



# Environmental footprint of food: Case studies

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“FOOD PRINT”:

The environmental cost of food

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# Content

- *The Unbearable Heaviness of Food*
- The complexity behind a glass of milk
- Where the milk carbon footprint stems from
- Retailers: the importance of the environmental footprint of food products
- Responsibility and Value Chain
- How the Environmental Footprint Can Help
- Concluding remarks

# The Unbearable Heaviness of Food

... a lot of impacts



some food....

- Climate change
- Ozone depletion
- Ecotoxicity for aquatic fresh water
- Human toxicity (cancer effects)
- Human toxicity (non cancer effects)
- Particulate matter and Respiratory inorganics
- Ionising radiation (human health effects)
- Photochemical Ozone formation
- Acidification
- Eutrophication (terrestrial)
- Eutrophication (aquatic)
- Resource depletion (water)
- Resource depletion (mineral, fossil)
- Land transformation



# The Unbearable Heaviness of Food

... a lot of impacts

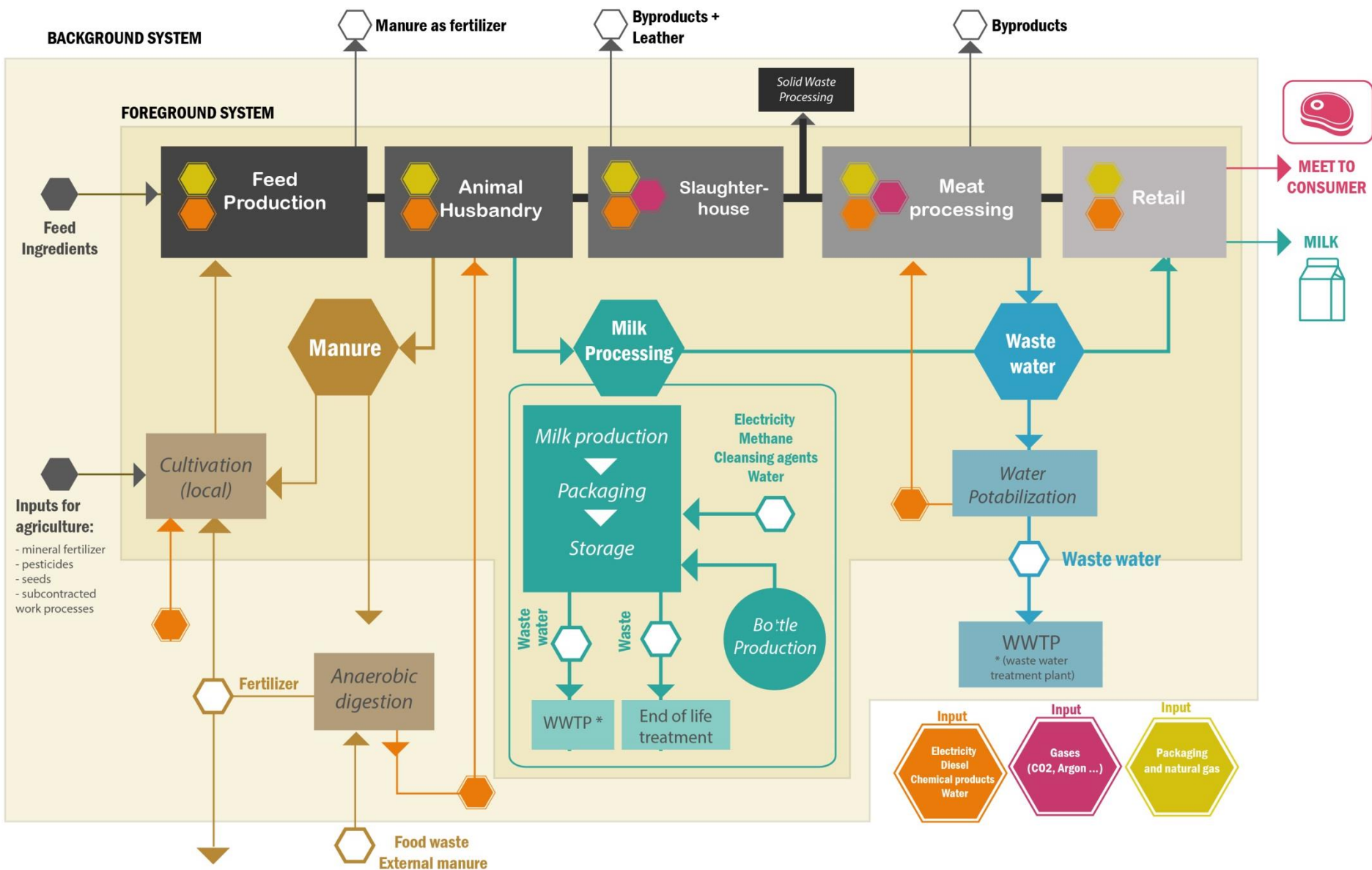


some food....

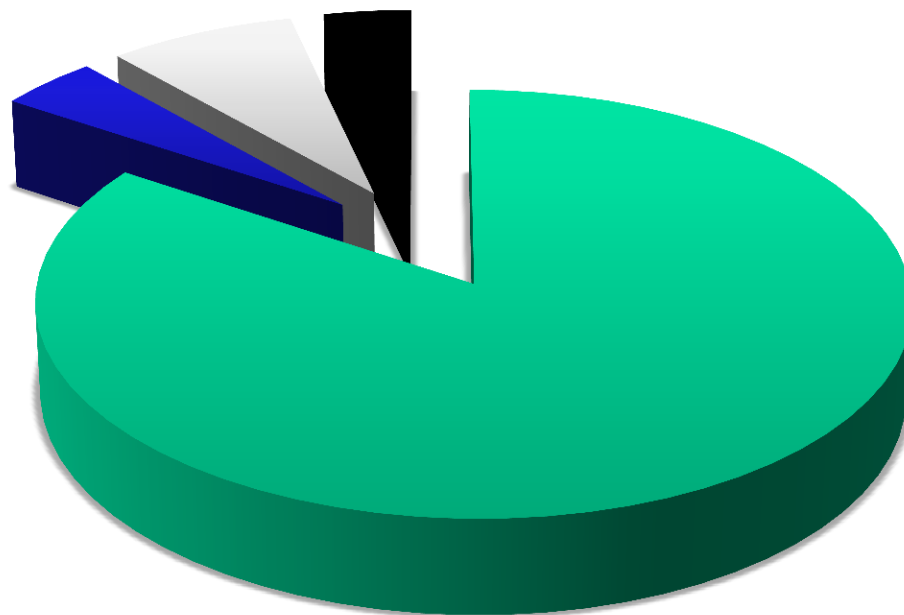
- Don't waste the food!**
- Climate change
  - Ozone depletion
  - Ecotoxicity for aquatic fresh water
  - Human toxicity (cancer effects)
  - Human toxicity (non cancer effects)
  - Particulate matter and Respiratory inorganics
  - Ionising radiation (human health effects)
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# Complexity of food life cycle



