

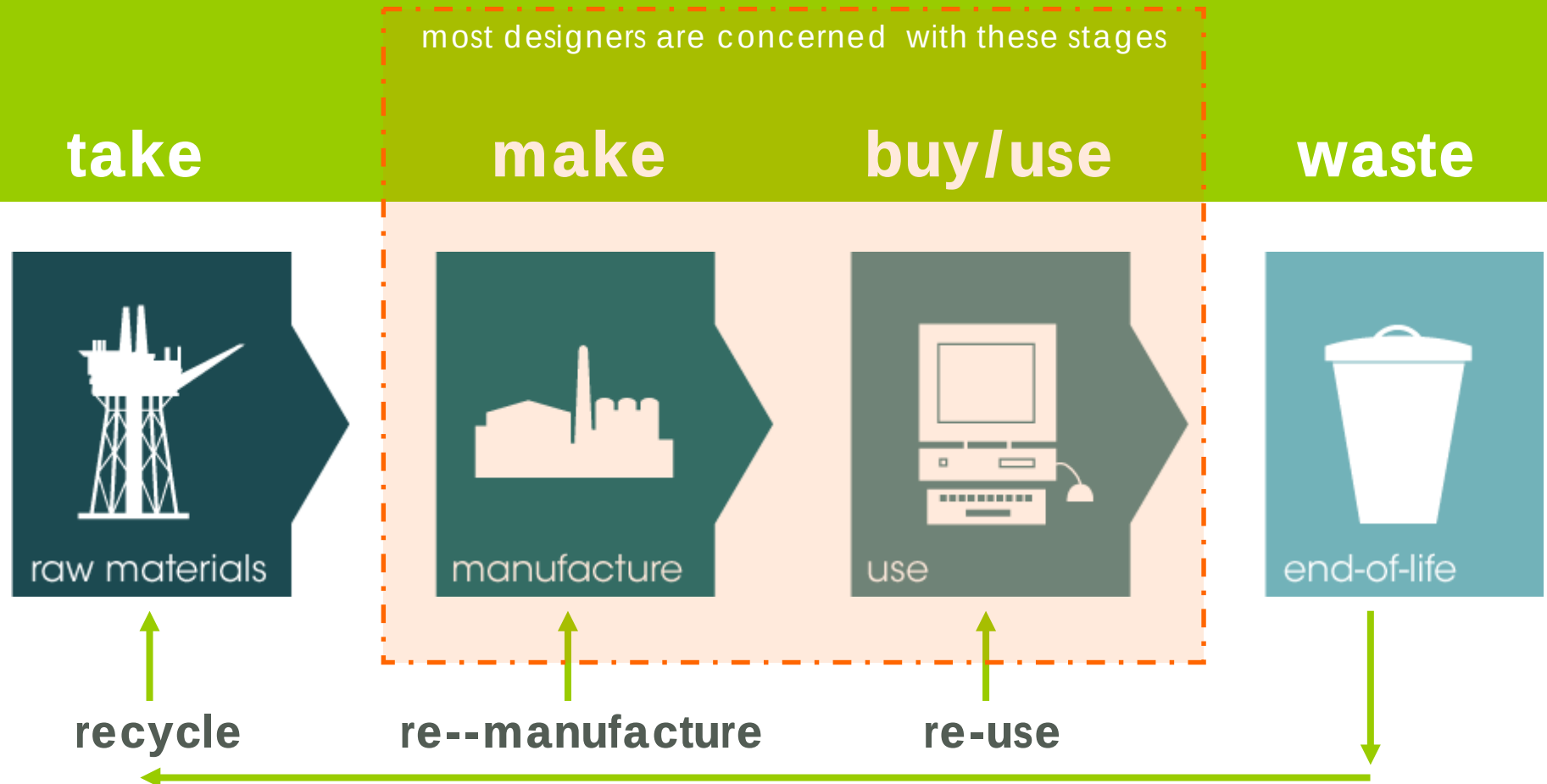
PP:D4M

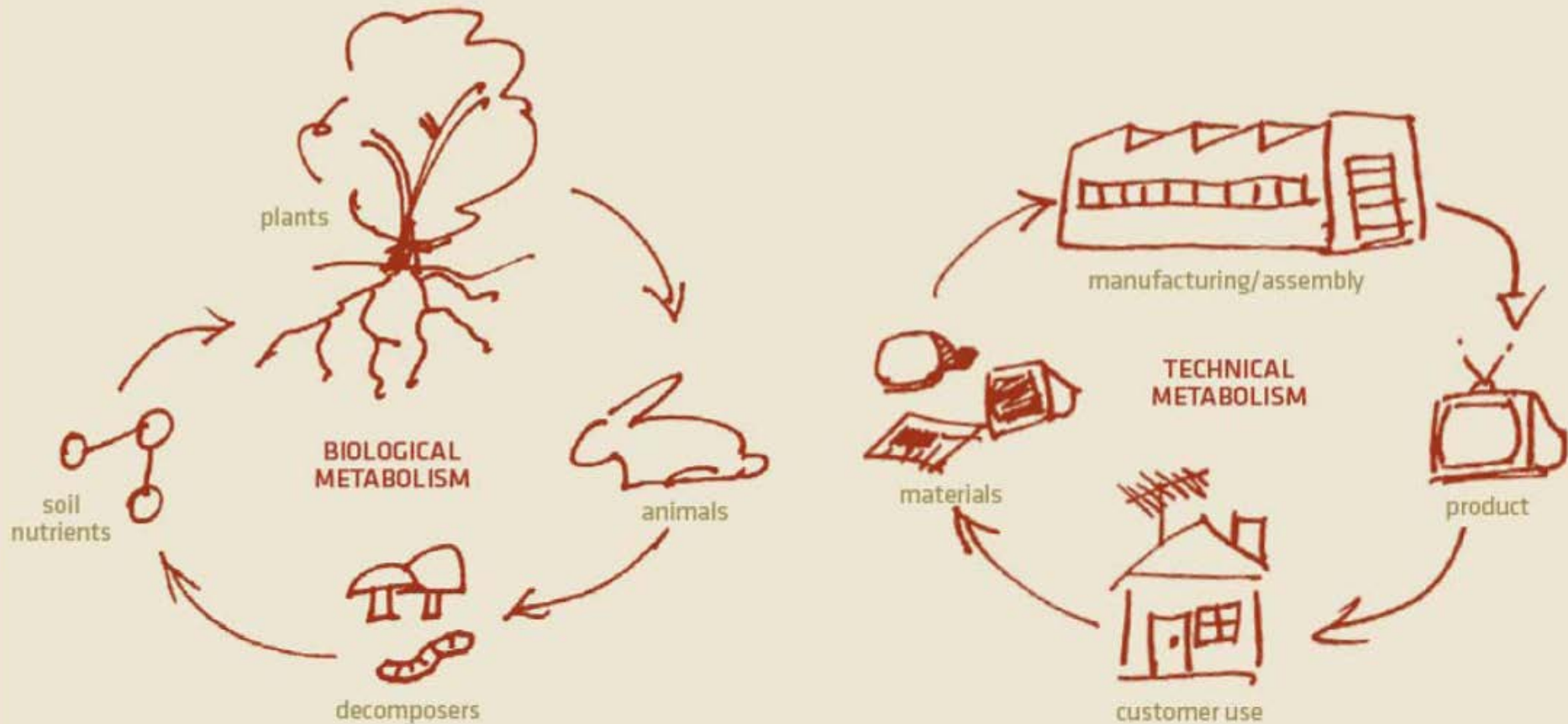
3. life-cycle thinking

key learning objective : understand systems and life-cycle thinking

- product life-cycle stages
- system life-cycles (cradle to cradle)

life cycle thinking expands the traditional focus on manufacturing processes to incorporate all stages from material extraction through to end-of-life



