



A brief review of innovative undertakings and activities carried out by Global companies, and organisations.

Nigel Roberts Student (2118467)
Jayne Hughes Student (2134201)

Agenda



- The global cultural and political attitudes which both hinder and benefit innovative efforts.
- The common difficulties, factors and benefits in transitioning from a linear economy to a circular economy.
- An example of government and Non-Governmental Organisation (CE) Circular Economy Policies and Strategies to encourage CE adoption.

1. The global cultural and political attitudes that hinder and benefit innovative efforts.



- **Global Political attitudes**
 - Political attitudes
 - What is government's role in sparking innovation and CE adoption.
 - Strategies That May Boost and benefit Innovation
- **Global cultural attitudes**
 - Every culture has its own strengths and weaknesses when it comes to innovation.
 - You can improve your odds of succeeding by recognising the biases that can hold it back.



1. The political Landscape.

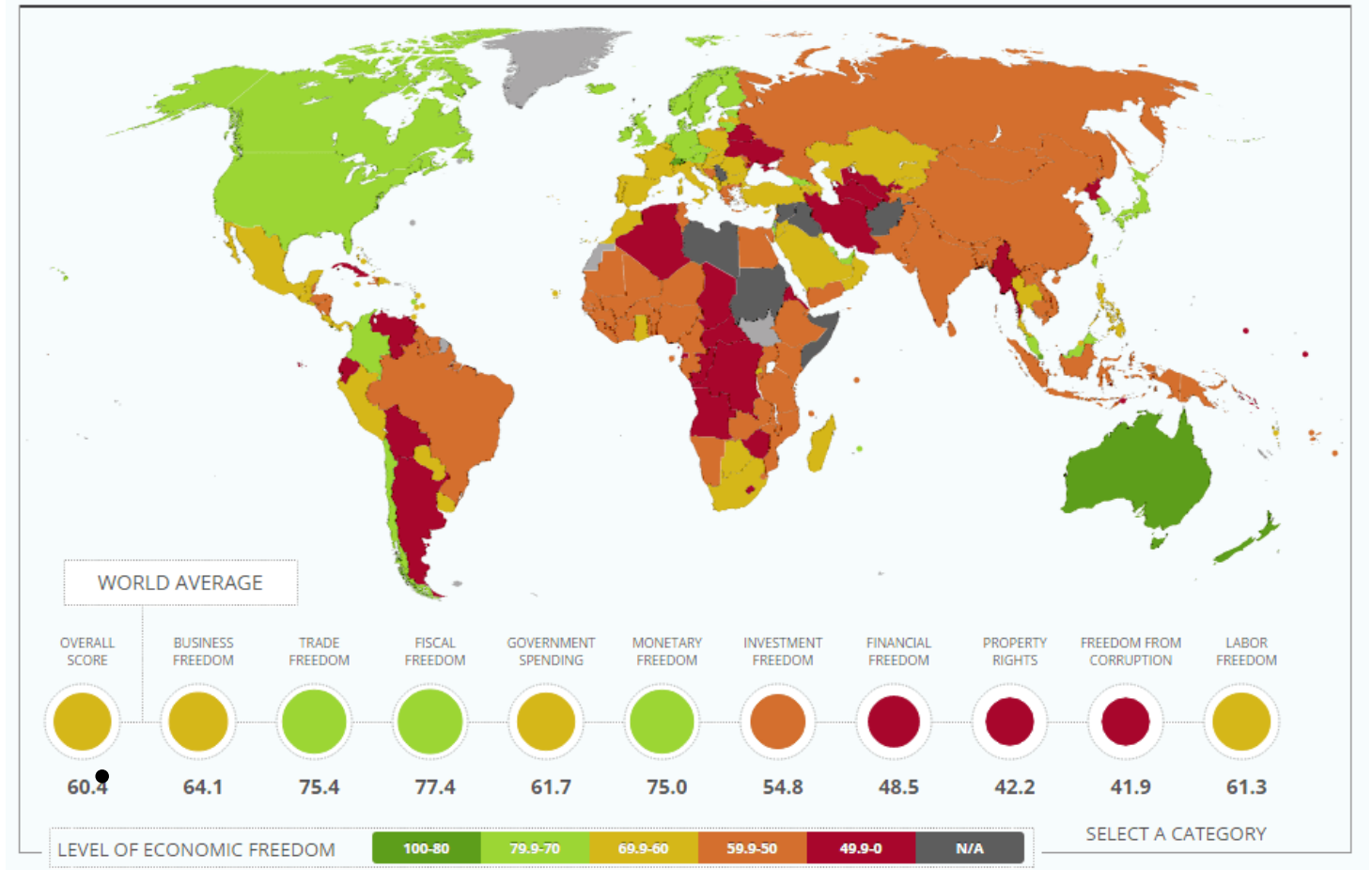
- **Monopolistic and Authoritarian**

A system of government in which absolute power over a state is concentrated in the hands of one individual, leading to lack of freedoms, and smothering innovations that threaten existing capital configurations/norms.

- **Democracy**

An innovative economic system rests on the presumption of liberty, on the presumption that people can innovate without asking permission. It's the free and open societies that allow people to speak their minds and question conventional wisdom that excel in innovation. There is an exception but proved not as sustainable.

