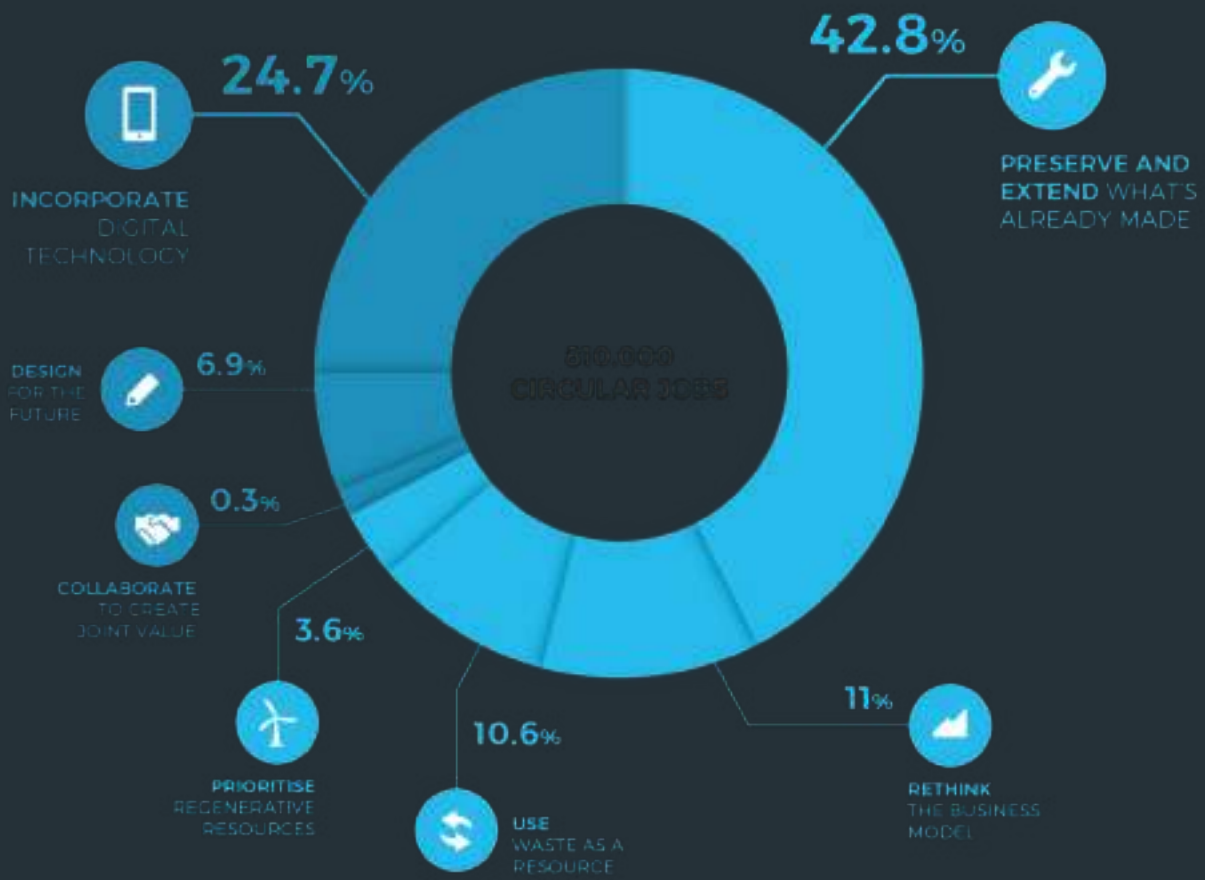


# DENIM ALLIANCE

Insights and Analysis +  
Community Building + Business  
Transformation

- 20+ global denim brands educated on circular economy and supported to adopt post-consumer recycled denim
- 46+ new post-consumer recycled denims developed

# Holland: 8,1% of jobs are circular



Thank  
you

# Executive Summary

## CONTEXT

### The circular economy concept is gaining traction, but significant work is required to move from idea to action

There is an increasing recognition that the circular economy offers an important strategy to address some of the most pressing environmental, economic and social challenges of the 21st century, while also providing positive economic benefits.

Progress has been made in 2018 towards a circular economy – with governments adopting new policies and national roadmaps, innovators developing new technologies, and businesses making commitments to transform their business models.

