



9 Resource Strategies

FACET 05.12.2020

CONSUMPTIE



LINEAIR



RECYCLE

CIRCULAIR

technisch



CIRCULAIR

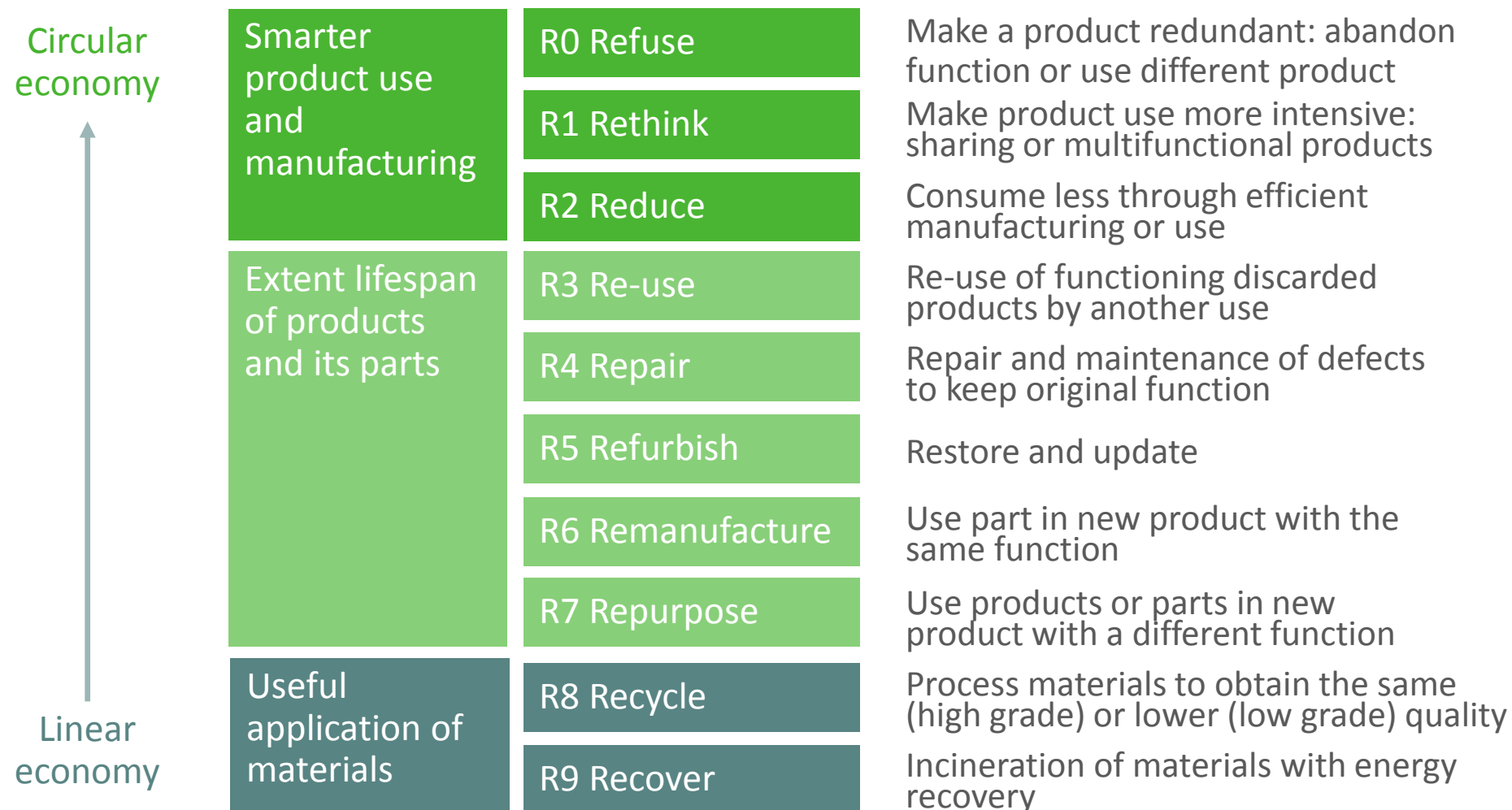
biobased



ORGA

BIOBASED

Strategies in a Circular Economy





R0 Refuse

- Make a product redundant; abandon function or use different product
- Prevent any environmental damage by refusing to accept or support products or companies that harm the environment
- One example is to refuse items that are over-packaged or packaged in plastic
- And sometimes items may not be necessary overall...