2015 Economic Freedom Heat Map



Innovation Works, and Flourishes in Freedom Ridley, M. (2021)

1. What is government's role in sparking innovation and CE adoption.

Outlined in a recent paper in the Journal of Economic Perspectives, here are five policies that Bloom and his colleagues say can effectively drive and benefit innovation:

Journal of Economic Perspectives (2019)

- Offer Tax Incentives for R&D
- Promote Free Trade
- Support Skilled Migration
- Train Workers in STEM Fields
- Provide Direct Grants for R&D



1. Strategies That May Boost and benefit Innovation

Providing Incentives for University Researchers:

- Some evidence exists that academics who retain full rights over their work are more likely to patent inventions and found startups. However, there's not enough research to make this policy a priority.

Engaging in Intellectual Property Reform:

- Debates continue to rage about whether certain systemic reforms, such as curbing “trolls” who buy patents just to go after supposed infringers, would improve innovation

Embarking on Mission-Oriented Projects:

- Government R&D projects focused on specific sectors have led to remarkable innovations, including NASA landing a man on the moon. The researchers point out that moonshots might be needed to innovate in response to pressing crises, like climate change. But proving their effectiveness is difficult, and funding is likely to be dictated by politics rather than the most beneficial technologies.



1. The cultural attitudes that benefits innovation.

Building a
culture of
innovation



- **Characteristics of top innovation cultures**

Based on the available studies, there would seem to be a pretty good consensus on the **ideal innovation cultures having the following characteristics** on Hofstede Model and GLOBE (the Global Leadership and Organizational Behavior Effectiveness), in rough order of importance: d (Hofstede, 1983).

- 1 Low power-distance
- 2. High levels of long-term orientation and pragmatism
- 3. High levels of individualism
- 4. High levels of indulgence
- 5. Low levels of uncertainty avoidance
- 6. Lower levels of masculinity

1. The cultural attitudes that hinders innovation.

Building a
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- **1. Not-Invented-Here (N-I-H) syndrome**

This is where your company, or more specifically the culture of your company, believes that all the smart people already work for your organization and there's not much more you can learn from the outside www.cio.com/article/221797/the-4-biggest-cultural-barriers-to-corporate-innovation.html.

- **2. Lack of diversity**

According to an article in HBR, they suggest the lack of diversity is that it's a proven obstacle to innovation and how diversity can drive innovation". It suggests that employees of firms with inherent and acquired diversity are 45% likelier to report a growth in market share over the previous year and 70% likelier to report that the firm captured a new market.

- **3. Let's keep digging**

This is where your company invests in an idea and refuses to let it go or to stop investing even when the market is telling you otherwise.

- **4. Internal politics and cultural issues**

The overall culture is great, specific cultural misalignments such as not-invented-here syndrome can hamper results.

2. The common difficulties and factors in transitioning from a linear economy to a circular economy.

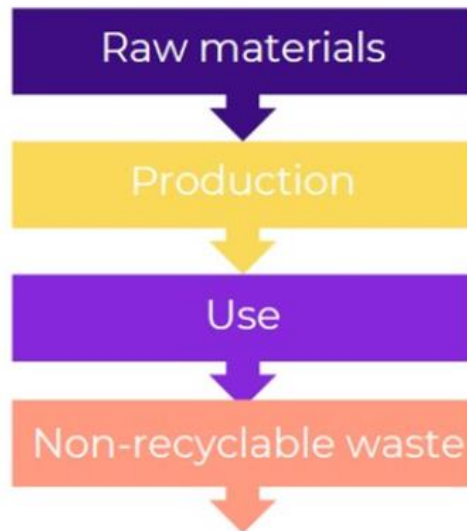
- What does circular economy system look like
- The Barriers transitioning from a linear economy to a circular economy
- What drives the business sector to adopt circular practices
- The benefits of CE adoption
- Swipe Right an example of circular economy success



