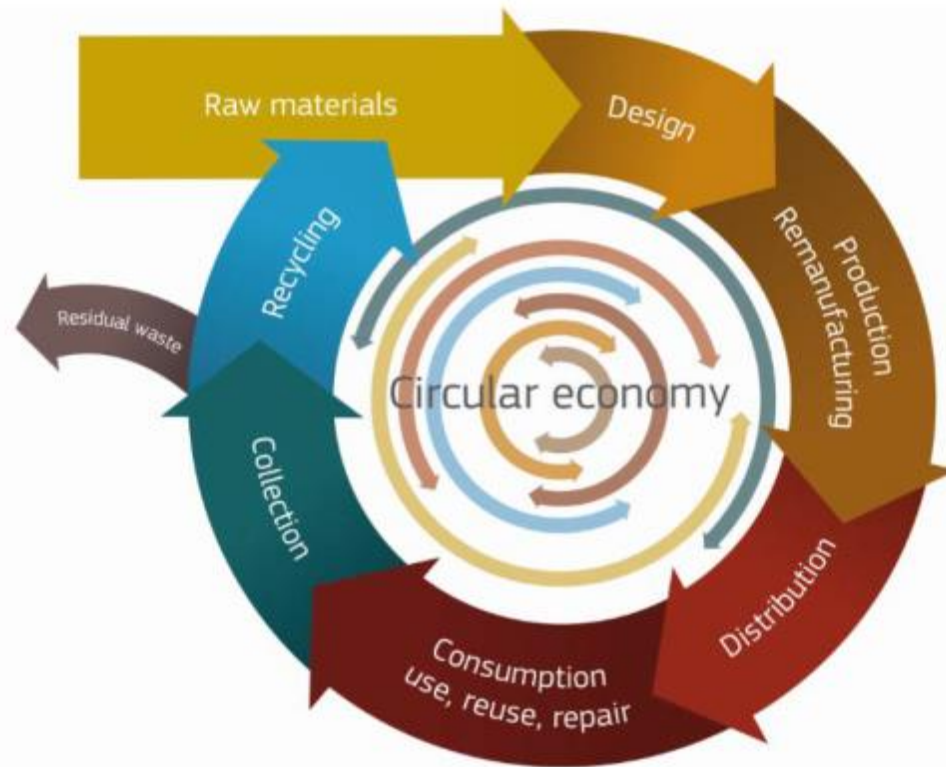


# WEEE – Future proofing through Innovation and Excellence





This research is part of the H2020 project PolyCE, funded by the European Union's Horizon2020 research and innovation programme under grant agreement No730308.

- PolyCE is an EU Horizon2020 project that is addressing the challenge of transforming the lifecycle of e-waste plastics to a more sustainable one by reducing the use of virgin materials and enhance the use of recycled plastics in new applications.
- 20 expert organisations from across Europe



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#### OUR OBJECTIVES

We are a European Commission funded project that has taken on the challenge to transform the lifecycle of e-plastic materials into a more sustainable one.