R1 Rethink

- Questioning the assumptions behind the current economic & business logic
- Changing production-consumption systems from linear (take-make-waste) to circular (everything stays in the biological or technical loops)
- Preserving our stock of material resources by eliminating waste, promoting resource efficiency and moving towards a circular economy
- Make product use more intensive: sharing or multi-functional products
- Minimize the damage caused to our natural environment by reducing and managing waste safely and carefully

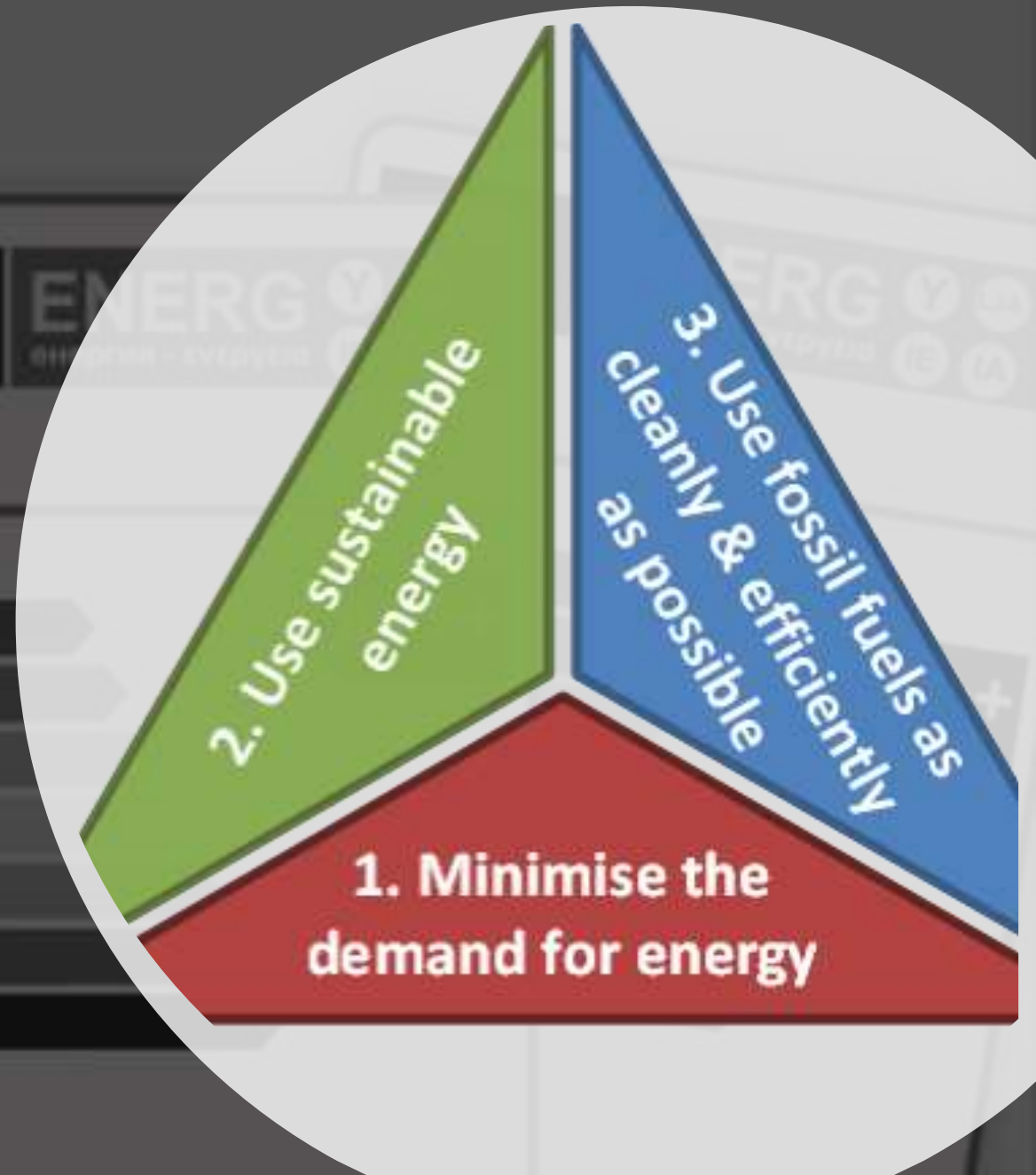




R2 Reduce

- Consume less through efficient manufacturing or use
- Reducing the number of resources used in everyday life is the next step in the resource management hierarchy
- You can reduce your energy usage, water usage along with reducing your garbage, food waste, plastic, and transportation

- 1. First energy saving (reduction)
- 2. Increase of renewable energy
- 3. Improved efficiency of the production of energy from fossil sources





R3 Re-use

- Re-use of functioning discarded products by another use
- Re-use is the action or practice of using an item, whether for its original purpose (conventional reuse) or to fulfil a different function





R4 Repair

- Repair and maintenance of defects to keep original function
- More attention for contractual agreements for maintenance and repair within (joint) purchase processes
- Service agreements with suppliers
- Interesting in combination with products-as-service models





R5 Refurbish

- To refurbish a building or room means to improve it by cleaning, decoration, restoring and/or updating its function and as such making it more attractive or better equipped
- Refurbishment is often aesthetic in nature
- This process is typically less intensive than remanufacturing, which results in a final product comparable to a brand-new product which often possess the same warranties and guarantees as a new product