2. The common global economic models

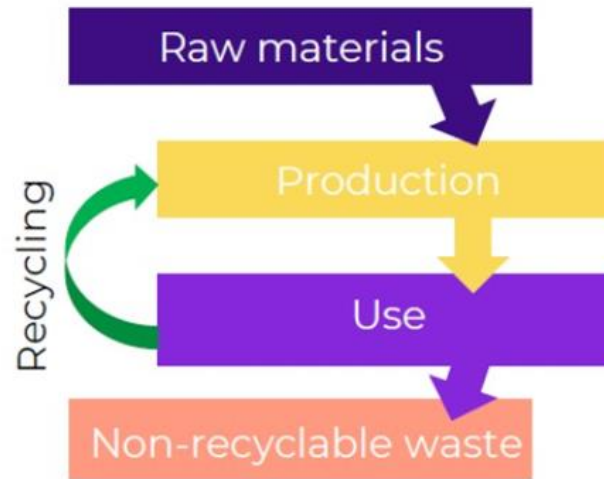
Take-make-Reuse- waste linear model

Linear economy

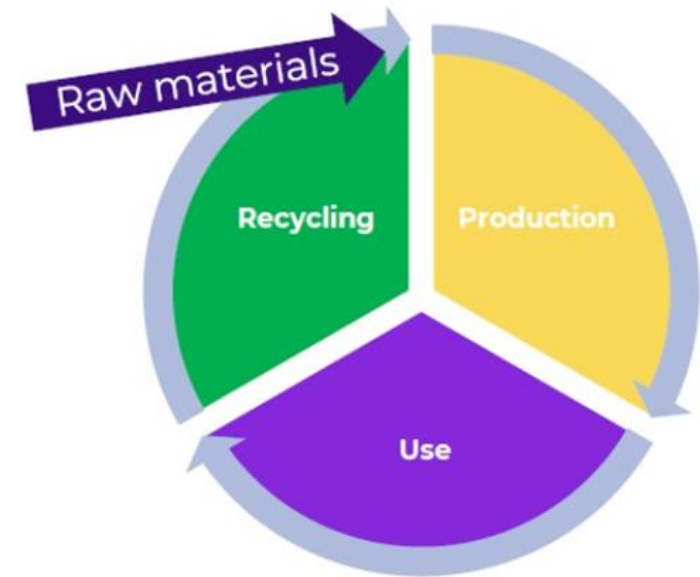


Take-make-waste" linear model

Re-use economy

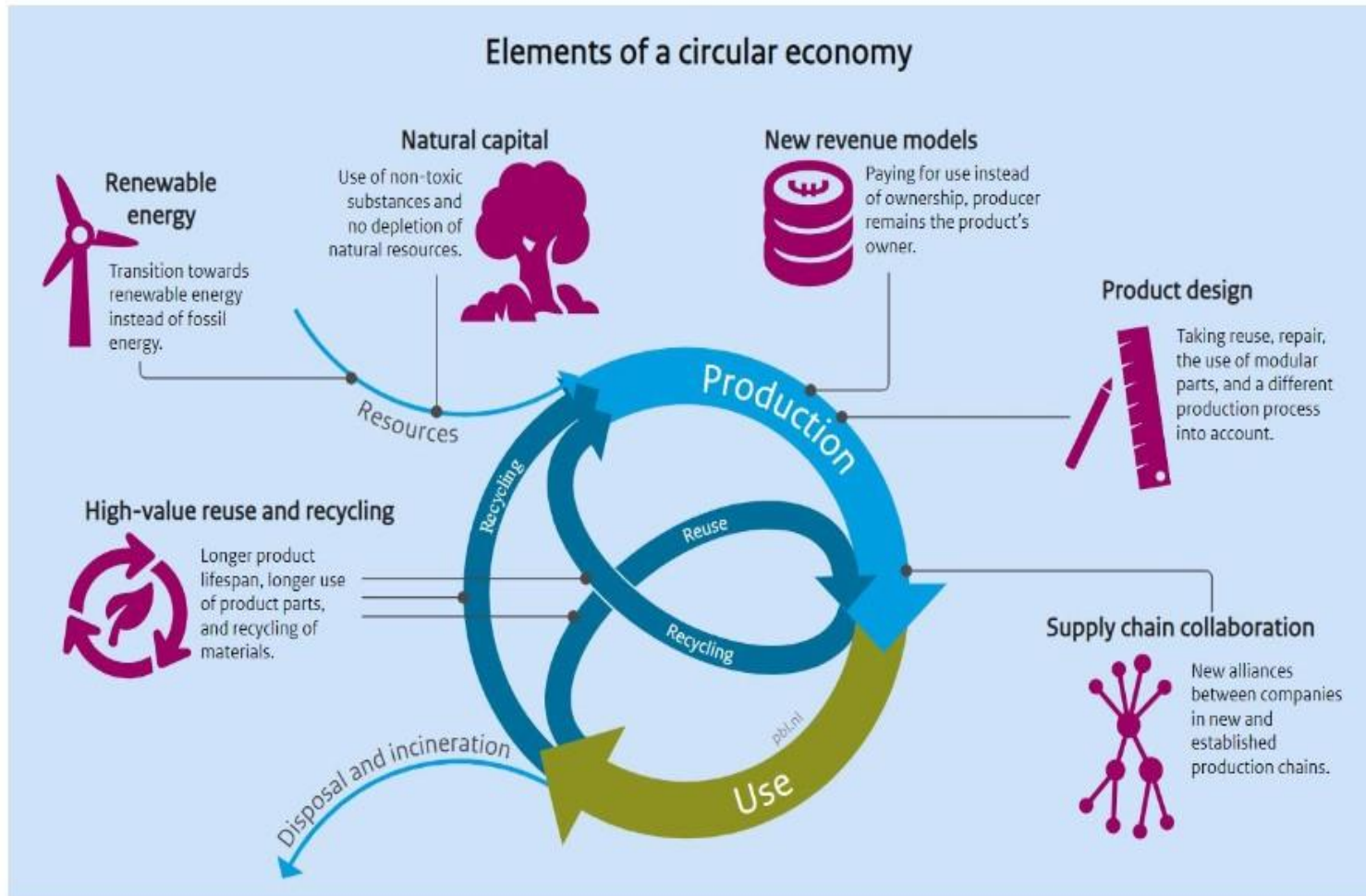


Circular economy



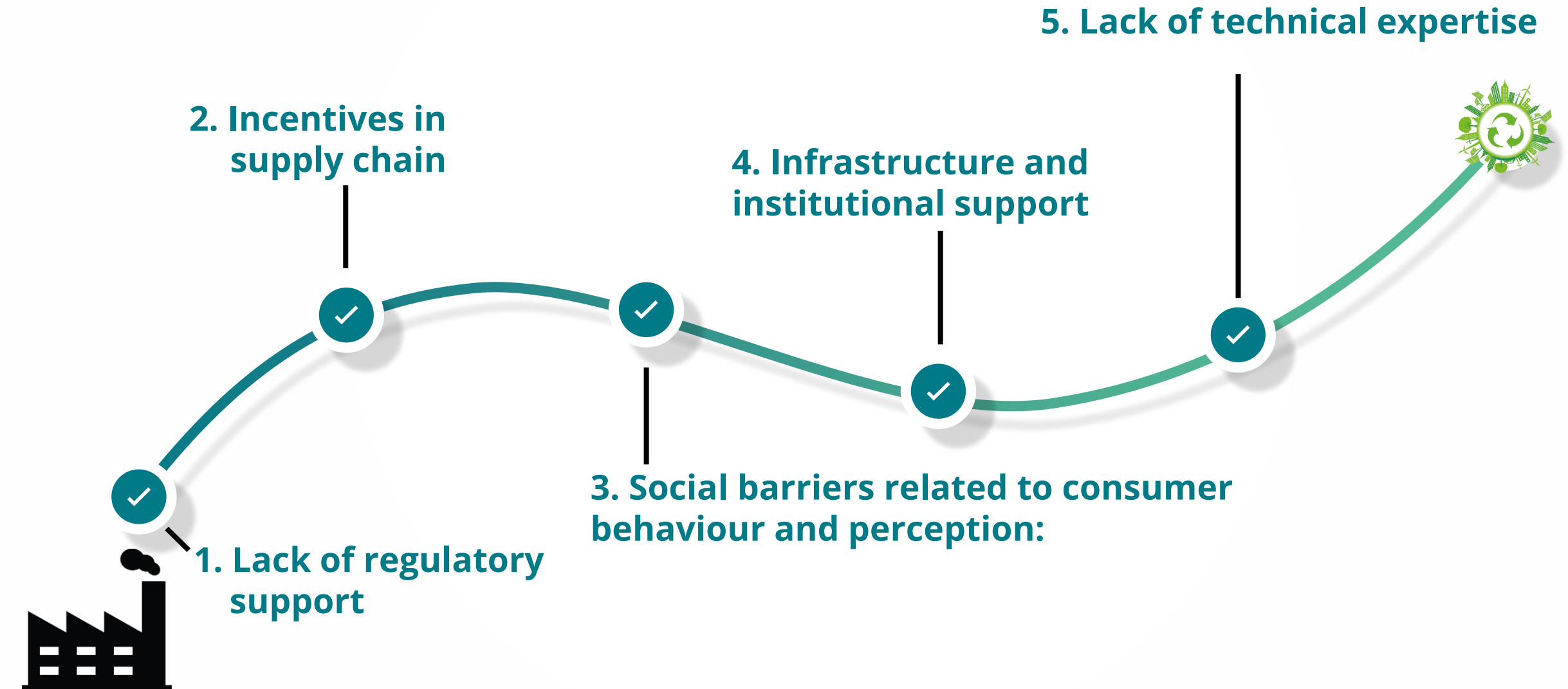
Take less -make- no waste-share, lease, reuse, repair, refurbish and recycle materials and products for as long as possible model

2. The circular economy elements.



- The circular economy does not only require closed material cycles and renewable energy, but also systems thinking. Every actor in the economy (company, person, organism) is connected to other actors.
- Together, this forms a network in which the actions of one player influence other players.
- To take this into account, the short- and long-term consequences must be taken into account in choices, as well as the impact of the entire value chain (Ellen MacArthur Foundation, 2015a). **Macarthur Foundation (2019)**

2. The Barriers transitioning from a linear economy to a circular economy



2. The Barriers transitioning from a linear economy to a circular economy

1. Lack of regulatory support:

Taxes, subsidies and government support: The subsidies, financial aid and un-costed externalities that support linear production processes are major hindrances in improving the financial competitiveness of circular economy approaches. In addition, unsupportive regulatory frameworks could become a stumbling block to change the linear business model. A report on regulation of packaging from the Association of Southeast Asian Nations (ASEAN) shows that even though ASEAN countries have various regulations on waste management and recycling, policy coherence is lacking, and current policy has limited impact in driving circular economy **(United Nations Environment Program, 2019)**

2. Incentives in supply chain:

In many industries, the supply chain is limited for sustainable material alternatives that can be recovered for remanufacturing and reutilisation for another product. Furthermore, on average and in a short-term view, the cost of products produced through linear production processes is cheaper, and if there are no incentives such as tax relief and subsidies in the producer's supply chain to choose more sustainable materials, the production cost maybe increased, which may not be attractive to consumers.

