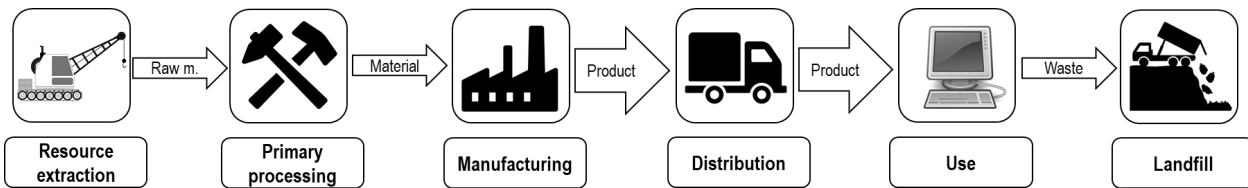


Enabling Repurposing

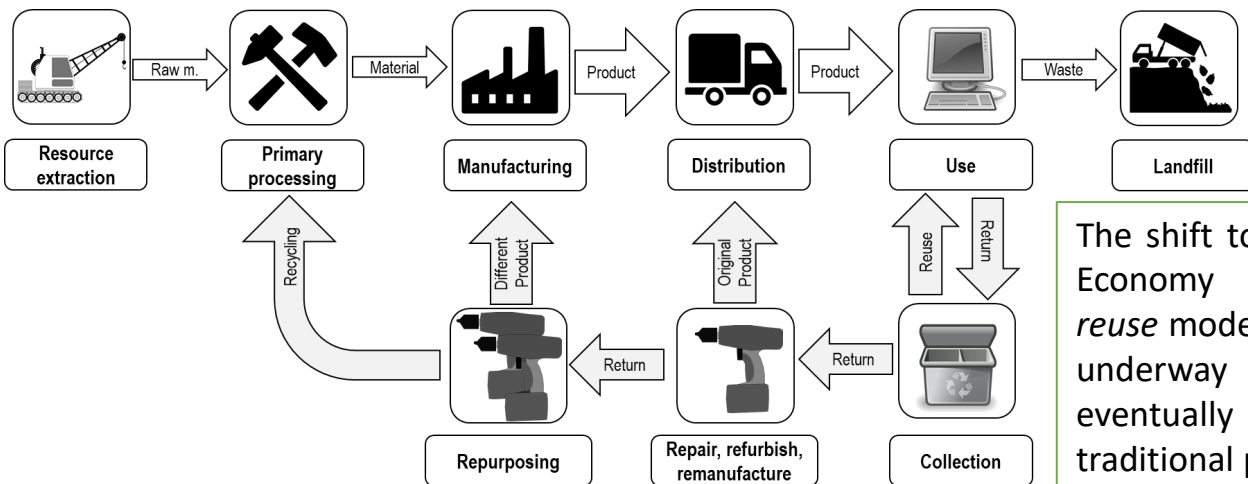
Product Transformation & Connected Collaboration

Responsible | Sustainable | Innovative

- **Sustainability** is at the top of the supply chain agenda as global resources are being depleted at an unprecedented rate in human history.
- **Repurposing** is an important, yet under researched Circular Economy strategy to keep products and materials in circulation.



The linear business model of *make–use–dispose* is leading to irreparable ecological damage and is no longer a viable option.



The shift to a Circular Economy *make–use–reuse* model is already underway and will eventually supersede traditional practices.

Repurposing Examples

Textiles	➔	Building material
Clothing	➔	Floor tiles
Wind turbine	➔	Bike shed
Airline seats	➔	Bags

What is repurposing?

- Repurposing adapts end-of-life products, parts and materials for use in different applications and markets.
- Contrary to recycling (down-cycling), it retains or adds value (up-cycling).
- It turns a supply chain's end-of-life waste into a valuable, carbon-efficient input.



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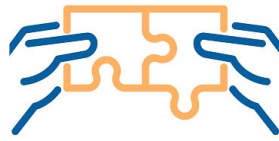
Enabling Repurposing

Project Specifics



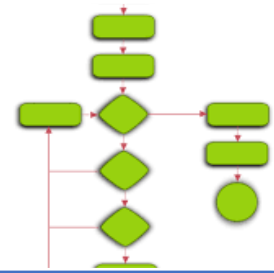
Activity 1 – Information

- Literature review
- Data collection
- Case studies



Activity 2 – Characteristics

- Product, material & markets
- Enabling
- Index



Activity 3 – Decision Support

- Tools
- Process
- Dissemination

What is the problem?

- Supply chains operate independently with no experience or access to potential markets.
- There exists little guidance on how to connect and manage inter-dependent supply chain operations.
- The answer comes through supply chain collaboration and making use of increasingly available digitalised information.

Partnership solution

- With our industrial partners, we are building a picture of contemporary repurposing projects.
- Partners will act as case studies to identify opportunities, issues and critical success factors for sustainable supply chain design.
- Providing information, data and ideas to understand structural parameters that influence daily operations and future strategy.

The People	The Partners	The Research
<p>Cardiff Business School Professor Aris Syntetos Dr Thanos Goltzos Dr Daniel Evers Dr Tim Ramjaun Dr Andy Treharne-Davies</p> <p>Michael Mead (3dGBIre) Chris Harrison (CREATE) Professor Mike Wilson (DSV) Dr Andy Lahy (DSV) Ellen Petts (Greenstream Flooring CIC) Becky Gordon (Interface) Greg Allen (Rj-Alpha)</p>	<p>3dGBIre: 3D printing company using repurposed filament.</p> <p>CREATE Education: Science education specialists.</p> <p>DSV: One of the world's largest logistics providers.</p> <p>Greenstream Flooring Welsh flooring recovery business.</p> <p>Interface: Manufacturer of sustainable flooring products.</p> <p>Rj-Alpha Advisory Services Ltd: Advising tech start/scale-up.</p>	<p>This is exploratory research so the questions will evolve but we need to consider:</p> <ul style="list-style-type: none"> • How to identify alternative supply chains that can provide material input? • Industrial or consumer end-of-life material suitability? • Consistency of supply quality and quantity? • Logistics and operations management of materials? • Additional processing requirements?