



# Sustainability

## Questions, Answers and Evidence

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# Fundamental or fad?

Distinguishing market for ideas from  
idea bubbles...

# What will endure?

Supply side shifts

Demand side shifts

Approaches to externalities

# Good or bad for business?

Added cost of doing business

Vs.

*Risk management*

*Cost leadership*

*Differentiation*

*Innovation*

# Evidence?

## Meta-Analysis\*

Environmental Performance → Financial Performance

35 Studies of 32,482 firms

Robust small but positive relationship

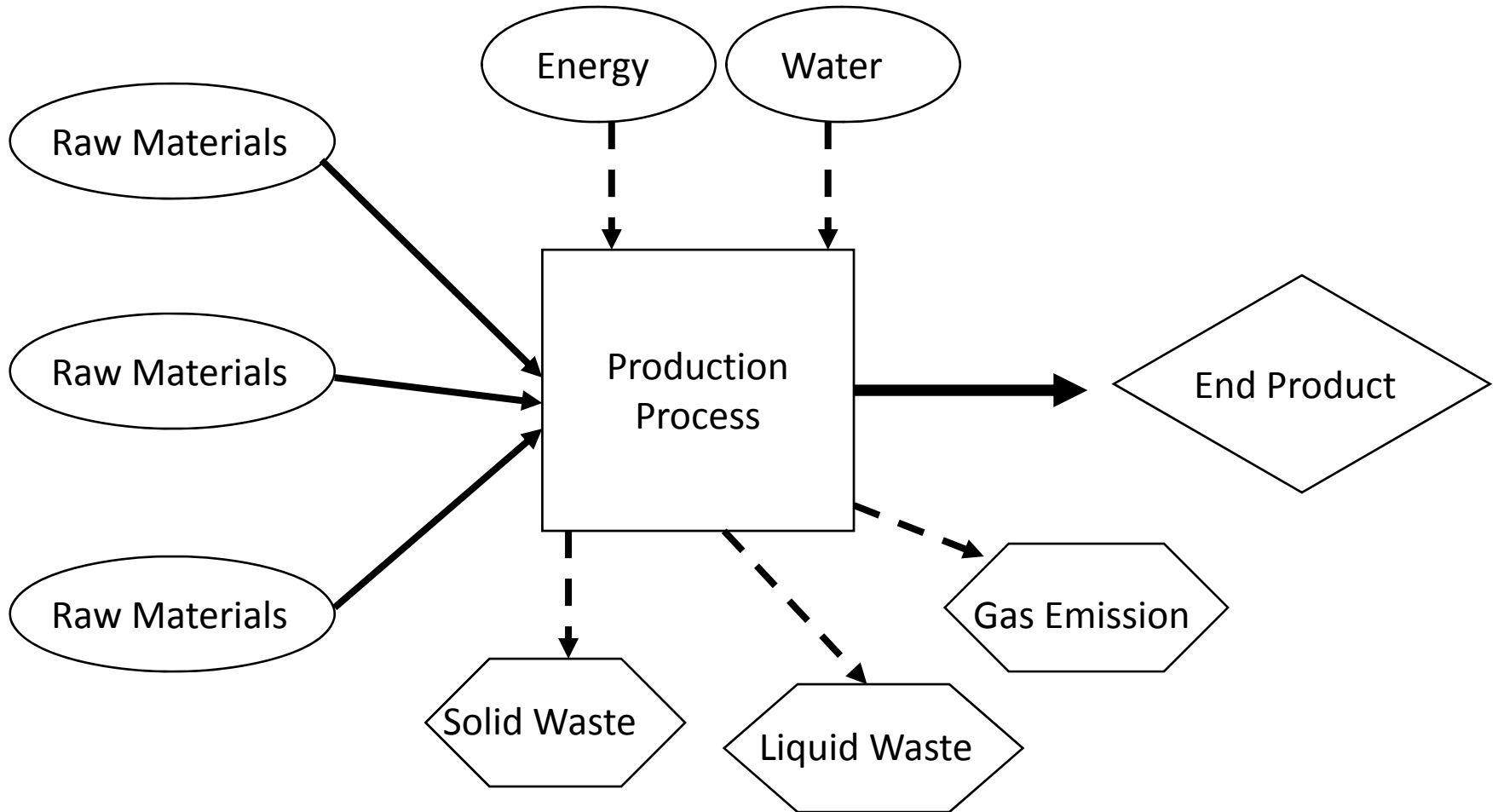
True for internal and external indicators