2. The Barriers transitioning from a linear economy to a circular economy

3. Social barriers relation to consumer behaviour and perception:

Public acceptance is a cornerstone of market behaviour that has the potential to influence companies to shift their business models towards circularity. Companies can be led by consumer demand for sustainable products and services **(Lee, 2016)**. Ignorance on the part of consumers of the environmental impact of goods and industrial activities continues to impede the transition processes **(Achillas et al., 2011)**. If consumers do not have a positive perception of reused products, they have low incentives to engage in a transition process. In addition, more environmentally friendly products tend to have higher prices, since costs are incurred upfront, through investments in better design, research, technical expertise, different materials and infrastructure (such as for waste management). Price is still a dominant factor for customers to make purchasing decisions; however, lower prices in a linear production system do not include the negative impacts of products on the environment **(Pheifer, 2017)**.

4. Infrastructure and institutional support

Infrastructure and institutional support: Infrastructure that supports circular economy practices needs to be in place in order for a transition to occur smoothly. This includes waste management, treatment facilities, packaging, recycling processes, and many more systems related to any product's life cycle.

2. The Barriers transitioning from a linear economy to a circular economy

5. Lack of technical expertise in SMEs:

Another bottleneck to introducing circular practices is the limited knowledge and technical know-how to shift from linear to circular product life cycles. Circular economy is more than just recycling; it starts from defining business strategy, circular input, product design and circular flows.

Enterprises will need myriad innovations when they decide to integrate circularity in their practices. Technical expertise in sustainable practices is lacking, for ensuring that an enterprise's business model is aligned with circular economy principles.

2. What drives the business to adopt circular practices

The circular economy is the business opportunity of our time (World Economic Forum, 2022)



- **Building of competitive advantage.** This is achieved through, new/better circular product designs, model innovation, and embracing the reverse cycle. Current research suggests benefits on material cost savings alone are between 12 to 14% p.a, and by 2025, when CE is expected to go mainstream, savings could move beyond the 20%-mark [Ellenmacarthurfoundation.org](https://ellenmacarthurfoundation.org), (13).



- **Green Investment.** Environmental, social, and governance (ESG) Over \$500 billion flowed into ESG-integrated funds in 2021, contributing to a 55% growth in assets under management in ESG-integrated products (**ESG Outlook 2022: The future of ESG investing | J.P. Morgan Asset Management**)



- **Accademia & Increasing knowledge.** New technologies and knowledge play a key role in supporting the shift towards a circular economy, with the uplift in innovation, blockchain and other associated training courses, degrees and diplomas also heightening employee & Snr manager interest.



- **Consumer awareness - stakeholder pressure** . In emerging economies, consumer awareness is the key factor in the adoption of circular principles (**Patwa et al., 2020**). Awareness, education, communication, information and economic factors have a major impact on the behaviour of a population and the movement towards the adoption of circular economy practices at all levels (**Aras & Crowther, 2009**).

2. What drives the business to adopt circular practices

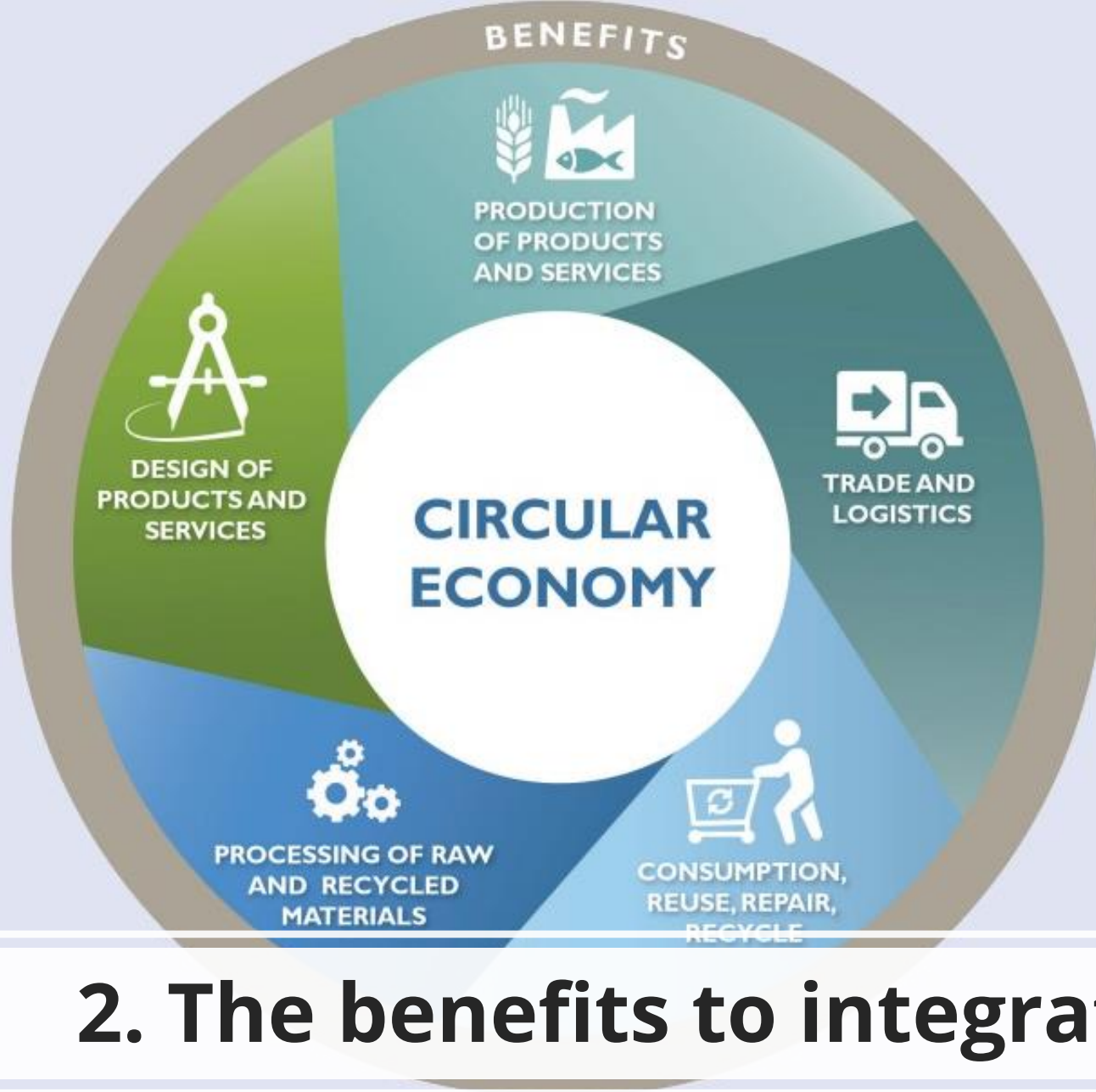
The circular economy is the business opportunity of our time (World Economic Forum, 2022)



