

Make Mushroom Packaging to Explore Long-Term Ecological Impact



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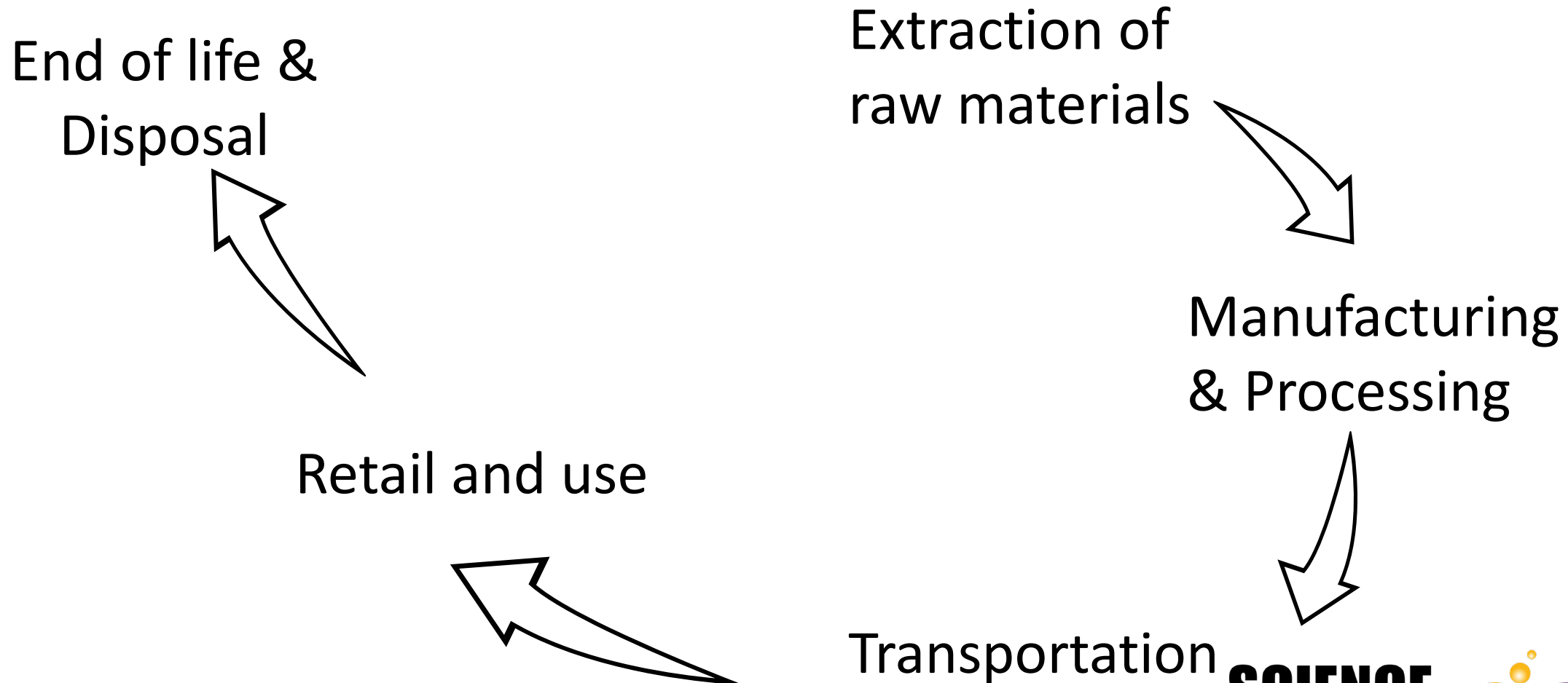




