

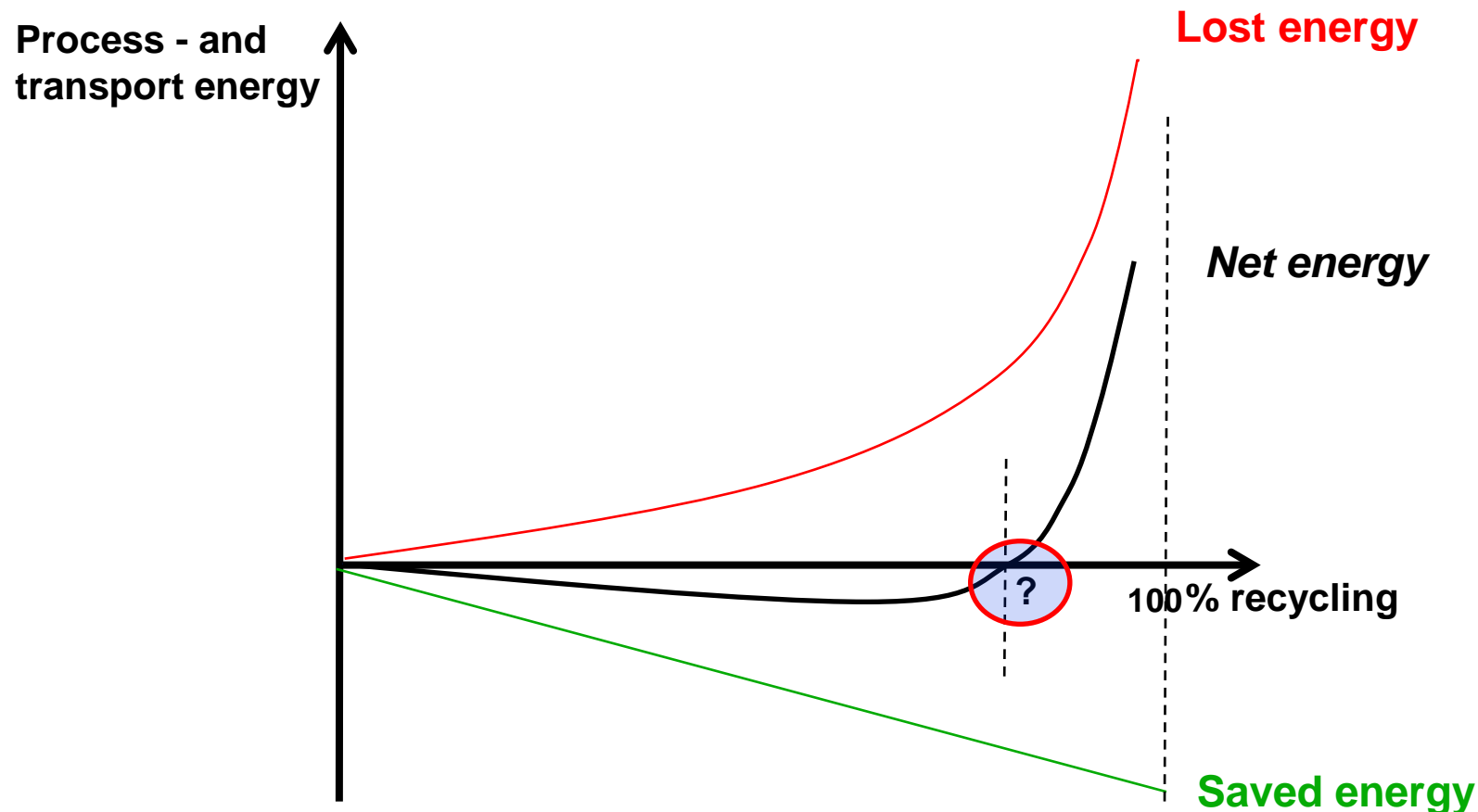
# Circular economy – when is it more sustainable?