- **Legislation.** In November 2021, the UK government passed the Environment Act.

The waste and resources, Act enforces:-

- Extend producer responsibility to make producers pay for 100% of cost of disposal of products, starting with plastic packaging
- A deposit Return Scheme for single use drinks containers
- Charges for single use plastics
- Greater consistency in recycling collections
- Electronic waste tracking to monitor waste movements and tackle fly-tipping
- Tackle waste crime
- Power to introduce new resource efficiency information (labelling on the recyclability and durability of products)
- Regulate shipment of hazardous waste
- Ban or restrict export of waste to non-OECD countries

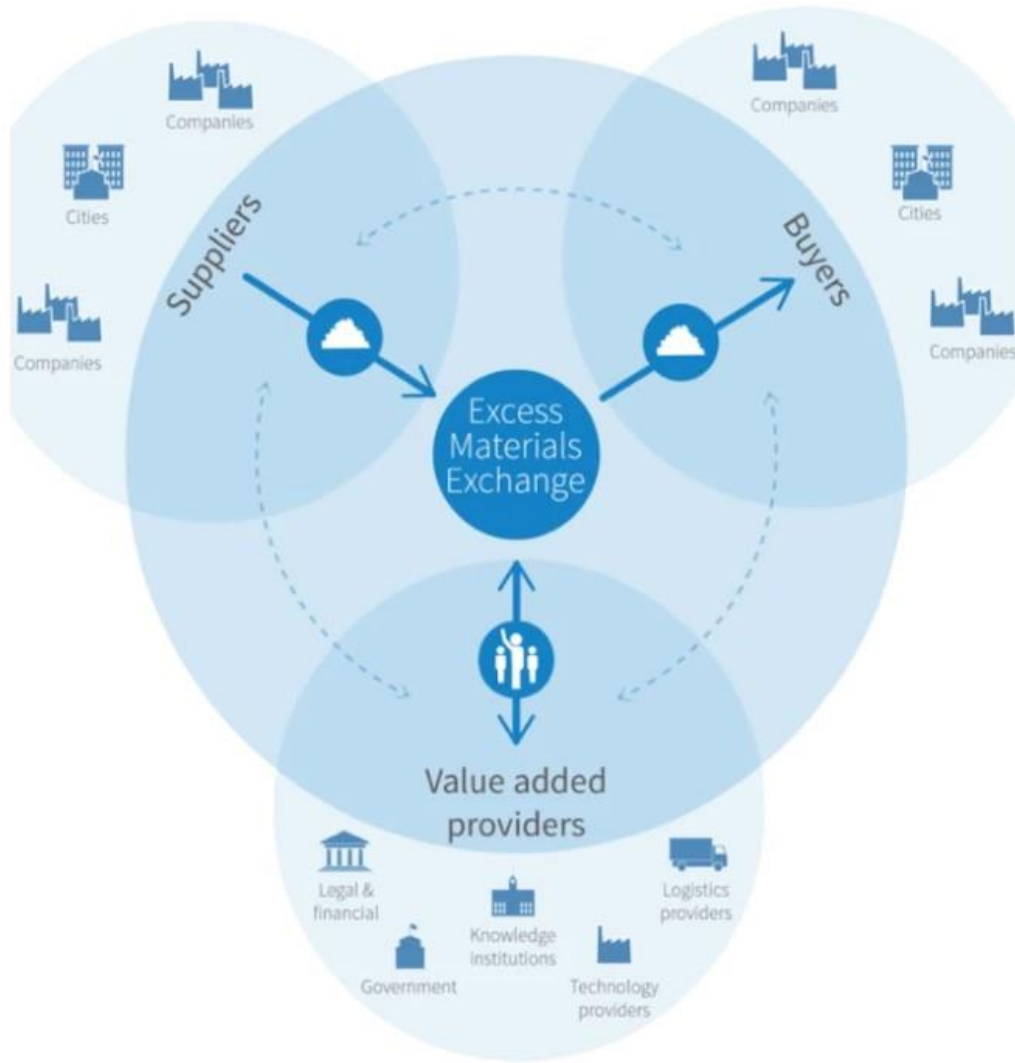


BENEFITS

- Minimized pollution, climate emissions, waste and use of raw materials
- Preservation of natural systems
- Increased competitiveness
- New markets
- Employment opportunities
- Social benefits