# Where the milk carbon footprint stems from

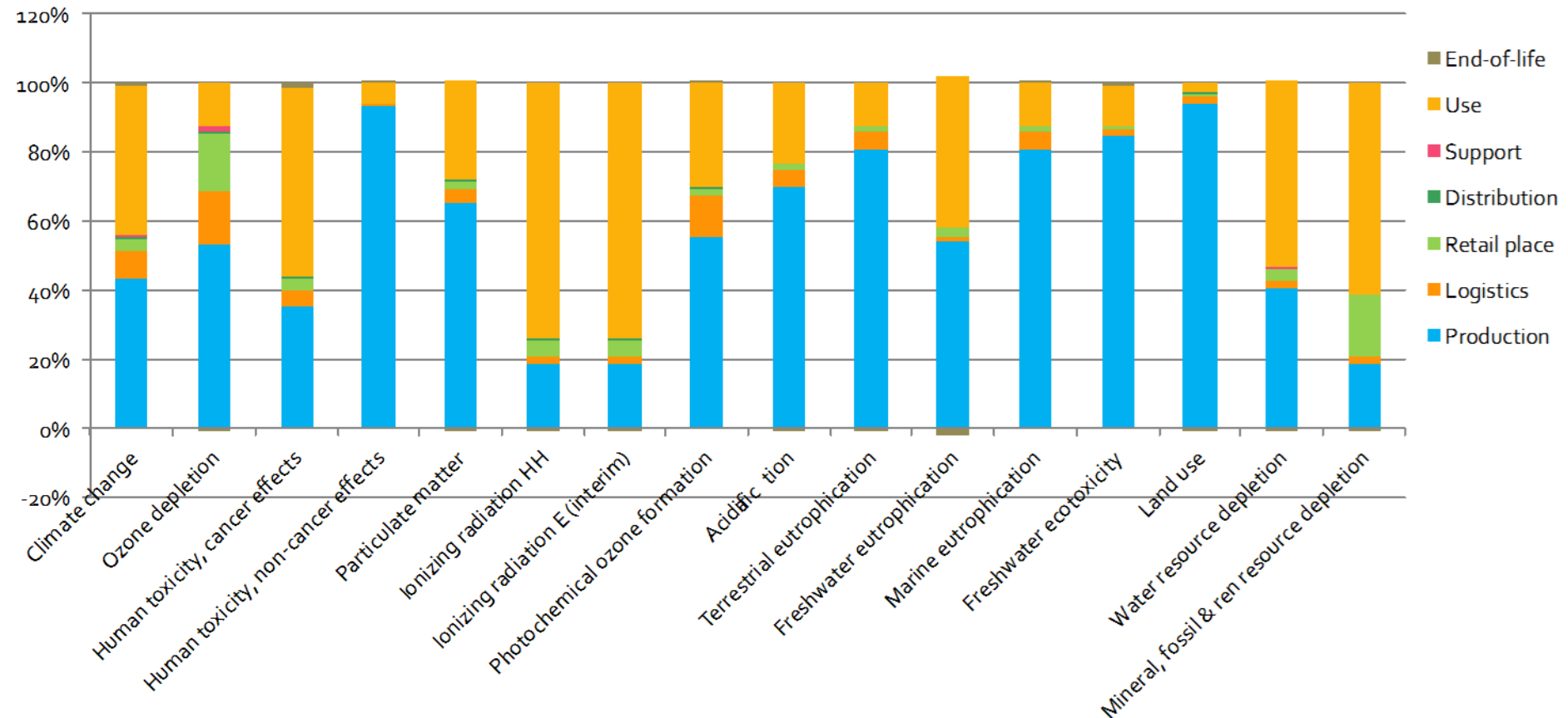


■ Farm level

■ Transport

# Retailers

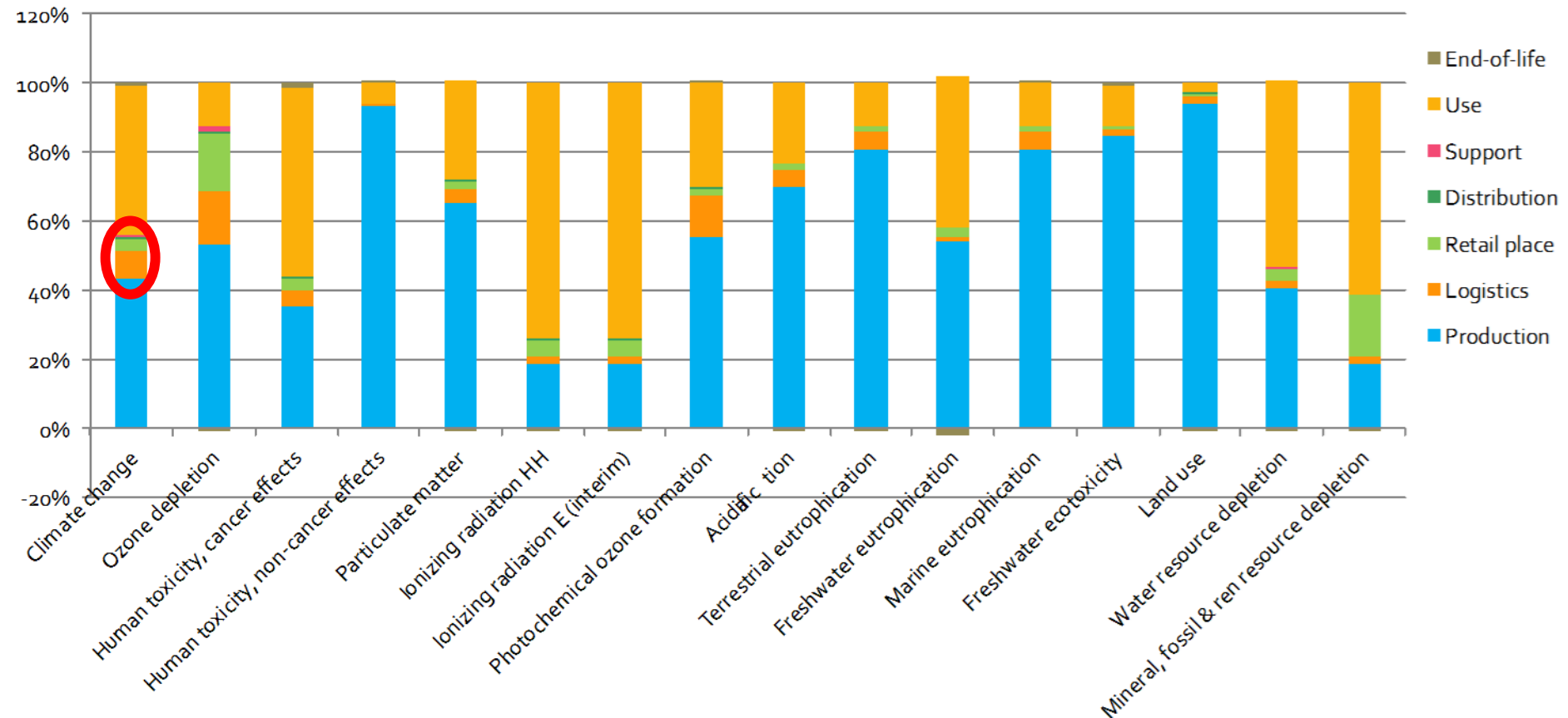
| Characteristic       | Amount                           |
|----------------------|----------------------------------|
| Consumers            | 3'000'000 (1'200'000 households) |
| In-house factories   | 3                                |
| Distribution centers | 10                               |
| Retail places        | 350                              |
| Total employees      | 39'700                           |