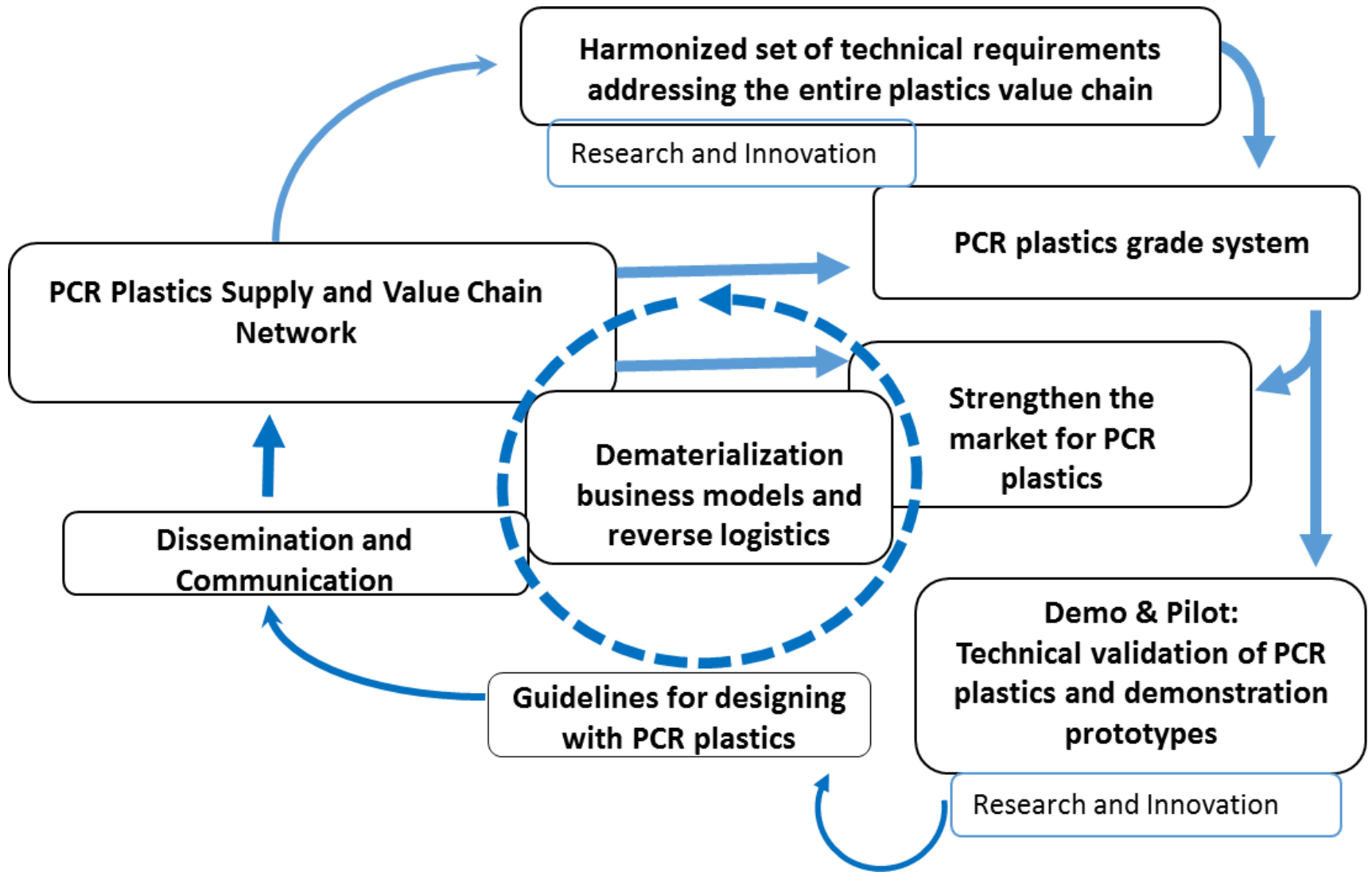
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