- You can refurbish houses, furniture, kitchens but also electronics like cell phones or laptops

DIY/DIY



Hurtigruten MS Richard
OLD VS. NEW

AFTER





R6 Remanufacturing


- Use parts in a new product with the same function
- It is the process of recovering, disassembling, repairing and sanitizing components for resale at 'new product' performance, quality and specifications
- By remanufacturing products, components or parts, a company contributes to the circular economy by extending the lifetime of those elements and creating value
- Economic drivers for remanufacturing may include reduced costs of goods sold, reduced prices to the customer, supply risk mitigation and stronger value chain relationships.

**Example: Remanufacturing plant
in Choisy-le-Roi, France**

- Damaged parts (scraps) from vehicles currently in use are being collected through the commercial reverse logistic network
- Remanufactured parts have the same guarantee and are submitted to the same quality control tests as new parts and 30-50% cheaper



RENAULT



Reman spare parts



Old cores collection



R7 Repurpose

- Use products or parts in a new product with a different function

Examples:

- Real estate, including land and buildings, is routinely adaptive reused for other purposes, both short-term and long-term, due to its high fixed cost. An example is conversion of old industrial mills
- Scrap metal and furniture have countless applications for repurposing
- Waste like plastics and wood can be repurposed in several ways, including art and toys



laclasse dellamaestra valentina





R8 Recycle

- Process materials to obtain the same (high grade) or lower (low grade) quality
- Only about 9 percent of the 9.9 billion tons of plastic generated globally since the 1950s has been recycled, according to the United Nations Environment Programme
- Almost half of the plastic waste poisoning marine life, contaminating food, and clogging waterways and sewers comes from consumer packaging