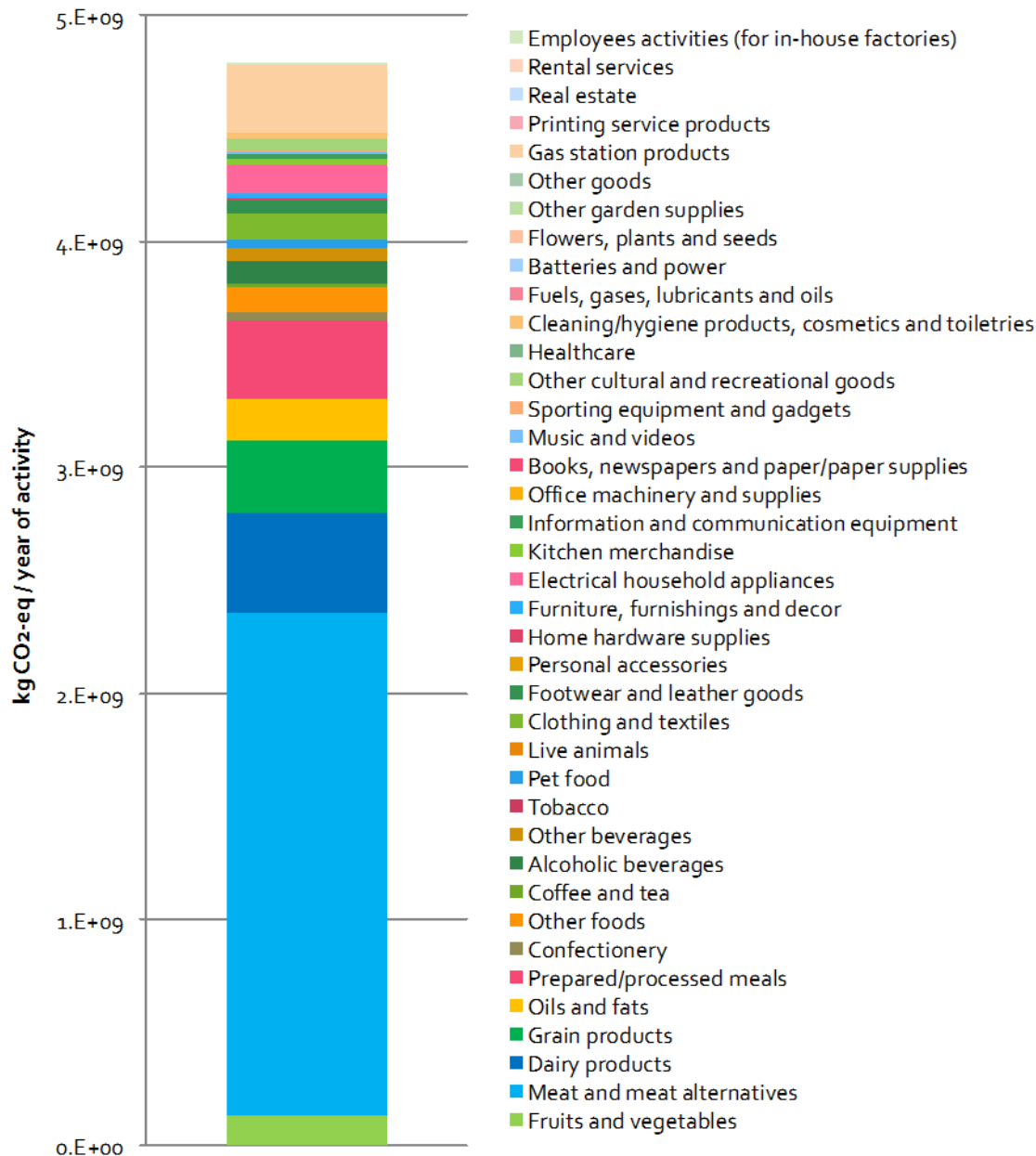
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