\*Dixon-Fowler, Ellstrand, Johnson, Romi & Slater (2009)

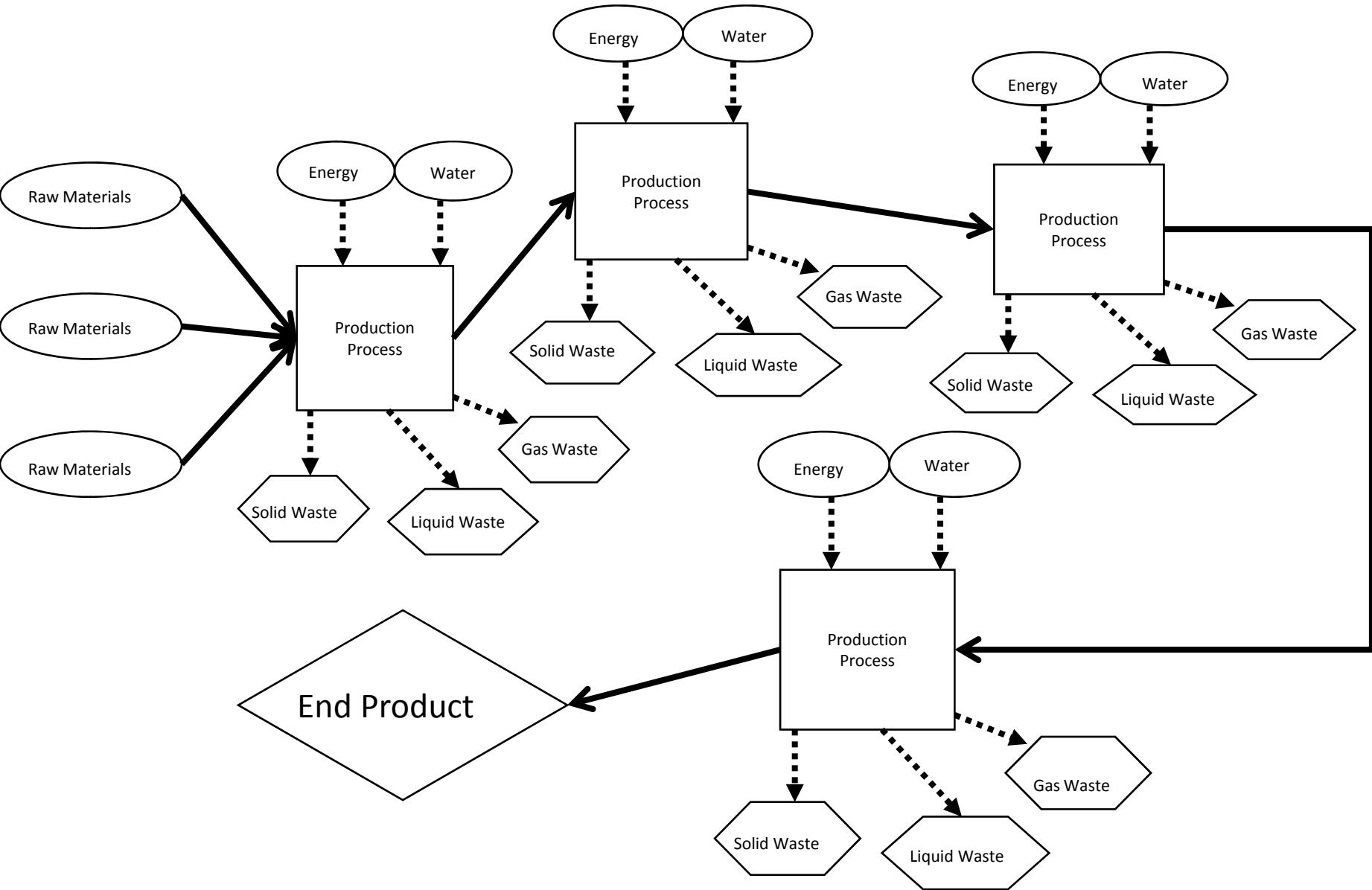
# Paper or Plastic?