FREITAG turns old truck tarps into sports bag

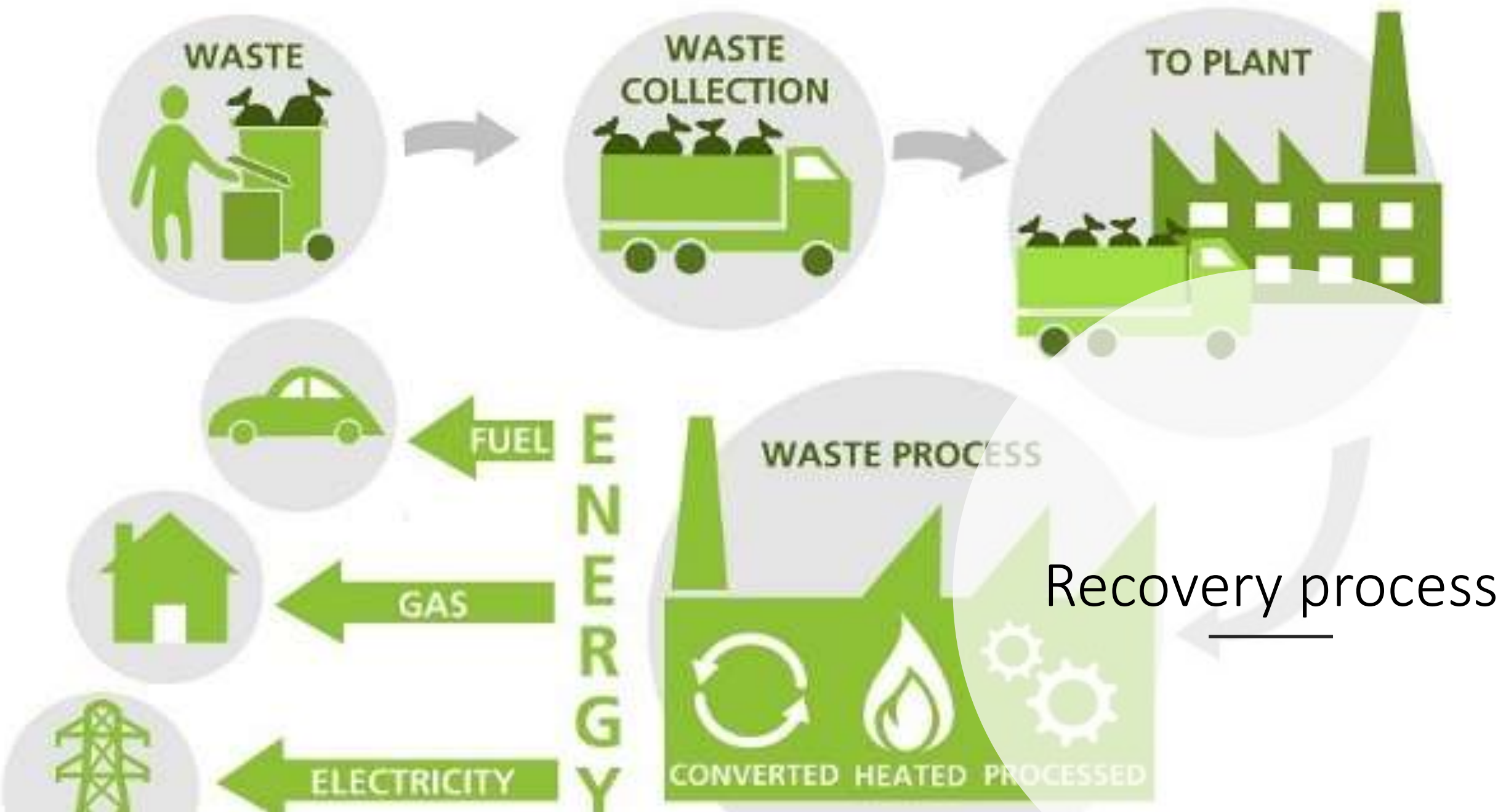




R9 Recover

- Processing materials with goal to recover energy or materials
- The recovery strategy is the last option within the production-consumption system to save some embedded energy or materials
- After this stage there is only the landfill (burying waste)





Source: <https://cleanleap.com/recovering-energy-waste-can-power-africa>

Alchemist (France)