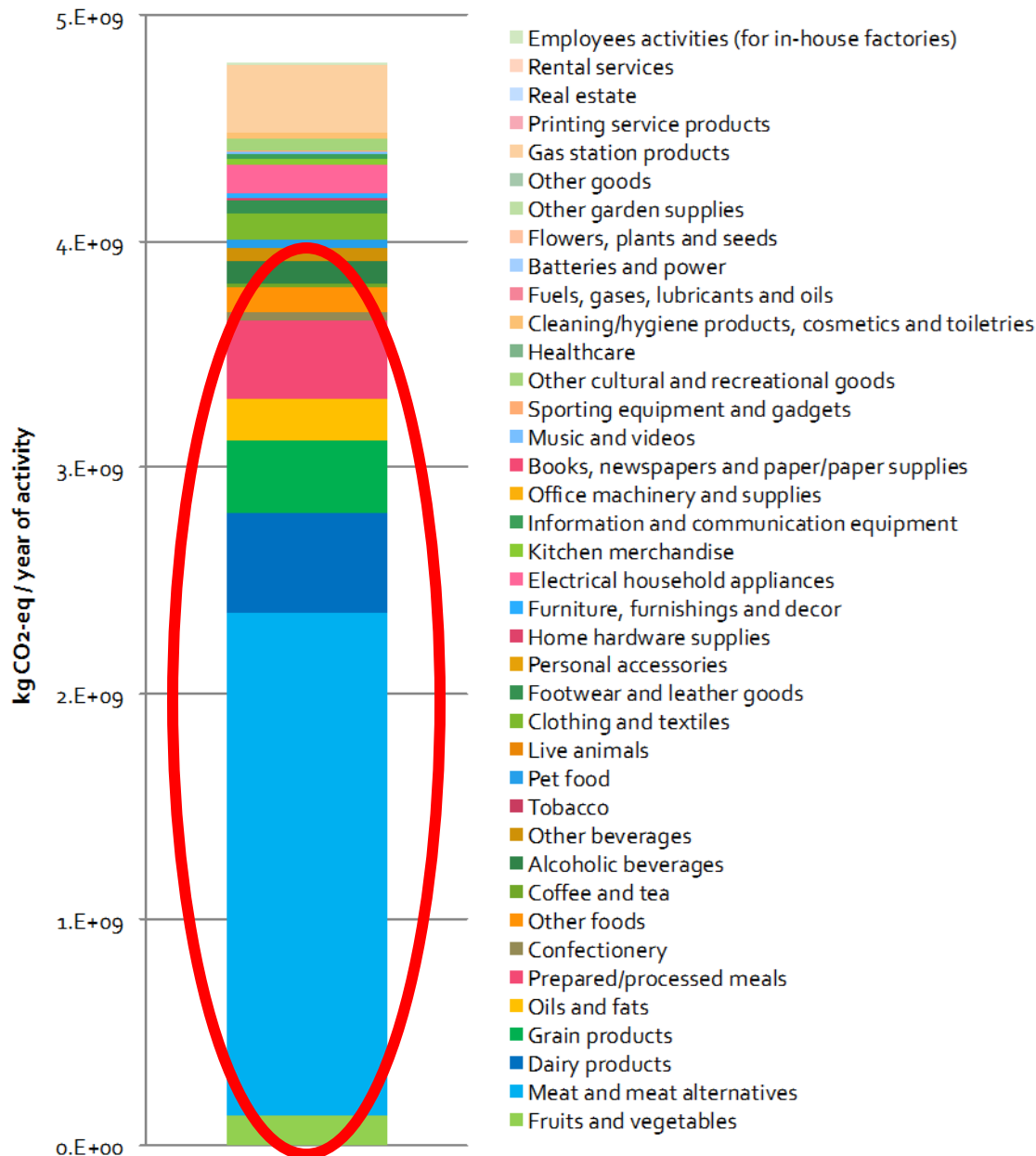




