

THE CIRCULAR ECONOMY: OPPORTUNITIES FOR ENTREPRENEURS/BUSINESS ENTERPRISES IN SIERRA LEONE

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**PRESENTATION MADE AT FREETOWN PITCH
NIGHT, AUGUST 2ND 2017. O'CASEY, LUMLEY
BEACH.**

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OUTLINE AND OBJECTIVE

- Overview of the Circular Economy
- Opportunities for SL entrepreneurs
- Examples

Objective

One of you or a group of you leave here today and go create something unique!

<i>Economic business cycles</i>	<i>Pol/Eco Influences</i>	<i>Technology Innovation</i>	<i>Impact on factors of production</i>
First cycle (1780s-1830s)	French Revolution	Industrial revolution I-iron, textile, steam technology	Land -iron & coal resources Capital -OT,BKn Labour -division of labour/fact. Workers. Enterprise -investment by landowners in new industry
Second cycle (1830s-1880s)	Marx	Industrial revolution II-steel industry/railroads	Land -pig iron coal Capital -joint stock, issuing of notes, stable banking system Labour -education of workers Enterprise -investment by State and VCs
Third cycle (1880s-1930s)	Capitalism	Electrical engineering/electricity/motor	Land -coal, petrol, other metals Capital -int. Finn. Labour -more skilled, demise of child labour, Enterprise -inter war speculation
Fouth Cycle (1930s-1990s)	Socialism, Unionism, Consumption	Nuclear/oil/electronics/micro processing	Land -alluminium, silicone, petroleum Capital -sophis. Fin mkts, Labour -highly skilled, universal education,unions Enterprise -international investment
Fifth cycle (1990s-	Globalisation, International, Integration	Information technology/telecoms/biotech/ggenetic eng	Land -recycled/envio fM, Capital -single world market, money Labour -know.workers Enterprise -monopolistic media,IT, private ins. investors

WHAT IS THE CIRCULAR ECONOMY

- Transition from a Linear economy
- A circular economy addresses mounting resource-related challenges for business and economies, and could generate growth, create jobs, and reduce environmental impacts, including carbon emissions.
- Circular economy emerged in the 1970s but gained prominence in the 1990s (example-functional service economy (performance economy) of Walter Stahel; the “cradle to cradle”® design philosophy of William McDonough and Michael Braungart)
- HOME EXAMPLES- palm kernel.....
- The Waste to wealth Entrepreneurship Association (2014)

DEFINE

- World Economic Forum defines a circular economy as “an industrial system that is restorative and regenerative by intention and design.”
- In other terms, it is an economy that generates no or minimal waste; and whatever waste it does generate can be returned to the environment safely.

PRINCIPLES OF THE CIRCULAR ECONOMY

- Design out waste
- Build resilience through diversity
- Work towards using energy from renewable sources
- Think in 'systems'



THE CIRCULAR ECONOMY IS MORE THAN «RECYCLING»

- Long-lasting design,
- Maintenance,
- Repair,
- Reuse,
- Remanufacturing,
- Refurbishing,

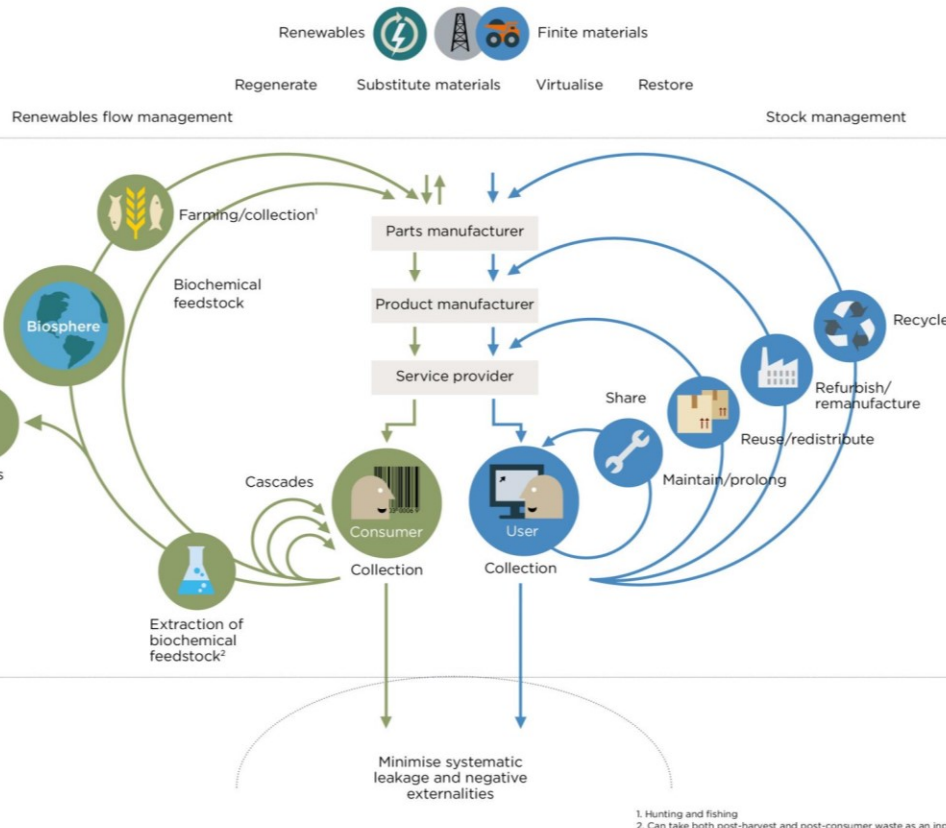
A circular economy distinguishes between technical and biological cycles:

The technical cycle involves the management of stocks of finite materials. Use replaces consumption. Technical materials are recovered and mostly restored in the technical cycle.

The biological cycle encompasses the flows of renewable materials. Consumption only occurs in the biological cycle. Renewable (biological) nutrients are mostly regenerated in the biological cycle.

A CIRCULAR ECONOMY

Enhance
al by controlling
and balancing
source flows
ers: regenerate,
change



Effectiveness
and designing
externalities
levers

1. Hunting and fishing
2. Can take both post-harvest and post-consumer waste as an input
Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

DETAILED CIRCULAR ECONOMY

THE BOTTOM LINE

- The circular economy's potential for innovation, job creation and economic development is huge: estimates indicate a trillion-dollar opportunity.

WHERE ARE THE OPPORTUNITIES

Regenerate

- Shift to renewable energy and materials
- Reclaim, retain, and restore health of ecosystems
- Return recovered biological resources to the biosphere

Share

- Share assets (e.g. cars, rooms, appliances)
- Reuse/secondhand
- Prolong life through maintenance, design for durability, upgradability, etc.

WHERE ARE THE OPPORTUNITIES

Optimise

- Increase performance/efficiency of product
- Remove waste in production and supply chain
- Leverage big data, automation, remote sensing and steering

Loop

- Remanufacture products or components
- Recycle materials
- Digest anaerobically
- Extract biochemicals from organic waste

WHERE ARE THE OPPORTUNITIES

Virtualize

- Dematerialise directly (e.g. books, CDs, DVDs, travel)
- Dematerialise indirectly (e.g. online shopping)

Exchange

- Replace old with advanced non-renewable materials
- Apply new technologies (e.g. 3D printing)
- Choose new product/service (e.g. multimodal transport)

STATUS:WASTE MANAGEMENT SIERRA LEONE , NOT ALONE

- Africa currently produces just about 70 million tons of waste every year. With its rapid urbanization and growing economies, waste production in Africa will exceed 160 million tons by the year 2025.
- Most of the waste produced in Africa can be recycled and reused to create new products.
- Sadly, only about 10 percent of the waste generated every day in Africa is collected.
- The rest usually ends up in illegal dump sites, gutters and drainage in Africa's cities.

EXAMPLE OF SPECIFIC BUSINESS OPPORTUNITIES-WASTE MANAGEMENT

Waste
Collection

Inorganic
Waste
Processing

Organic
Waste
Processing

Waste to
Energy

BUSINESS MODELS

Product as
Service

Next Life Sales

Product
Transformation

Recycling 2.0

Collaborative
Consumption

BUSINESS OPPORTUNITIES DRIVERS (THE CIRCULAR ECONOMY)

Service Economy

Outsourcing

Sustainable Business

Green Economy

Waste to Energy

Privatisation of public
utilities- community
level , reducing and
eliminating regulations

WHAT IS DRIVING THE CIRCULAR ECONOMY



EXAMPLES OF ENTREPRENEURS

**Bilikiss Adebisi
Abiola –
Wecyclers, Nigeria**

**Thato Kgathanye
& Rea Ngwane –
Repurpose School
bags, South Africa**

**Andrew Mupuya –
YELI, Uganda**

**Bethlehem
Tilahun Alemu –
soleRebels,
Ethiopia**

**Lorna Rutto –
EcoPost, Kenya**

**Abdul Karim
Kamara-Sierra
Leone**



THANK YOU

THANK YOU SOBA!

INTERESTED OR FEED BACK ON PITCH NIGHT

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