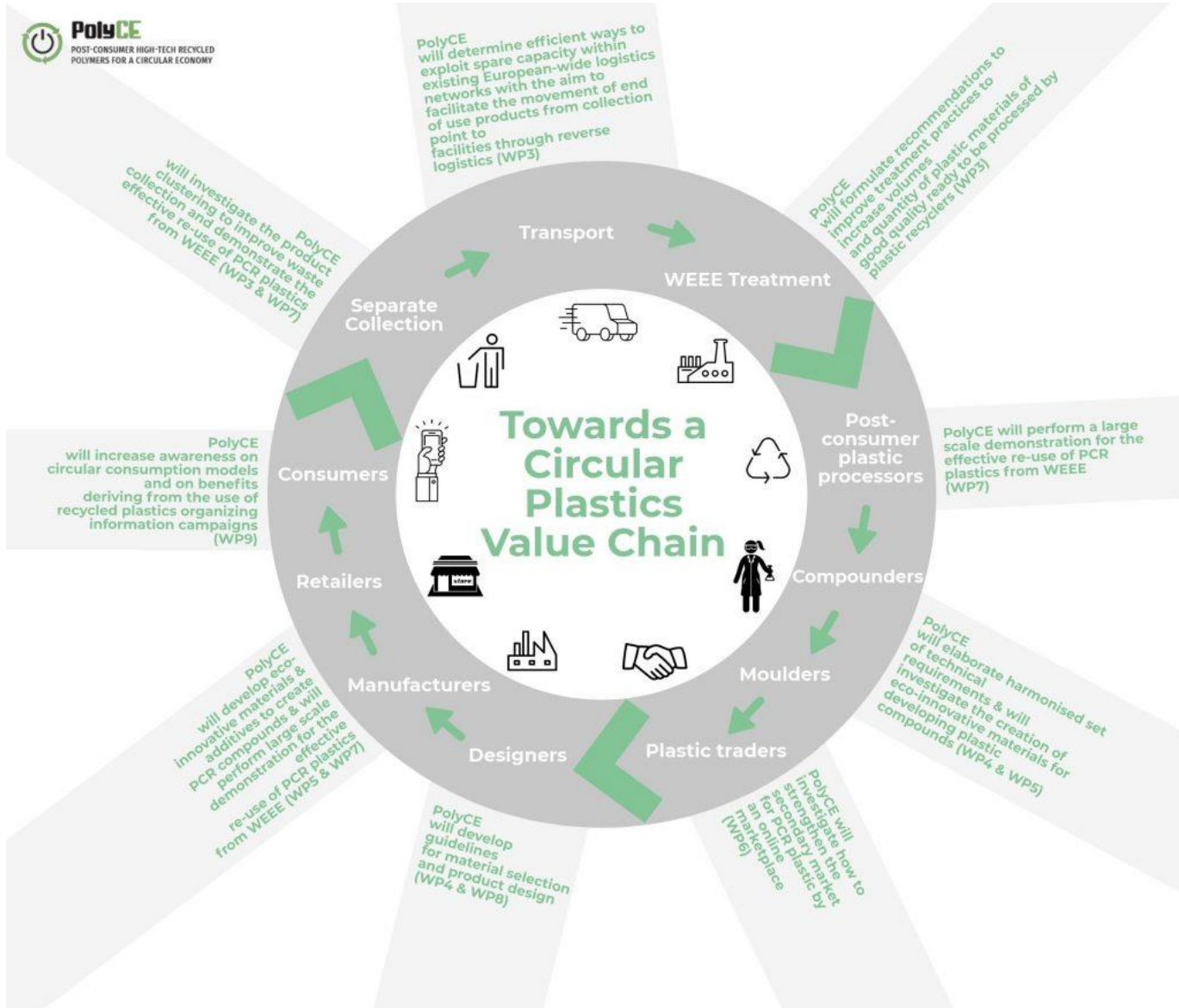
#### ABOUT US