2. The benefits to integrating circular practices

2. Swipe Right an example of circular economy success



Excess Materials Exchange (EME) is a young and innovative technology company that has developed a digital facilitated marketplace where companies can exchange any excess materials and products. They function like a dating site, and actively match supply and demand and materials with their highest-value reuse opportunity

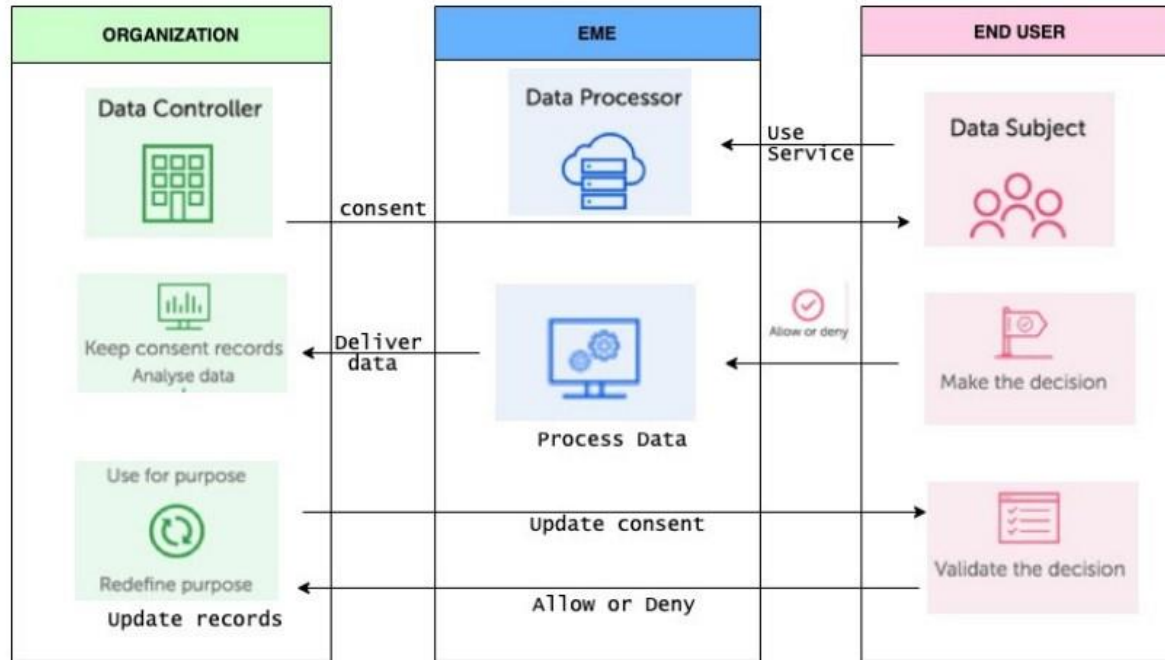
Target market: Individuals, Businesses, Government

The Solution:

The Excess Materials Exchange (EME) is a digital platform that unlocks the potential of excess materials and products by matching them to their highest value uses. They give materials, products and waste streams a new high-value reuse destination.

2. Swipe Right an example of circular economy success

How it works:



EME's GDPR data flow between users, EME and the organisation.

1. **The Resources Passport:** This is a standardised and modular format to provide any material with an identity. This (digital) passport gives an insight into e.g., the composition, the origin, the toxicity or deconstructability of the material or product.
2. **Tracking and Tracing:** With tracking and tracing identifiers like barcodes, QR codes and chips, they effectively match physical materials to their digital Resources Passport. This makes it possible to follow the materials throughout their life-cycles.
3. **Valuation:** They identify the maximum potential value that can be derived from a material, product or waste stream, and calculate the financial, environmental and social impacts.
4. **Matchmaking:** They then match the material or product to a new reuse option and innovation partners within their EME network.

In EMEs' experience, material flows increase by 110% on average in financial value, and the ecological footprint reduces by 60% on average.

3. Example of Circular Economy Policies and Strategies within the EU & UK.

Example of policies

1. UK (Wales, Scotland)
2. EU
3. United Nations



3. UK (Wales)

Since 2012, the Welsh government have been working towards embedding Circular Economy (CE) approaches into policy and practice, resulting in recycling rates of 63%, the highest rate in the UK, 2nd in Europe and 3rd globally in terms of proportion of waste recycled

Core Themes

The ways of working of the Well-being of Future Generations Act
The themes that will lead us towards a more circular economy:

Improve our recycling record

Waste by 2050

Waste from all sectors including construction, business etc.

The infrastructure in Wales to waste



Supporting innovation in material use

Amount of waste and moving materials to footprint

Recycled and content.

Investment in areas



Supporting communities and businesses

Communities together to develop projects to promote re-use and repair.

Ways to save and make money, invest in the local economy.