Growing Mycelium Composite

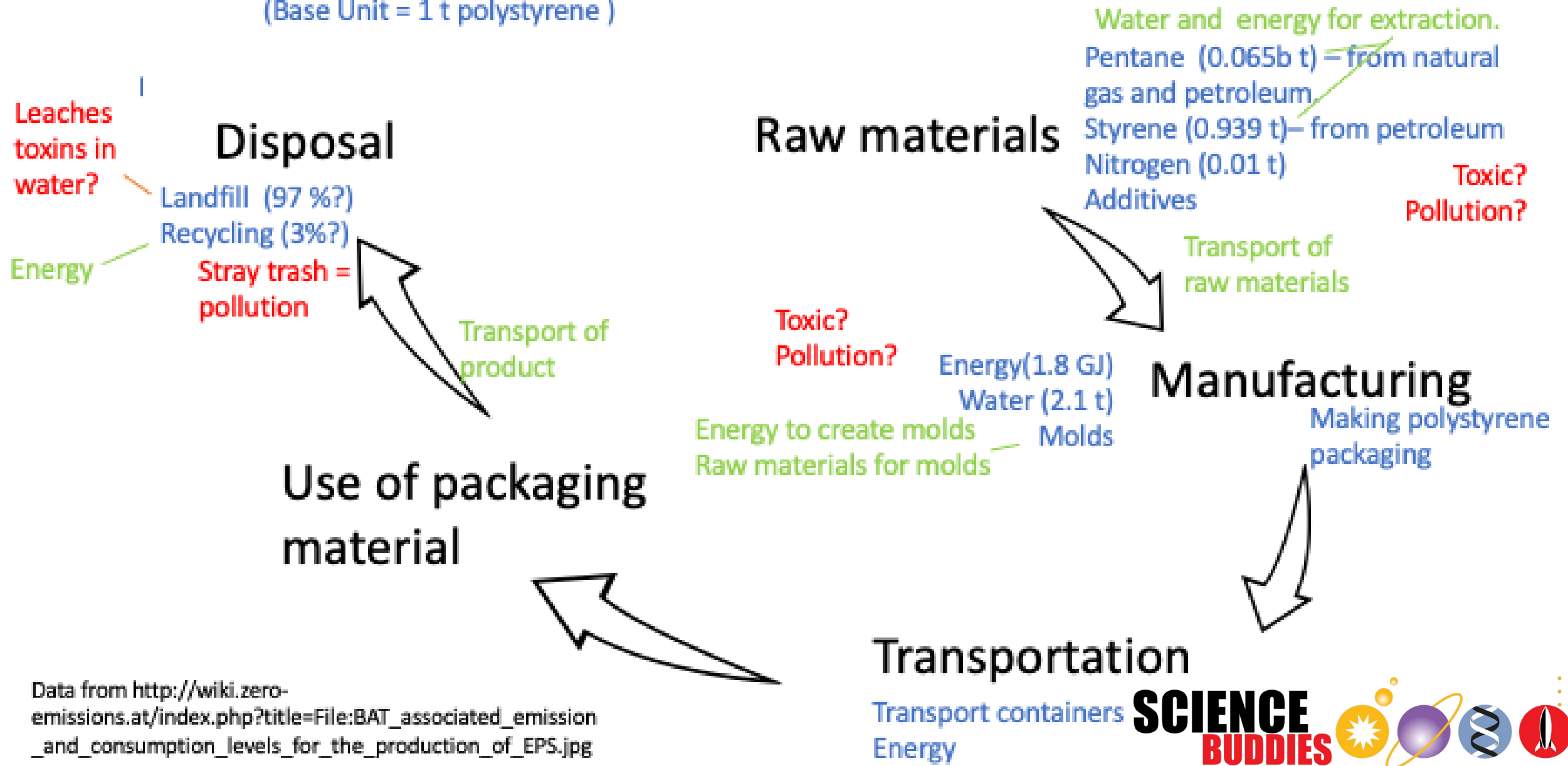


The Cradle-to-Grave Life Cycle



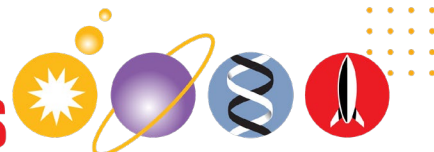
Life cycle of polystyrene packaging

(Base Unit = 1 t polystyrene)



Data from http://wiki.zero-emissions.at/index.php?title=File:BAT_associated_emission_and_consumption_levels_for_the_production_of_EPS.jpg

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Partial life cycle assessment of polystyrene packaging

(Base Unit = 1 t polystyrene)

Disposal

Landfill (97 %?)
(Recycling)

Raw materials

Extraction of
raw materials

9,022 L

2.937 kg
CO₂-e

Manufacturing

Making polystyrene
packaging

1,849 L

0.324 kg CO₂-e

Transportation

Transport containers
Energy

21.514 kg CO₂ for 400 km
(diesel truck, 40 L/100 km)
Assuming 2 ton per truckload

Use of packaging material

Global warming potential

Water use

Data from
<https://www.epsindustry.org/sites/default/files/LCA%20of%20EPS%20Resin%20LCA%202017.pdf>
<https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>