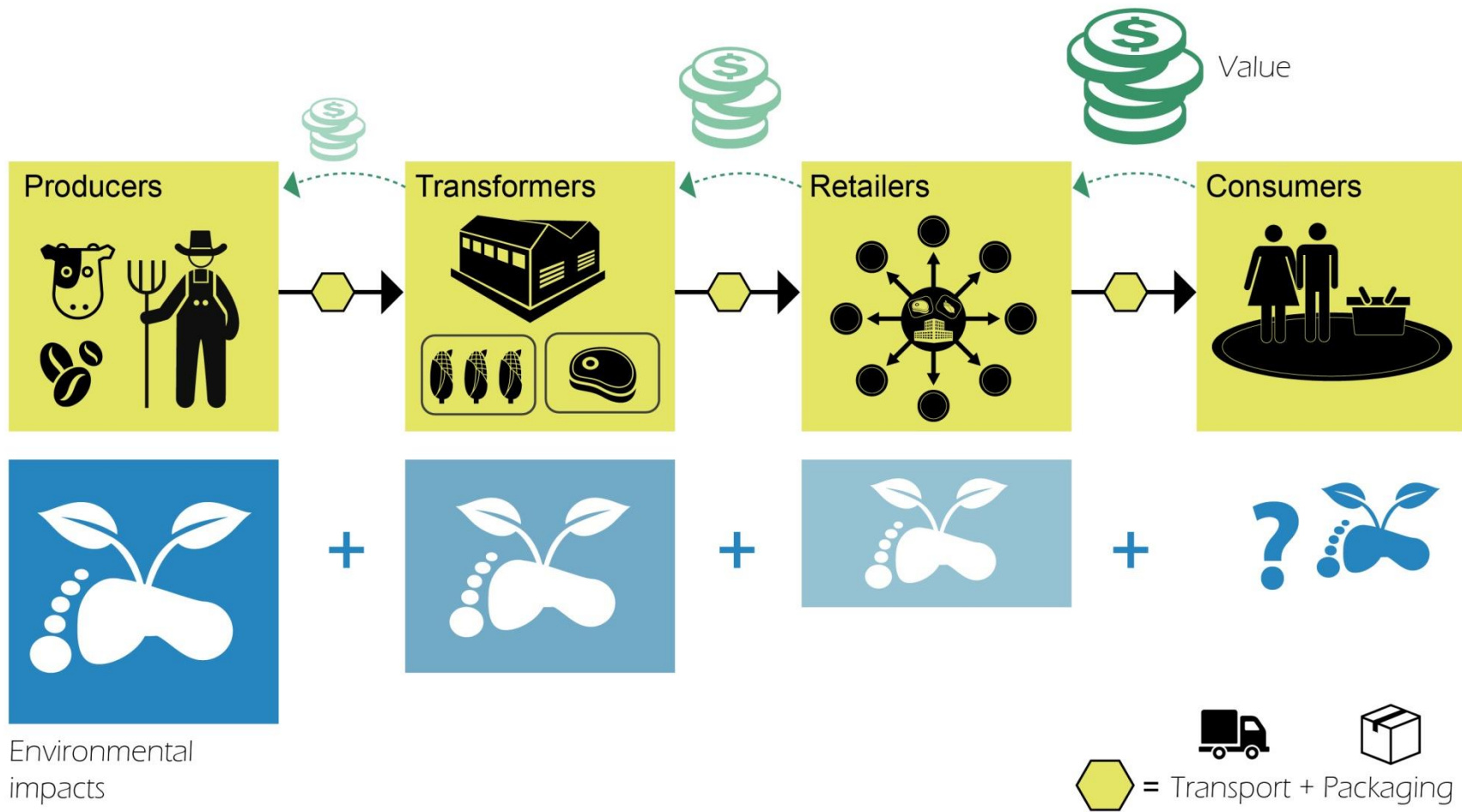
# GWP of food products



# GWP of food products



# Responsibility and Value Chain



# How the Environmental Footprint Can Help



# How the Environmental Footprint Can Help



**You can't Manage  
what you  
don't Measure!**

# How the Environmental Footprint Can Help



- Hotspots identification
  - Identification of environmental critical aspects and potential improvements associated with management and technological interventions
- Policy measures
  - Promote and drive the changes
- Communication to consumers (public and private)
  - Better informed choices
- Specific role for retailer
  - Pull eco-innovation in production and transformation
  - Push consumers towards more sustainable habits and diet

# A fair responsibility allocation

- Actors in the supply chain have different economic power and environmental impacts
- Supply chain management for a fair value distribution and responsibility allocation
- More powerful actors (and policy makers) should support primary producers that can implement effective mitigation strategies



# Concluding remarks

- EF to measure and compare
- Supply chain management for a fair value distribution and responsibility allocation
- Ample margins for improvements in production: traditional practices improved with scientific knowledge
- Policy makers: they should implement supporting measures to help weakest actors (producers, SMEs, consumers)
- Retailers: can act as strong actor between producers and consumers, helping producers and transformers in eco-innovation activities and promoting sustainable life style in consumers
- Consumers: make better informed choices; change unsustainable life style and diet; reduce food waste; correctly manage the waste

# Thanks for your attention!



## Questions?



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