PolyCE consists of a consortium of 20 expert organisations that are working together to significantly reduce the use of virgin plastics and enhance the use of recycled plastics in new electronics applications.

[\[read more\]](#)







# PolyCE

- Review and assess Circular Business Models
- Develop plastic materials and additives – inc eco friendly flame retardants
- Testing systems for plastics along value chain
- Map recycling situation in Europe
- Analyse reverse logistics systems

# Surveys and Interviews

- Change in the perception, and awareness, of Circular Economy (CE)
- CE concepts are easier to understand than climate change
- Sustainability is seen as the overarching principal encompassing social, economic and environmental aspects.
- Resource Efficiency is seen as **the what**, CEBMs as **the how** and sustainability as **the why**

- Designing with end of life in mind is becoming much more the norm,
- “Business as usual”, is one of the biggest barriers for adoption of CEBM’s
- Main external barriers to adoption of CEBM are economic and technical viability,
- Internal barriers can be in getting acceptance, and participation, from the different areas within the company itself.



- Where CEBMs were adopted, it was primarily for consumer electronics, Information and Communications Technology (ICT), medical devices, large household appliances and lighting equipment.
- Costs and sustainability goals were the most significant CEBM drivers for the eight product categories (listed in the survey).

- The key factors that impacted upon the use of PCR) were the size of the organisation and how the PCR plastics were bought and sold.
- It is assumed that **small companies lacked the resources (e.g. finance), and access (e.g. to an online market platform) to PCR.**
- It is also possible that given their small size, that they may also simply lack the capacity to require larger quantities of post-consumer recycled plastics





- One of the fundamental requirements is consistent **material availability**, with ABS, PP and HIPS being the main post-consumer recycled plastics utilised.
- Plastics availability must be analysed in parallel with the aspect of plastics **quality**. If the supply of PCR plastic is reliable in term of volume, the consistency of quality cannot be always easily ensured.

- The lack of a generally accepted quality control procedures is perceived to influence all the PCR plastic value chain and is impacting on the achievement of high rates of recycling.
- QA currently represents a barrier for an appropriate **valorisation** of the plastic itself.



# Demonstrators

- Smartphones – modular components
- PCR plastics for LED lighting
- Non WEEE plastics in EEE applications
- LHA appliances incorporating PCR from WEEE
- SHA – potential for removing integrated batteries

# Consumer survey

- Some results so far:
  - 3 top most important aspects for purchase are: long lasting product, upgradable and repairable. ,
  - 95% of consumers would buy a device containing PCR plastics in the future.
  - Main reasons why people don't buy PCR plastic products: aesthetics, health issues, “unclean”, and “too expensive”.
  - Predominant reason for purchasing PCR products is are environmental conscience

# LaWEEda - Latin American-European network on waste electrical and electronic equipment research, development and analyses

The overarching aims of the project are to:

- Promote the take-up of practical entrepreneurial experiences in education and training of Universities and Training Organisations in Brazil and Nicaragua in the area of e-waste management
- support HEIs in Brazil and Nicaragua to modernise and internationalize the academic and non-academic training of engineers and technicians by establishing an education concept for e-waste management
- Improve the level of competences and skills in HEIs by developing innovative educational programmes
- improve the quality of higher education and significantly enhance its relevance for the labour market and society
- connect the academic world and the industry in the area of e-waste management between Brazil and Nicaragua as well as the EU



**Brazil**

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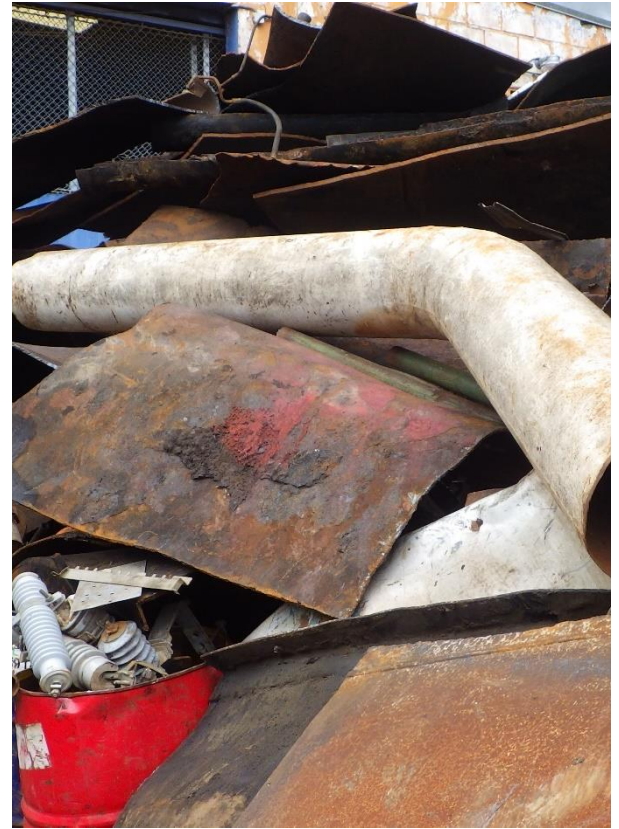
Brazil