How do you decide?

# Life Cycle Analysis

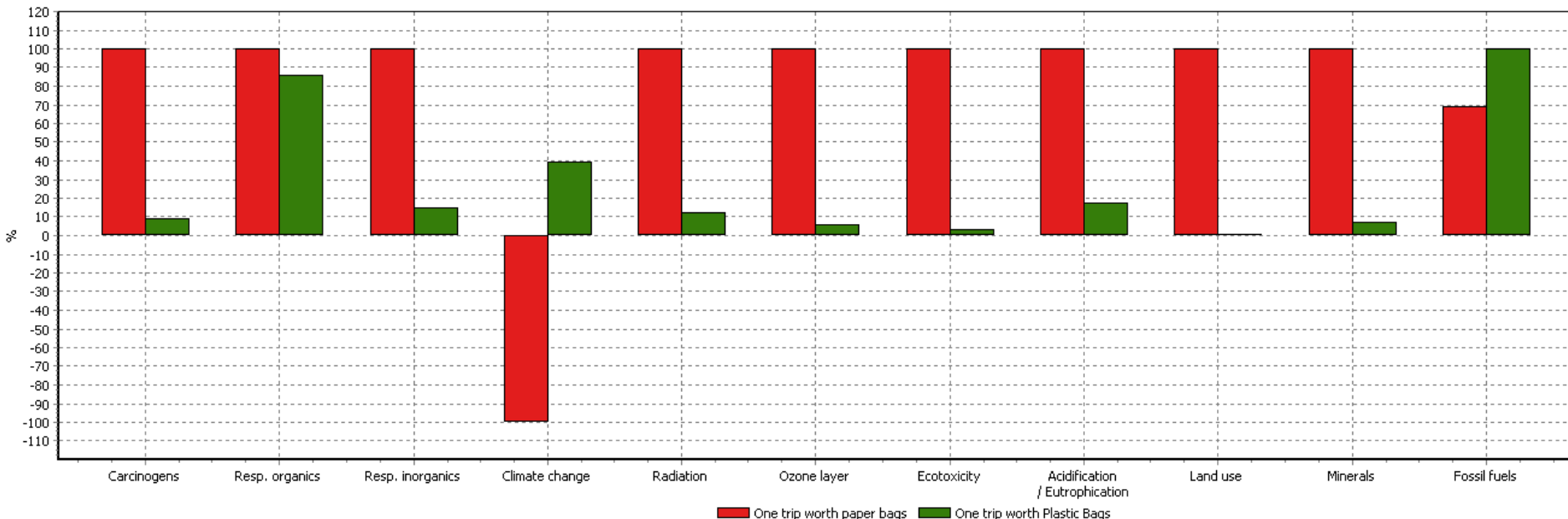


# Aggregate of Processes in Supply Chains



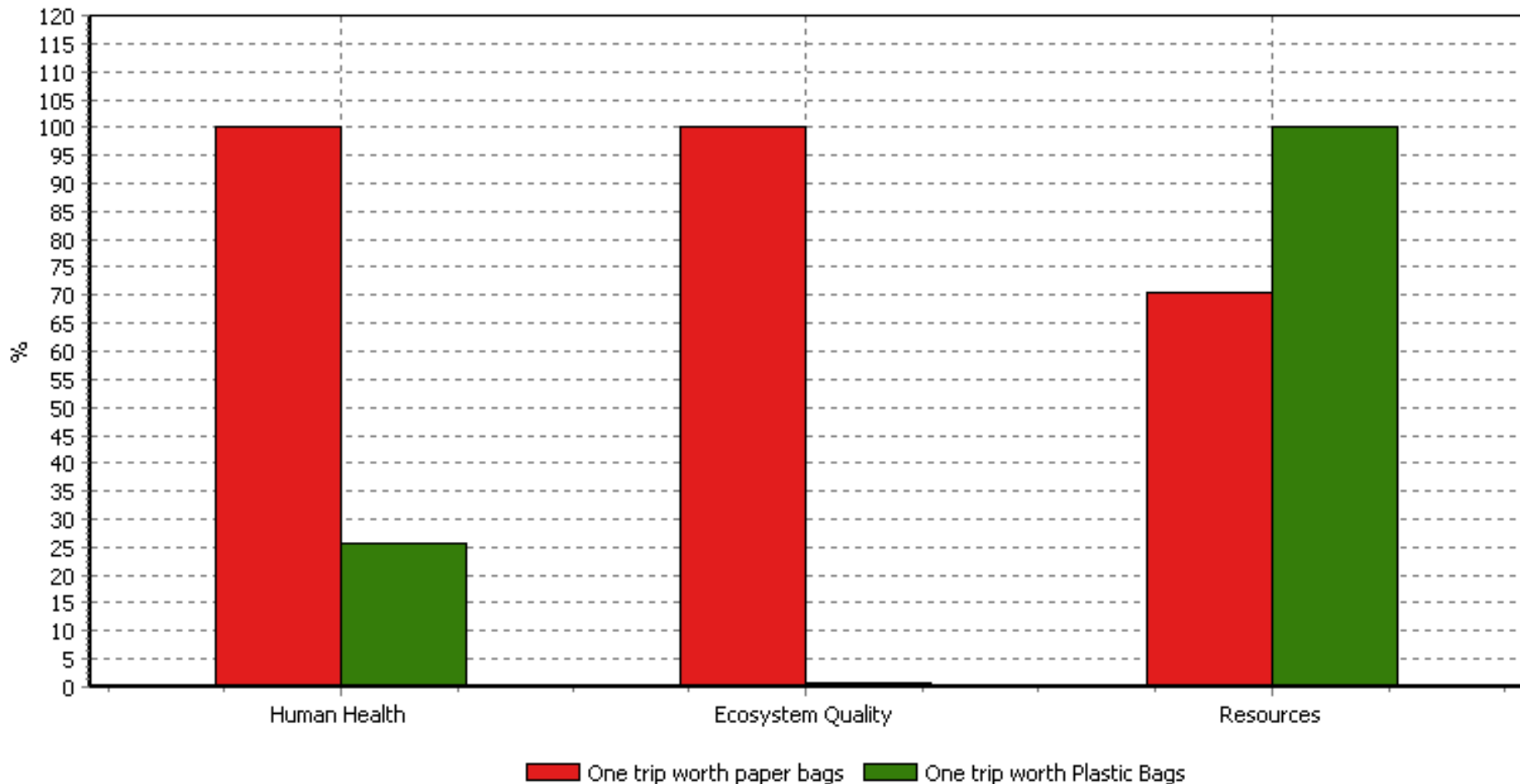
# Paper vs. Plastic Characterization

- Paper bags higher impacts than plastic with two exceptions:
  - Plastic bags higher fossil fuel use
  - Paper bags sequester carbon in paper growing



# Results: Damage Assessment

Three damage categories: Human Health, Ecosystem impacts, Resource Depletion



# LCA for Managers

Strategy and policy

Supply chain insights

Modeling and optimization

Metrics (for buyers, consumers, et al.)

# LCA for Poultry

No large empirical US studies (yet)

## Preliminary Indications

*Feed production and energy are hot spots*

*Not so much for transportation*

*Poultry compares favorably as protein source*