La mission des Alchimistes : collecter, composter et fertiliser les sols urbains

Nous avons lancé notre premier site micro-industriel il y a 15 mois



Collecte en logistique douce à moins de 15 km



Valorisation micro-industrielle Low-tech et peu énergivore



Production de compost urbain Riche en matière organique

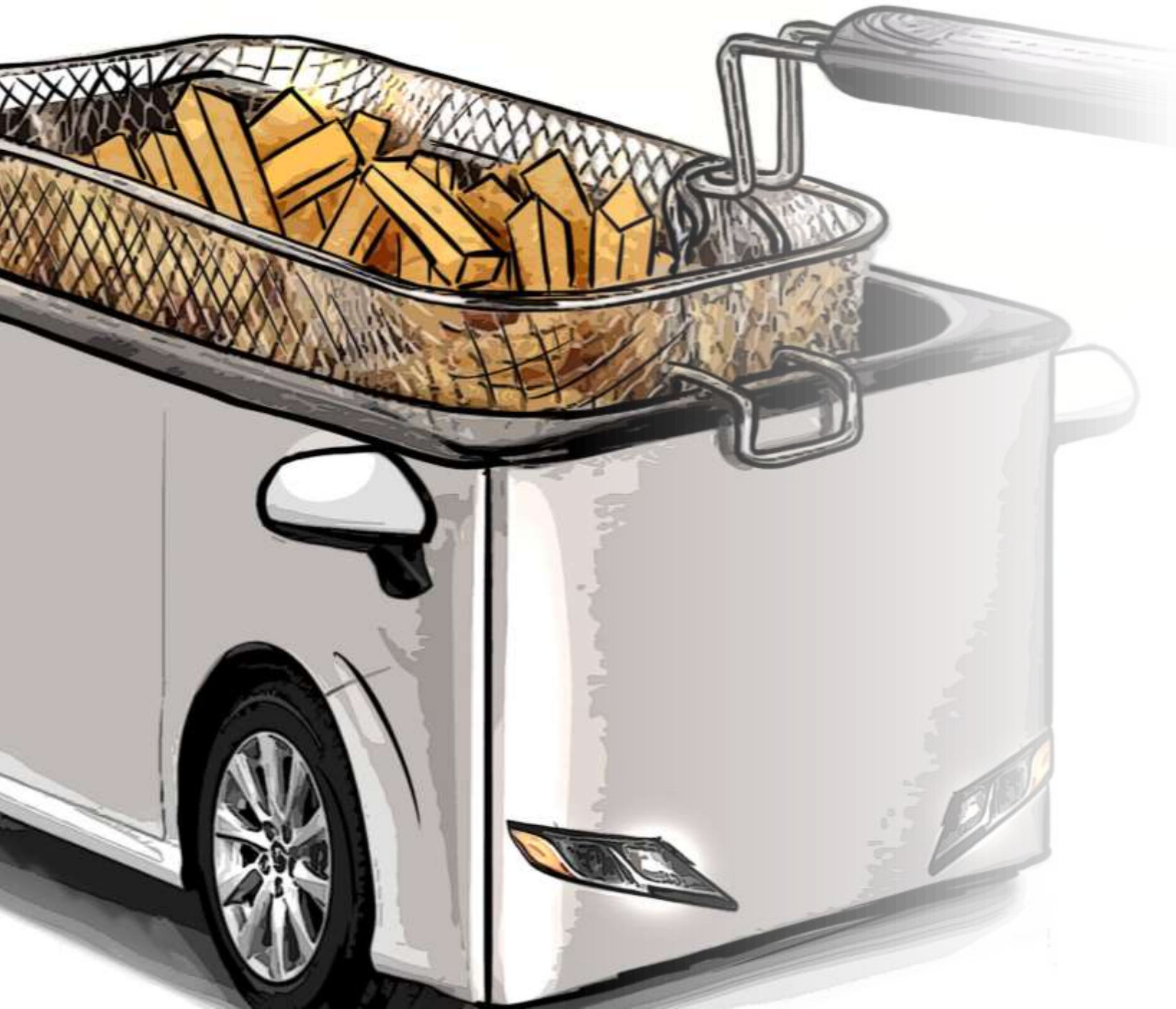


Capacité de traitement : 730 tonnes / an

Processus de compostage : 8 semaines

Production de compost : 150 tonnes / an





Biofuel from
frying oil?

Thank you!