

# Applying principles of circular economy to sustainable tourism – preliminary findings

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# Aim and scope

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- Aim:
  - Sub-chapter 4.2. – How to apply principles of **circular economy** (CE) to sustainable tourism (ST)
  - Develop a set of proposed draft **indicators** for circular economy (CE)
- Scope:
  - Tourism sector (three subsectors: *hospitality, transport, services*)

***NOTE: Tourism is NOT a sector → amalgamate of parts of many sectors (agriculture, metal industry, construction, transport, services. National statistics are best per official sector***

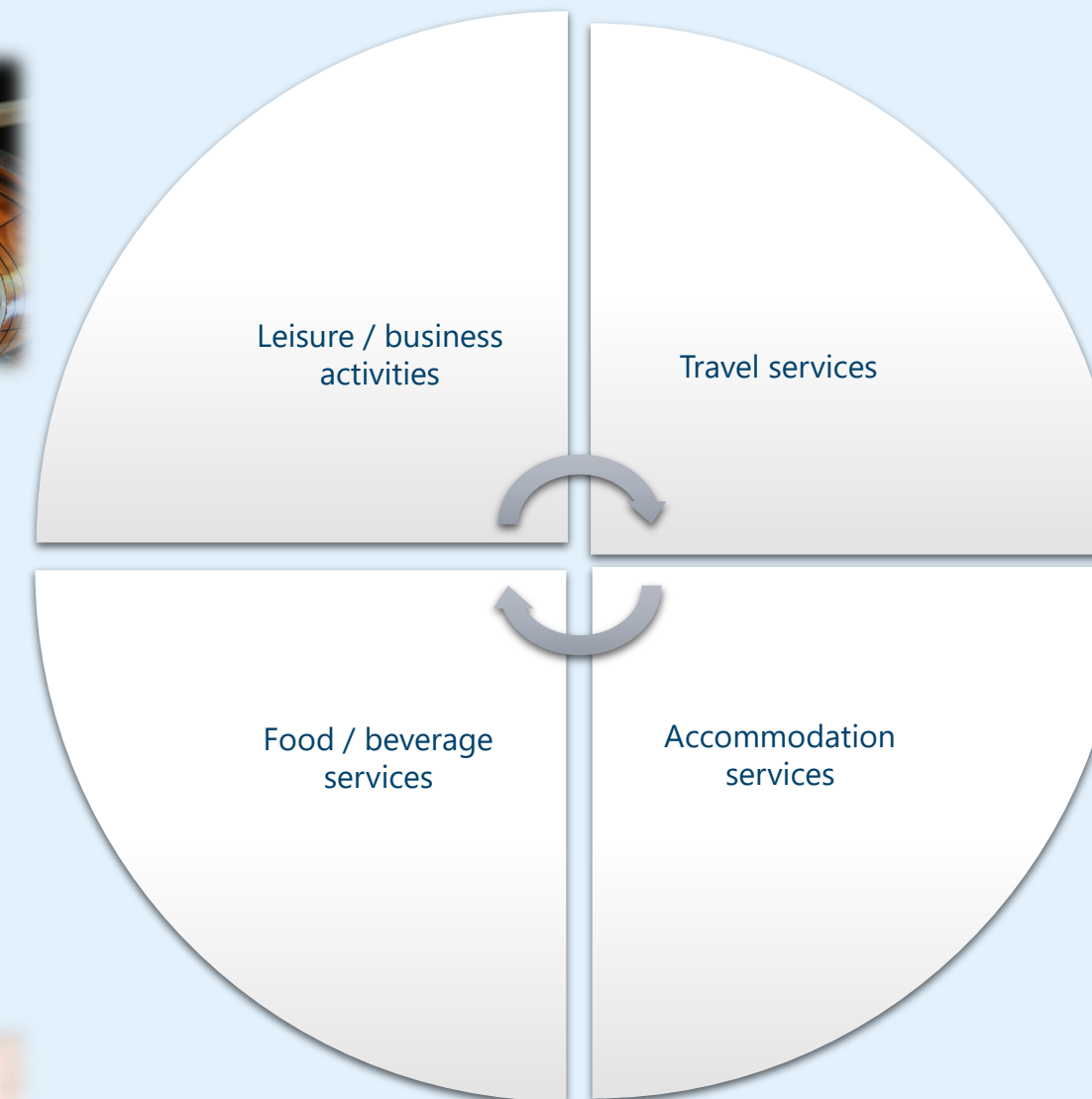
# Tourism Supply Chain

*Tourism Supply Chain: thousands of interconnected small scale operators*

*Tourism Supply Chain Management:*

- complex, over many layers
- with public and private stakeholders

*Tourism Product: an experience usually composed of goods supplied by businesses in 4 categories/ sub-sectors:*



# Sustainability issues in tourism

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- Tourism practices
  - Are resource consuming
  - Follow a linear economy paradigm: growth as driver for profit  
→ impacts on climate, resource depletion and environment
- 4 Key issues:
  - Energy use and emissions (5-10% global share)
  - Water usage (resorts)
  - Waste production
  - Other resource depletion (unsustainable consumption)
- → Tourism resource use of energy and emissions, water, land and food will double within 25 to 45 years