Supporting prevention and reuse

- Reduce the amount of waste from households, and the industrial and commercial sectors
- Promote repair, re-use and remanufacture to communities and businesses



Investing in infrastructure

- Additional waste management infrastructure to ensure maximum return from collected materials
- Infrastructure to support reuse, repair and remanufacture
- Decarbonise current infrastructure



Using government levers

- Build on schemes like our Landfill Disposals Tax Communities Scheme, to deliver innovative projects
- Use government funding, legislation, taxation and purchasing to drive Wales to a circular economy



Headline actions

1. Become a world leader in recycling
2. Prioritise procurement of wood, remanufactured and recycled content
3. More efficient use of food
4. Invest in clean technology for materials collection
5. Enable collective community action
6. Create business opportunities
7. Phase out single use plastic
8. Take full responsibility for our waste.

These actions fit into each of our core themes



Llywodraeth Cymru
Welsh Government

3. UK (Wales)

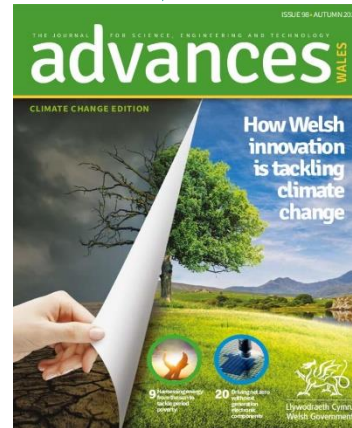


Smart funding.

Support and funding is available to provide support to Welsh businesses and research organisations to commercialise new products, processes and services developed through research, development and innovation processes.



WRAP Cymru is a Circular Economy Fund and has so far awarded 21 capital grants to organisations in Wales, with the total investment – including match-funding – standing at more than £11.9million.



Advances Wales is a free quarterly magazine showcasing the latest news, research and developments in science, technology and engineering in Wales



Discovering Green Organisations in Wales. A government fully funded Business Publication supporting and promoting green services and solutions.

3. UK (Scotland)



The Circular Economy Accelerator Centre promotes the principles of a circular economy. A Business Support Service, and Investment Fund, with a team of circular economy experts supporting companies to journey toward CE.



The Social Enterprise Net Zero Fund (NZTF) is designed to support social sector organisations (SSOs) and the wider third sector to make the transition to carbon net zero by reduce energy consumption, improving energy efficiency, the development or help move to renewable energy sources, assisting transition to sustainable transport options, the scale local food production and supply, to minimise or re-purpose food waste and or develop circular economy products, services, processes and practices.



The Circular Economy Investment Fund, administered by Zero Waste Scotland, offers investment for SMEs based in Scotland and supports work that will deliver circular economy growth. £18 million is available as grant funding to small and medium-sized enterprises that are helping to create a more circular economy.

Funding Opportunities

CLIMATE



MOBILITY



ENERGY



Budget available

€1.21 BILLION

for CLIMATE, ENERGY
and MOBILITY topics

3. (EU) European Union.

3. European Union.

- **What is Horizon Europe?**
- Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion



Adaptation to
climate change,
including societal
transformation



Cancer



Healthy oceans,
seas, coastal &
inland waters



Climate-neutral
& smart cities



Soil health &
food

(Horizon Europe 2027)

3. (EU) European Union.

Five Missions Areas

- **Conquering Cancer:**

Targets by 2030: more than 3 million more lives saved, living longer and better, achieve a thorough understanding of cancer, prevent what is preventable, optimise diagnosis and treatment, support the quality of life of all people exposed to cancer and ensure equitable access to the above across Europe.

- **A Climate Resilient Europe** - Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030

Prepare Europe to deal with climate disruptions, accelerate the transition to a healthy and prosperous future within safe planetary boundaries and scale up solutions for resilience that will trigger transformations in society.

- **Mission Starfish 2030:** Restore our Ocean and Waters

Targets by 2030: cleaning marine and fresh waters, restoring degraded ecosystems and habitats, decarbonising the blue economy in order to sustainably harness the essential goods and services they provide.

- **100 Climate-Neutral Cities** by 2030 - by support, promote and showcase 100 European cities in their systemic transformation towards climate neutrality by 2030 and turn these cities into innovation hubs for all cities, benefiting quality of life and sustainability in Europe.

- **Caring for Soil is Caring for Life**

Targets by 2030: at least 75% of all soils in the EU are healthy for food, people, nature and climate

3. Non-Governmental Organisations

To aid the transition to a circular economy at a global level the UNEP launched the **Global Alliance for Circular Economy and Resource Efficiency (GACERE)**. This brings together businesses, governments, and civil society organizations to share knowledge and good practices, to develop strategies and policies to support the circular economy. The UN also supports various initiatives and programs aimed at promoting the circular economy, such as

- UN Industrial Development Organization's (UNIDO) Circular Economy Platform for Latin America and the Caribbean, and the UN Economic Commission for Europe's (UNECE) work on the circular economy in the region.
- (SDGs) The Sustainable Development Goals, this provides a framework for achieving sustainable development in a comprehensive and integrated manner, addressing the economic, social, and environmental dimensions of development.
- They are a set of 17 goals adopted by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. (United Nations, 2023)



Questions

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Answers

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