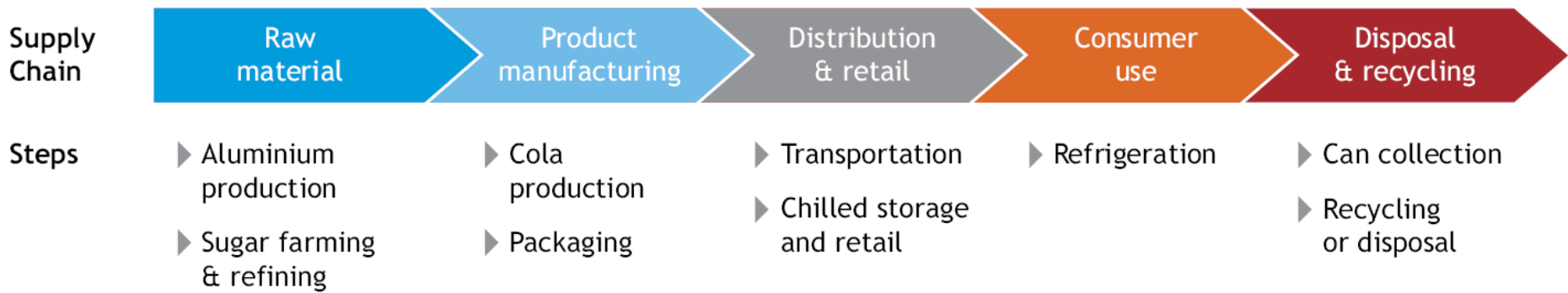


life cycle thinking

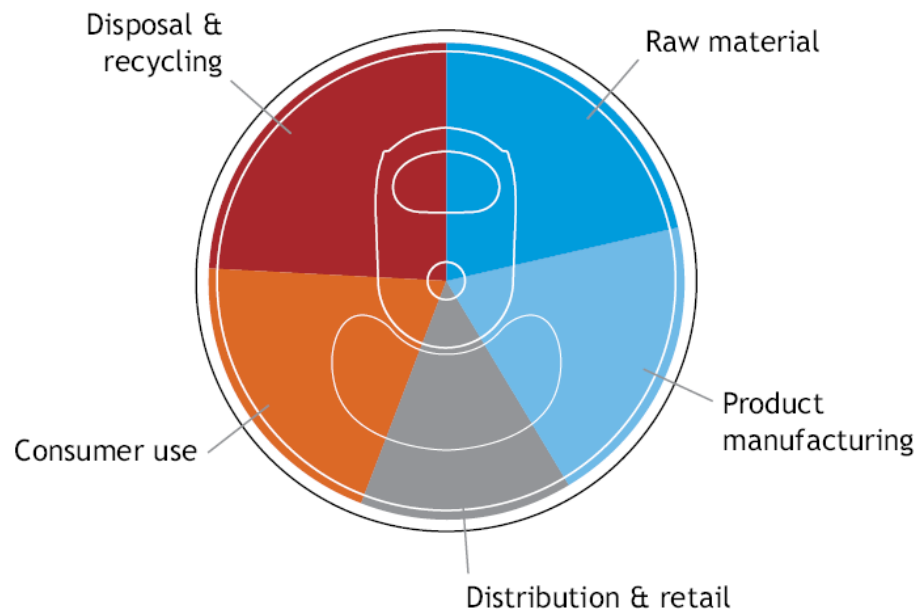
is understanding where the impacts happen over a product life cycle with a view to reducing those impacts

life cycle thinking example





Total carbon footprint of the can of cola (illustrative)