# Literature Circular Economy (CE) in tourism

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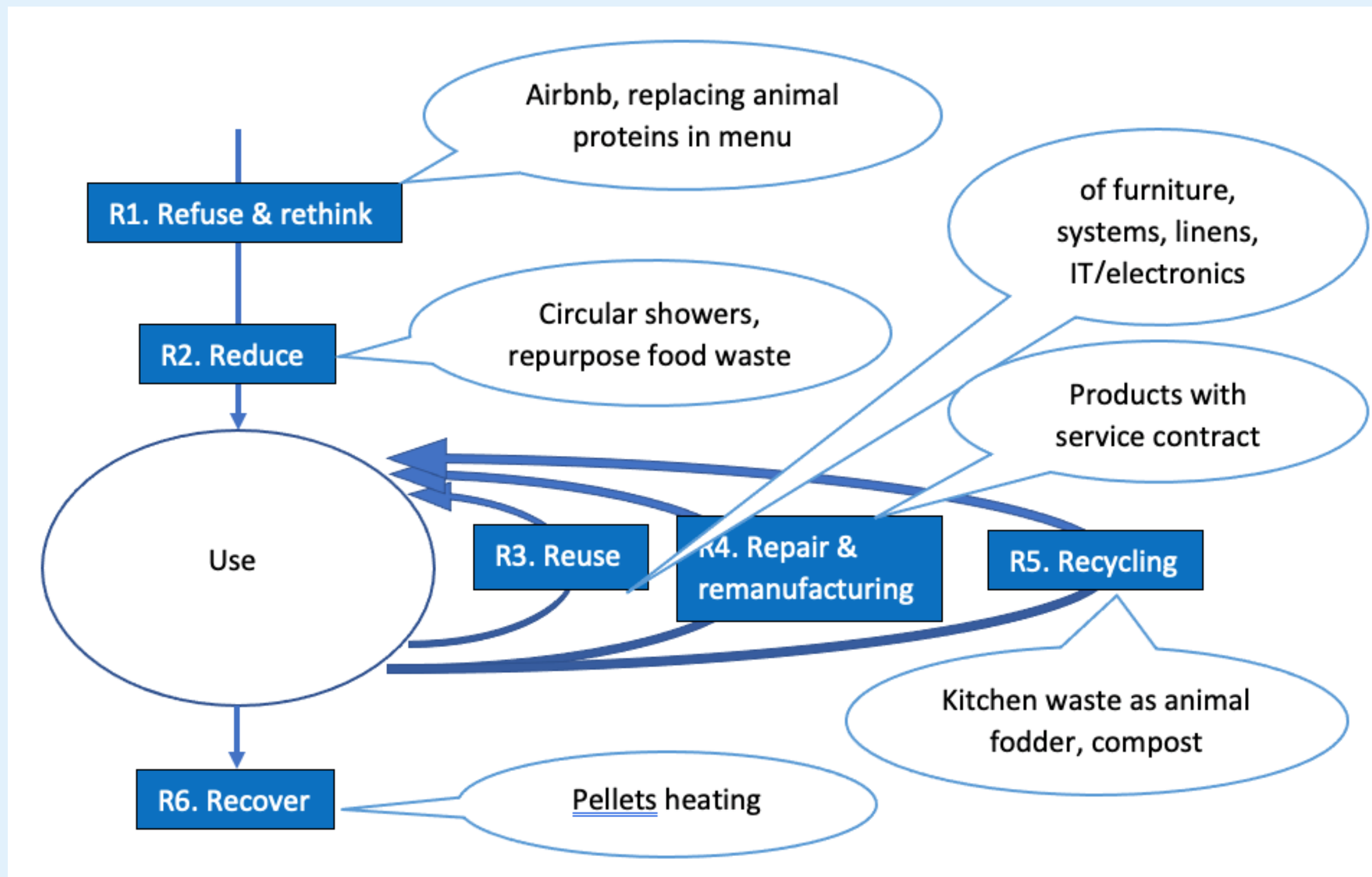
- CE thinking has just begun in tourism
  - Few publications, mostly on possible applications of CE principles – varying interpretations of circularity
  - Tourism products consist of different services (which tourists combine), no clear “product owner”
- applying CE to a full tourism product (?) challenging!

# Relevance of CE and tourism subsectors

	Energy Use	Water use	Other Resource use	Waste	Climate change
<b>Accommodation:</b>					
• Buildings	++	++	0/+	+	++
• Operations	+++	+++	+++	+++	+++
<b>Restaurants/bars:</b>					
• Buildings	++	++	+	++	+
• Operations	+	+	++	+++	+++
<b>Transport:</b> local	+	0/+	+	0/+	++
<b>Transport:</b> Origin - Destination	+++	0/+	+	0/+	+++
<b>Activities:</b> Events/ Attractions/ Festivals	+	++	+++	+++	+
Services (tour operators, travel agencies, financial services, booking services)	0/+	0/+	0/+	0/+	0/+

0 = irrelevant  
+++ = most relevant

# Circularity (R) ladder example accommodations



R-ladder adapted from PBL, 2019

# Developing indicators for CE in tourism

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- *"Embracing circularity implies robust measurement and monitoring of the sustainable development impacts of economic activities [...]". (UNWTO-UNEP, 2019, p. 66)*
- **No specific indicators** for CE in tourism in existence
- Many indicator frameworks for Sustainable Tourism, but: no globally accepted, consistent approach (OECD, 2020)

# Developing indicators for CE in tourism

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Important criteria for CE indicator development:

- Relevant for core issues
- Policy-relevant (Paris Agreement, SDGs, ...)
- Availability of (Statistical) data
- Meaningful and practicable
- Not too many indicators (4-6)

# Potential ST and CE indicators

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- ST→ mix of quantitative and managerial indicators:
  - Energy management system installed (management)
  - Share of renewable energy use (quantitative)
- Current generic quantitative indicators at country-level:
  - Recycling rate of municipal waste (Eurostat)
- Tourism (sub)sector- policy indicators:
  - Likely nothing quantitative at national scale;
  - Potentially at micro-level (tourism SMEs)

# Contact

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