

Economía Circular

María José González
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- Escases de recursos
- Residuos difíciles de gestionar
- Presiones ambientales

**¿POR QUÉ
NECESITAMOS
OTRO TIPO DE
ECONOMIA?**

ESCASES DE RECURSOS

ELEMENTS OF A SMARTPHONE

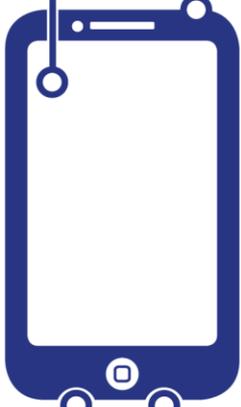
ELEMENTS COLOUR KEY: ● ALKALI METAL ● ALKALINE EARTH METAL ● TRANSITION METAL ● GROUP 13 ● GROUP 14 ● GROUP 15 ● GROUP 16 ● HALOGEN ● LANTHANIDE

SCREEN

Indium tin oxide is a mixture of indium oxide and tin oxide, used in a transparent film in the screen that conducts electricity. This allows the screen to function as a touch screen.

The glass used on the majority of smartphones is an aluminosilicate glass, composed of a mix of alumina (Al_2O_3) and silica (SiO_2). This glass also contains potassium ions, which help to strengthen it.

A variety of Rare Earth Element compounds are used in small quantities to produce the colours in the smartphone's screen. Some compounds are also used to reduce UV light penetration into the phone.



49 In Indium	8 O Oxygen	
50 Sn Tin		
13 Al Aluminium	14 Si Silicon	
8 O Oxygen	19 K Potassium	
39 Y Yttrium	57 La Lanthanum	65 Tb Terbium
59 Pr Praseodymium	63 Eu Europium	66 Dy Dysprosium
64 Gd Gadolinium		

ELECTRONICS

Copper is used for wiring in the phone, whilst copper, gold and silver are the major metals from which microelectrical components are fashioned. Tantalum is the major component of micro-capacitors.

Nickel is used in the microphone as well as for other electrical connections. Alloys including the elements praseodymium, gadolinium and neodymium are used in the magnets in the speaker and microphone. Neodymium, terbium and dysprosium are used in the vibration unit.

Pure silicon is used to manufacture the chip in the phone. It is oxidised to produce non-conducting regions, then other elements are added in order to allow the chip to conduct electricity.

Tin & lead are used to solder electronics in the phone. Newer lead-free solders use a mix of tin, copper and silver.

29 Cu Copper	47 Ag Silver	
79 Au Gold	73 Ta Tantalum	
28 Ni Nickel	66 Dy Dysprosium	59 Pr Praseodymium
65 Tb Terbium	60 Nd Neodymium	64 Gd Gadolinium
14 Si Silicon	8 O Oxygen	51 Sb Antimony
33 As Arsenic	15 P Phosphorus	31 Ga Gallium
50 Sn Tin	82 Pb Lead	

BATTERY

The majority of phones use lithium ion batteries, which are composed of lithium cobalt oxide as a positive electrode and graphite (carbon) as the negative electrode. Some batteries use other metals, such as manganese, in place of cobalt. The battery's casing is made of aluminium.

3 Li Lithium	27 Co Cobalt	8 O Oxygen
6 C Carbon	13 Al Aluminium	

CASING

Magnesium compounds are alloyed to make some phone cases, whilst many are made of plastics. Plastics will also include flame retardant compounds, some of which contain bromine, whilst nickel can be included to reduce electromagnetic interference.