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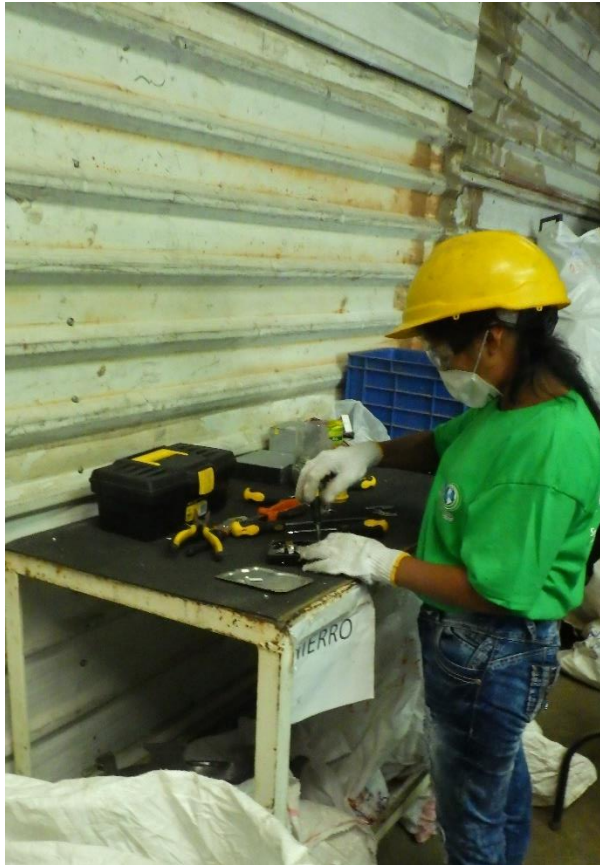
Brazil

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# Nicaragua

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# Nicaragua

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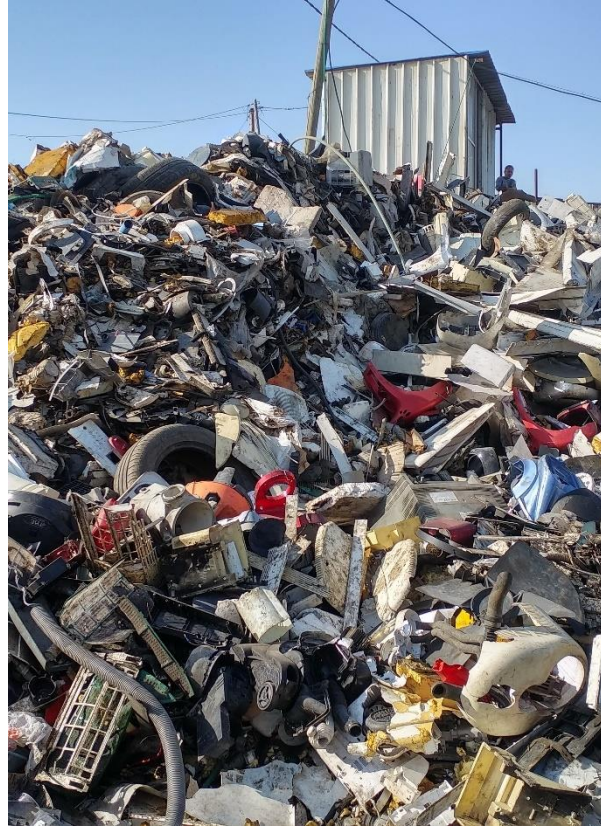
# Nicaragua

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# Palestine

**Promotion of sustainable growth in Palestine through an environmentally safe, innovative and economically valuable treatment of WEEE (Waste from Electrical and Electronic Equipment)**





Palestine

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# Palestine

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# Palestine

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# Thank You



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