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# CE and thermodynamics

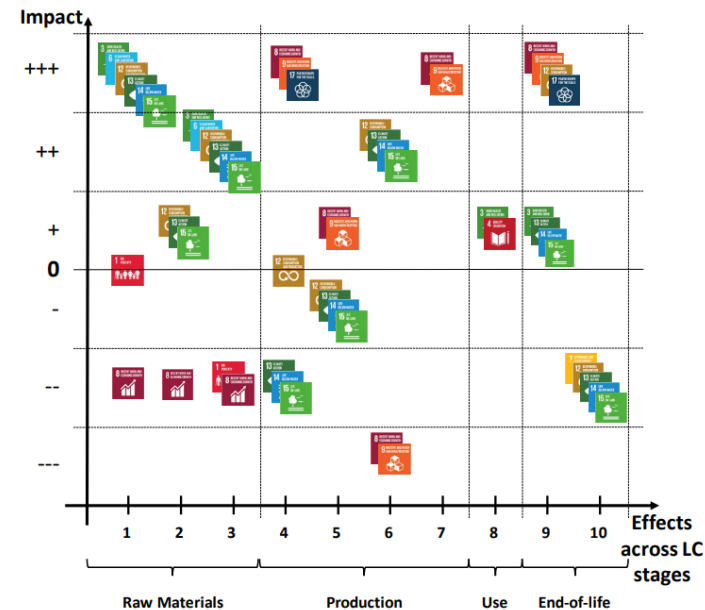
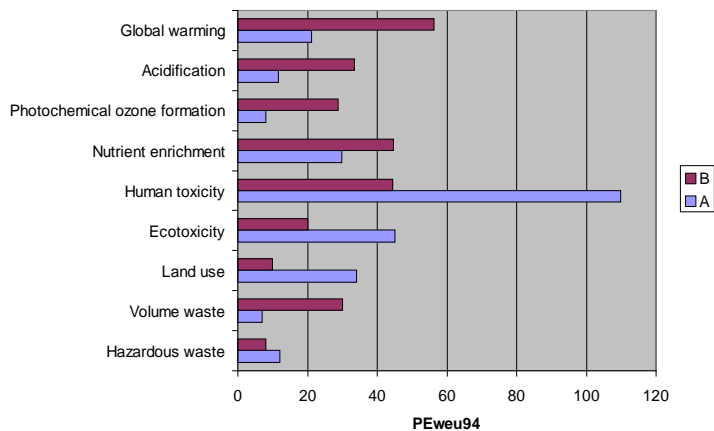
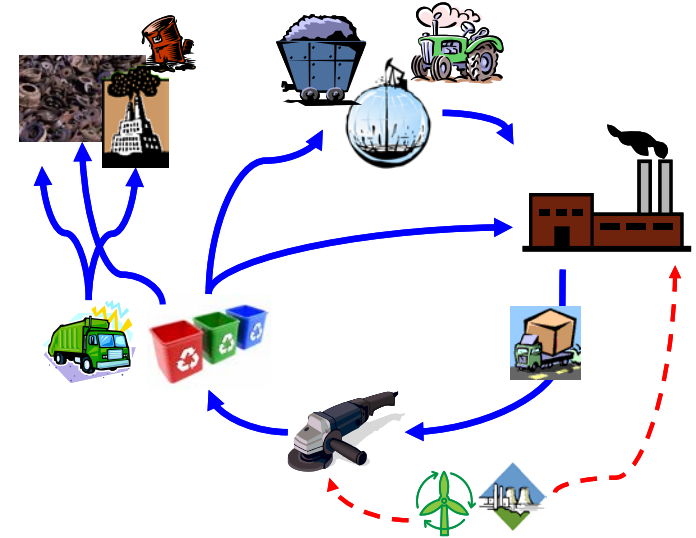
Closing loops saves production, materials and resources but also cost energy for processing and transportation – how far should we go?



# So is it more sustainable?

To determine if your solution is more sustainable than what it is supposed to replace you need to reveal problem shifting and trade-offs:

- **Look at the whole life cycle** of your solution – from the cradle to the grave
- **Look at all the potential impacts** it may have on the environment, climate and also its social impacts



# Stocks and flows

Western societies have in-use stocks of +10 tons steel per capita

The annual production of steel is 0.2 tons steel per capita