6 C Carbon	12 Mg Magnesium
35 Br Bromine	28 Ni Nickel

RESIDUOS DIFÍCILES DE GESTIONAR



PRESIONES AMBIENTALES



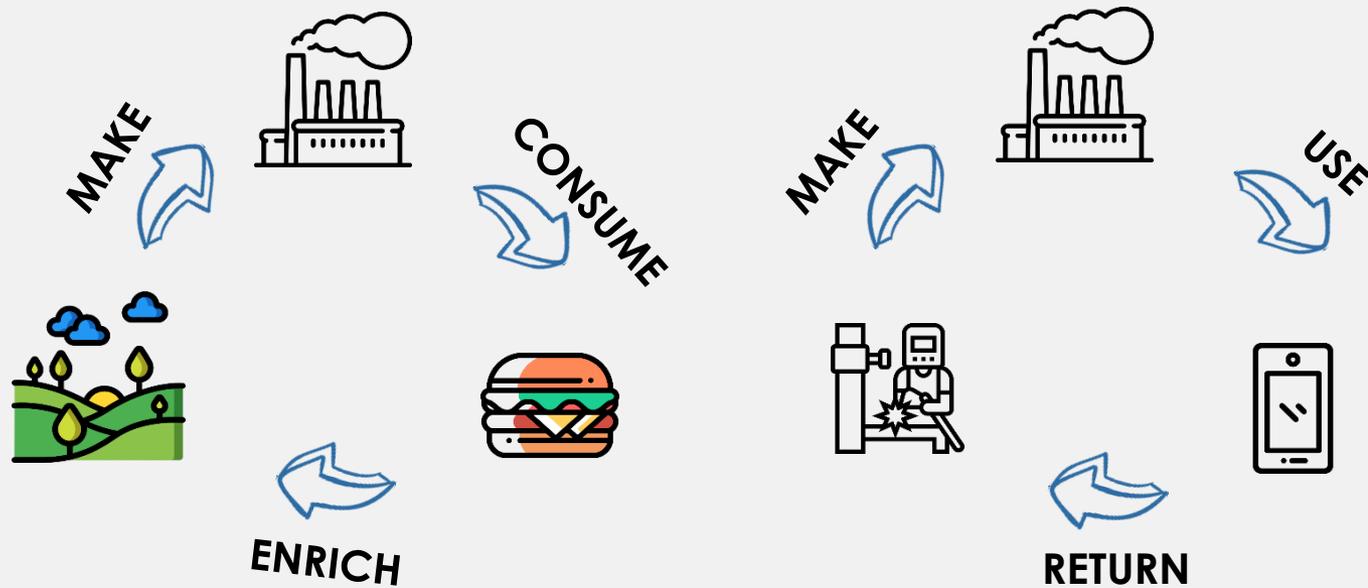


ECONOMIA LINEAL

Energía no renovable

Consumir servicios ecosistemicos

Diseño para descartar



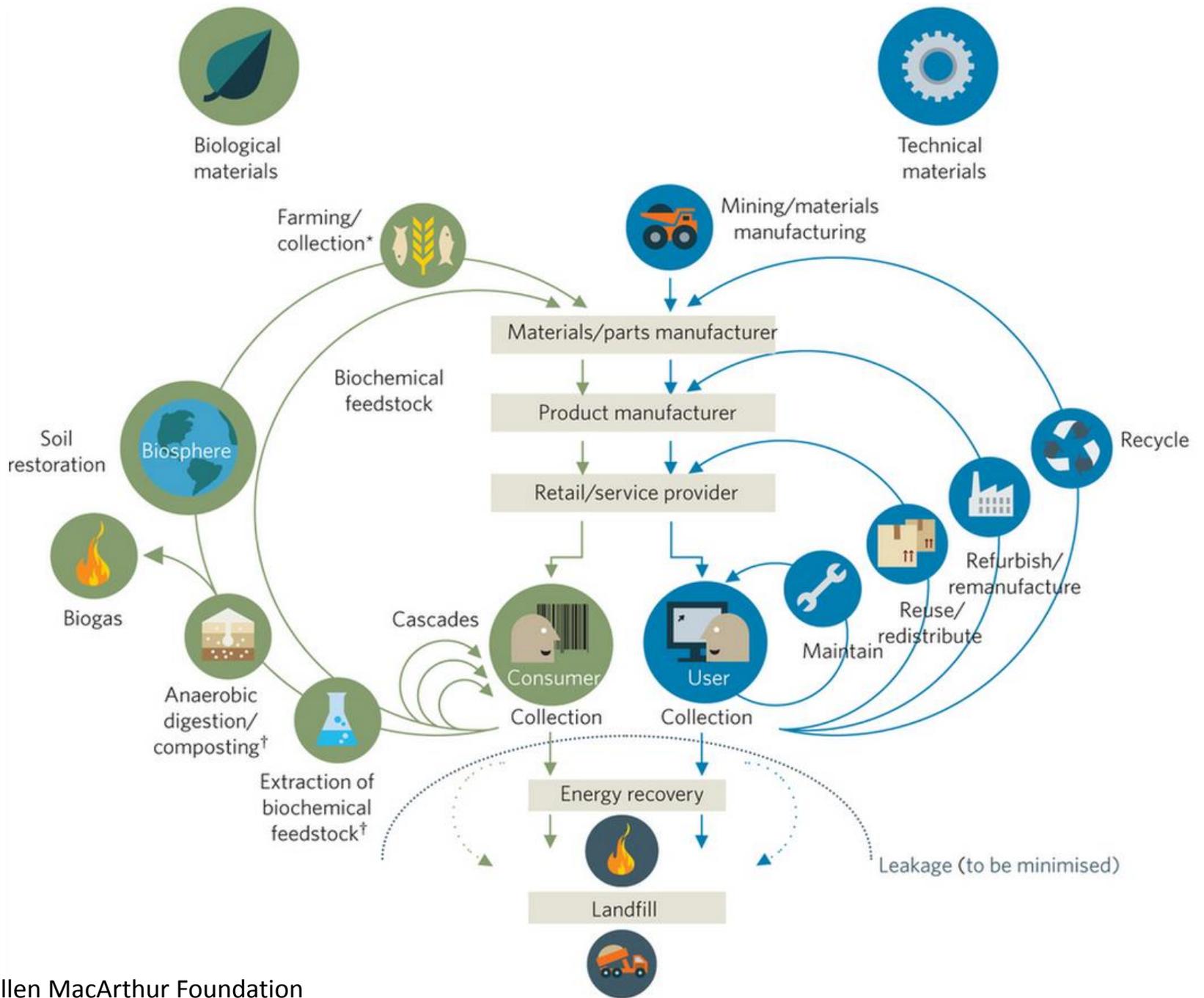
ECONOMIA CIRCULAR

Energía ~~no~~ renovable

Restaurar servicios ecosistémicos

Diseño para que tenga mayor valor siempre

Una economía circular es restaurativa y regenerativa por diseño, y tiene como objetivo mantener los productos, componentes y materiales en su mayor utilidad y valor en todo momento



Fuente: Ellen MacArthur Foundation

ESTRATEGIAS

- **CAMBIO DE MATERIAS PRIMAS**
- **EXTENSIÓN DE VIDA ÚTIL**
- **ECONOMÍA DE LA FUNCIONALIDAD (PaaS)**
- **SIMBIOSIS INDUSTRIAL**
- **RECURSOS COMPARTIDOS Y ECONOMIA COLABORATIVA**
- **INDUSTRIA 4.0 (robótica, impresión 3D, internet)**
- **+ INNOVACIÓN y DESARROLLO TECNOLÓGICO**



Bundles

We love laundry





Ec. de la
Funcionalidad

A person is riding a yellow and blue bicycle, likely a public bike, in an outdoor setting. The bicycle has "fiets" and "OV-fiets.nl" written on it. The rider is wearing a grey patterned sweater and dark pants. In the background, other people are riding bicycles, and there are buildings and a banner visible.

REUSO
(Service life intensification)