The old '206' beverage can



The new '202' beverage can

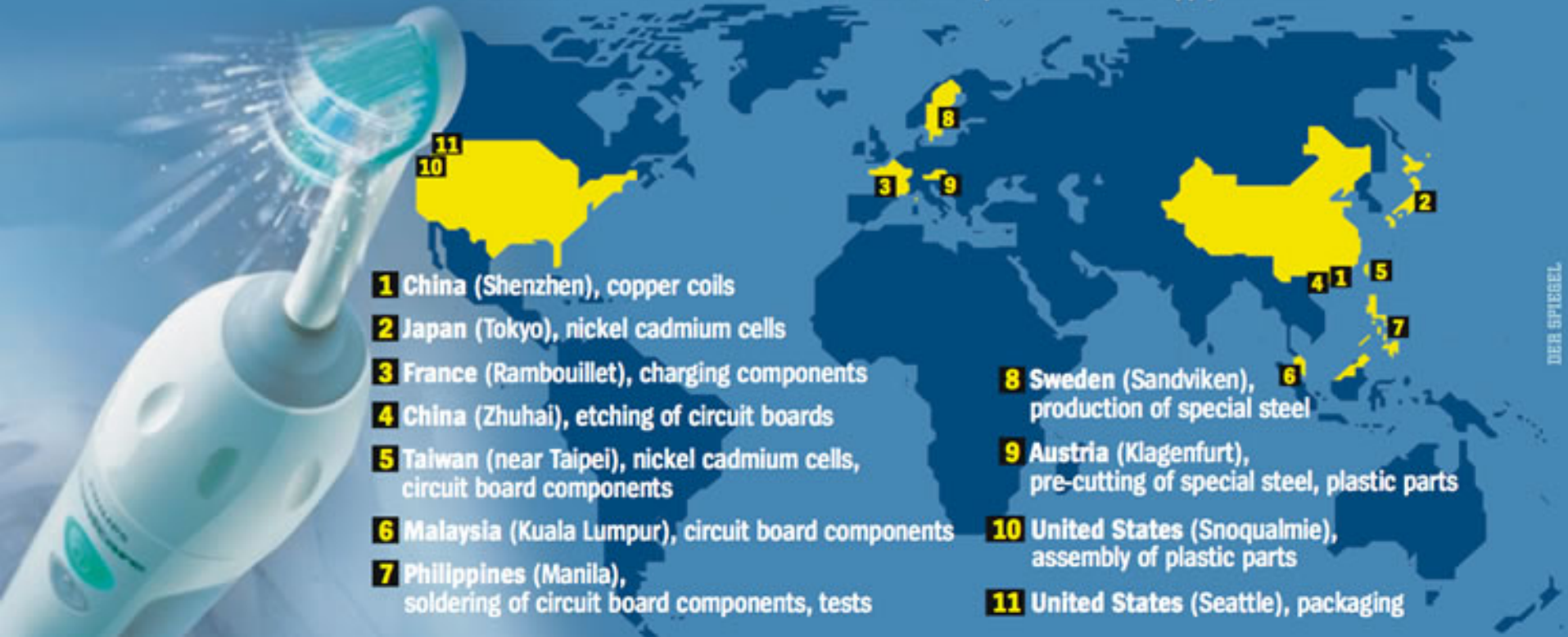
Identified benefits:

The project demonstrated that light weighting can produce significant cost savings through reduced raw material costs. Benefits were also achieved through reduced production complexity.

- Conversion from the '206' to the smaller '202' can produced cost savings of over £1 per thousand cans and led to savings worth some £40 million/year in reduced metal use for the beverage can industry worldwide.
- As a result of the project, CCE Ltd saved an estimated £2.3 million/year from 1995 onwards.
- Total conversion costs were approximately £2.2 million, net of asset write-offs. This made the project a profitable investment with a payback period of less than two years.

what about global supply chains?

Division of labor "Sonicare Elite 7000" production and supply locations



"Sonicare Elite 7000"

produced at **11 locations** and in **five time zones**, comprised of **38 components**, parts supplied by Japan, France, China and Malaysia, materials and production in Austria, Sweden, assembly in Philippines and United States, when fully assembled and packaged in Seattle the components have travelled a full **27,880 kilometres**, two thirds of the Earth's circumference.