At the same time, large scale action and impact is still lacking – further effort to shape and scale policy, business practices and financing mechanisms is required

## PACE

### The Platform for Accelerating the Circular Economy (PACE) is a public-private collaboration platform and project accelerator

PACE aims to accelerate action towards the circular economy by driving projects, capturing & disseminating learnings and leveraging leadership for scale. The PACE Leadership Group currently includes over 50 committed partners who are leading a portfolio of projects in four focus areas: plastics, electronics, food & bioeconomy and business model and market transformation across China, South-East Asia, Europe and Africa.

The PACE value proposition includes:

- Developing blended financing models for circular economy projects, in particular in developing and emerging economies
- Helping to create and adjust enabling policy frameworks to address specific barriers to advancing the circular economy
- Bringing the private and public sector into public-private collaborations to scale impact around circular economy initiatives

## OUTLOOK

### In 2019 and beyond PACE aims to scale-up its efforts significantly across projects, themes and regions

2018 has focused on building the foundation for a strong programme strategy, engaging the leadership group and advancing a series of collaborative projects.

In 2019 and beyond PACE aims to:

- Scale up its programme and further professionalize the three activity pillars, backed by the necessary resources and partners
- Scale impact of its existing core and affiliate project portfolio
- Grow the number of core and affiliate projects in the portfolio
- Drive measurable results on each of the four thematic areas of focus – plastics, electronics, food & bioeconomy and business model and market transformation
- Expand into markets like Latin America, South East Asia, Middle East and North America



# Foreword from the Co-chairs

Global material resource use during the 20th century rose at about twice the rate of population growth. Furthermore, we have seen a global “recoupling” of economic growth with resource consumption in the past decade, meaning that more resources are being consumed for every additional unit of GDP<sup>1</sup>. Should this trend continue, raw material demand is projected to double by 2050 just to maintain current levels of economic growth.

This dramatic increase in the use of raw materials will intensify climate change, increase pollution, reduce biodiversity and lead to the depletion of natural resources, causing worrying shortages of critical materials, reducing economic resilience and heightening the risk of local conflicts. These trends concern us deeply.

At the same time, new business models, well designed policies, technology innovation and investment opportunities are emerging that can drastically address this challenge while also providing major economic benefits. Indeed, the transition towards a circular economy is estimated to represent a \$4.3 trillion global growth opportunity by 2030 while helping to restore some of our natural systems<sup>1</sup>. We have all within our respective institutions made progress in advancing this transition, yet we remain frustrated and challenged by the slow pace and scale of change to date. For this reason we have launched this platform to foster leadership and more action-based collaborative projects.

PACE is about accelerating action through leadership, collaboration, investment and policy reform. We are convinced that combining public-private leadership with specific large-scale collaborative actions, we can help drive essential change that will be welcomed by responsive and responsible leaders globally. We therefore encourage all those who wish to join us on this important journey to do so with commitment to drive change.

Co-chairs



**FRANS VAN HOUTEN**  
CEO  
Royal Philips



**NAOKO ISHII**  
CEO & Chairperson  
Global Environment Facility

1. Accenture, Waste to Wealth, 2015

Circular economy is a powerful strategy to address some of the most pressing environmental, economic and social challenges of the 21st century



## NEED FOR URGENT ACTION



During the 20<sup>th</sup> century the use of natural resources rose at about **twice the rate of population growth**<sup>3</sup>



In the last decade we have seen a recoupling of economic growth with material use, with **more materials being used per unit of GDP**<sup>4</sup>



We extract over 84 billion tonnes of materials per year to meet the functional needs of society. Yet, **only 9% of these materials are cycled back into our economies**<sup>5</sup>



Estimates suggest that by 2050, if current trends continue, there will be **more plastic than fish in the ocean**<sup>6</sup>



Disease caused by **pollution was responsible for more than 9 million premature deaths in 2015** – 16% of deaths worldwide or three times more deaths than from AIDS, tuberculosis, and malaria combined<sup>7</sup>

## PROMISING SOLUTION

Circular economy provides a **\$4.5 trillion opportunity** by 2030 through avoiding waste, making businesses more efficient and creating new employment opportunities<sup>8</sup>



The Circular Economy is an important strategy to achieve SDG 12 on responsible consumption and production and is also **critical to delivering on a further related 6 SDGs**.



Reducing or reusing just one fourth of the current amount of food waste can feed **870 million hungry people in the world**<sup>9</sup>



Circular Economy has been shown to almost halve the number of years of anticipated **water shortages in water stressed regions of California**<sup>10</sup>



CE in India could lead to **82% less consumption of virgin materials** in transportation & vehicle manufacturing by 2050<sup>11</sup>