REPARACIÓN

REMANUFACTURA

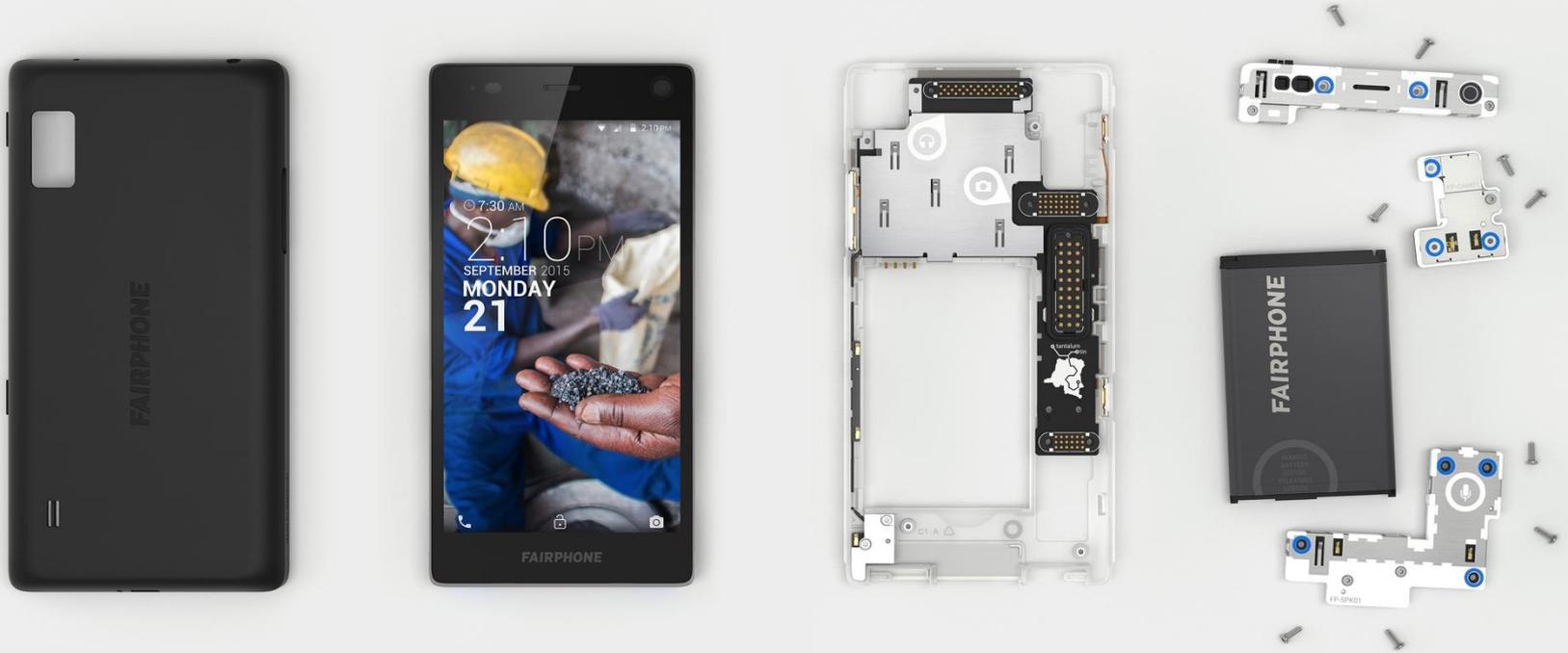
RECICLAJE



REUSO
(Service life extention)



REUSO
(Economía compartida)



REPARACIÓN
REMANUFACTURA



Store Top



WELCOME TO THE
PLAYSTATION.Store

Featured Items

Demo

Downloadable Games

View All



Genji: Days of the Blade



Lair



MotorStorm



NBA 07



F1 Championship Edition



Resistance: Fall of Man



Warhawk



Calling All Cars



Cash Guns Chaos



Talladega Nights -- Trailer

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Spotify®

NETFLIX

DESMATERIALIZAR
(Internet accesible)

RECICLAJE (Cambio de materia prima)



Kickpack



RECICLAJE
(Único material y reciclable)

QMILK – The material of the future



Our unique and innovative products



Qmilk Faser

QMILK - Fiber - Innovation - Material combinations

QMILK fibers are 100% natural, soft and smooth as silk and skin friendly. They meet the requirements of innovative material developments. With a natural antibacterial effect and high hydrophilicity, they provide added value of the fiber products in the growth market (QMILK as the only natural fiber which has thermo-binding properties). Thus, other natural fibers can also be combined without conventional plastics or plastic resins. So, of course, light-weight constructions remain 100% and can be composted.

FASHION APPLICATION

TECHNICAL APPLICATION

Qmilk Cosmetics

QMILK – natural cosmetics with natural peptides- As the new active favorites in medicine and cosmetics. They protect and regulate all processes of the skin. QMILK – pure & effective skin care system. Exclusive compositions of organic oils and fresh milk proteins even free of alcohol & glycerol- Your sensitive skin is healthy and youthfully fresh! Protected, best supplied and in balance, your skin is healthy and youthfully fresh.

BUY NOW



Qmilk Biopolymer

The material of the future

With the world's first - 100% natural plastic QMILK makes a decisive contribution to human health and the environment of people. Properties of QMILK organic plastic:

Within a few months completely bio-degradable without any residue



COMPOSTAJE (Cambio de materia prima)

COMPOSTAJE
Cambio de materia prima
Tecnología + eficiente





DIGESTION ANAEROBIA
Tecnología + accesible
Tecnología + eficiente



European
Commission

CIRCULAR ECONOMY

Closing the loop

AN AMBITIOUS EU CIRCULAR ECONOMY PACKAGE

CIRCULAR ECONOMY

2015

PLÁSTICOS | CONSTRUCCIÓN | MINERALES RAROS

BIOECONOMÍA | RESTOS DE ALIMENTOS

TRANSICIÓN HACIA UNA ECONOMÍA CIRCULAR

**BUY LESS,
CHOOSE WELL,
MAKE IT LAST**

- VIVIENNE WESTWOOD -