



## Critical Design Parameters for the Ecodesign of Appearance Wood Products

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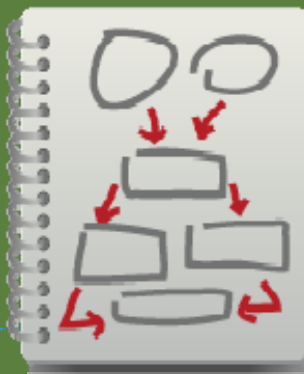
# Need

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- Strategic positioning of the wooden appearance wood products in the green wave
  - Establish a comprehensive basis of the certifications impacting on appearance wood products
  - Realize a LCA of a given appearance wood product and apply reverse engineering practices to reduce environmental footprint of the product
  - Transpose previous observations to the main appearance wood products

# Approach

- A review of the literature, the standard and certification and a critical analysis based on LCA thinking (Completed)
- Realize a LCA of commercial door and retroengineering of the components and the process (On going)
  - Iteration with the LCA model including fictive iterations
- Transposition of the main conclusion on the other appearance products (component and processes)



# Competition

- All the appearance products used in the building
- The appearance products made with other materials (vinyl, plastic, ceramic, etc)
- All the appearance product with a better green documentation

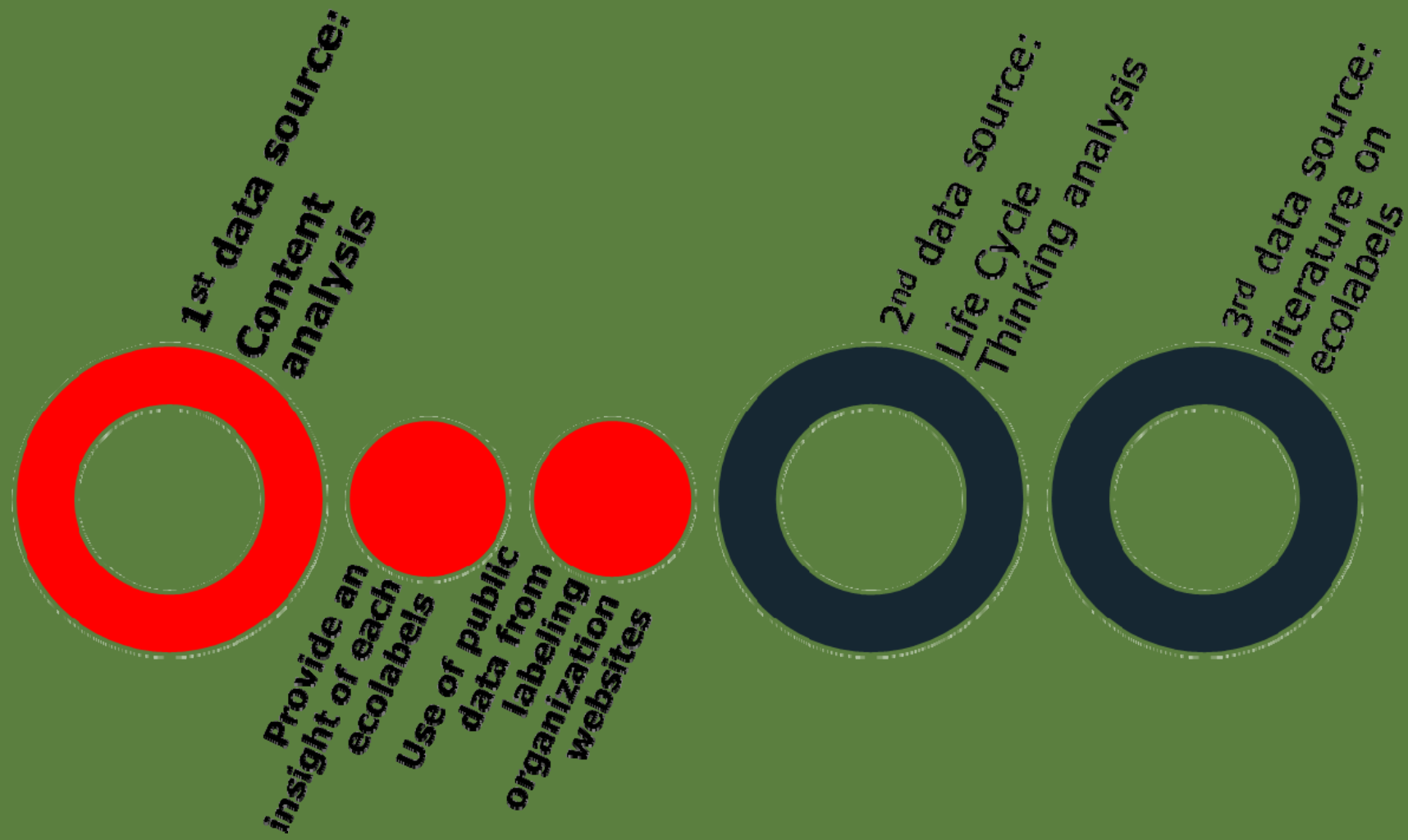


# Competition

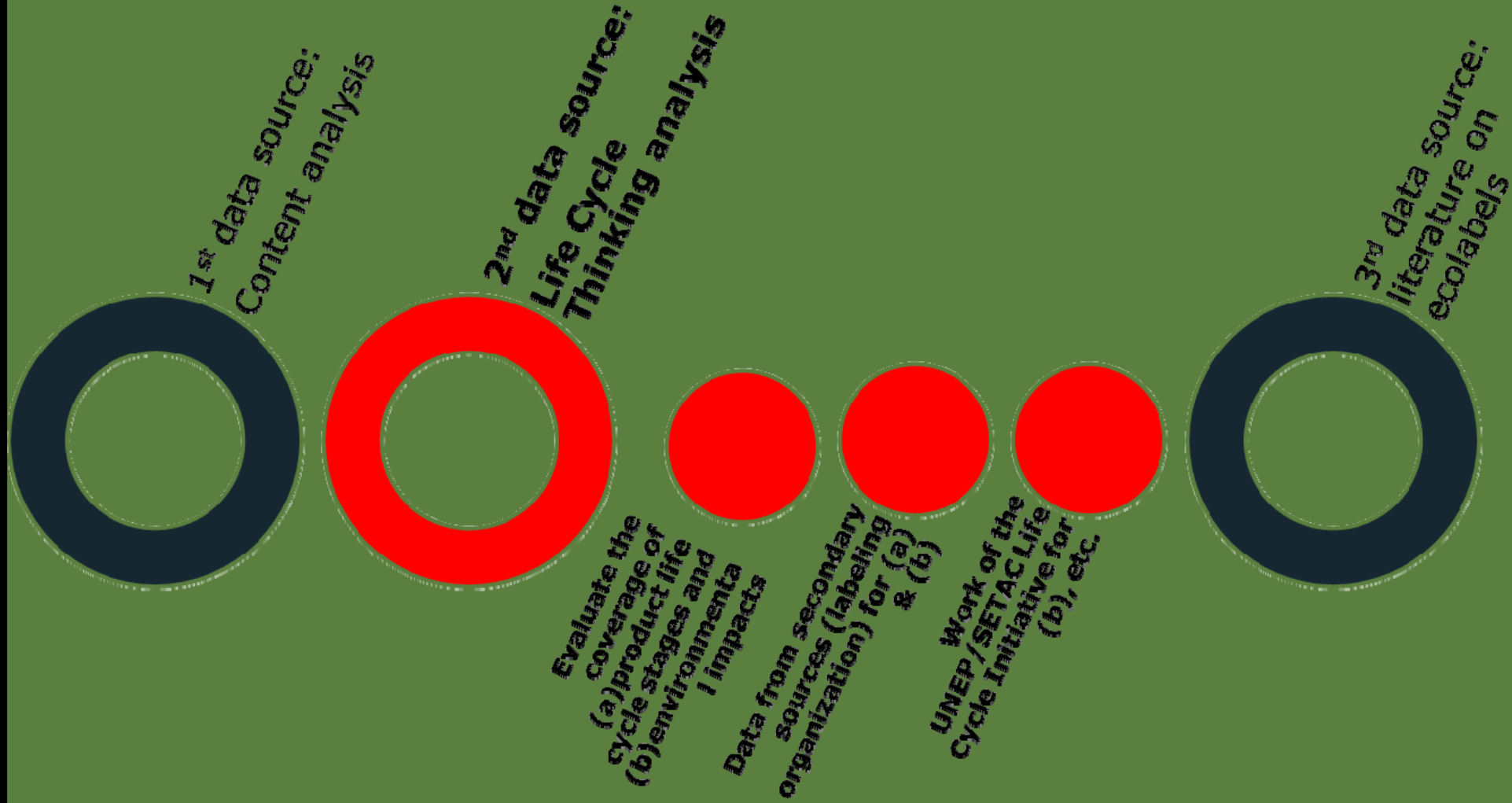
- Apply ecoconception principles where it counts in our product development
- Strategic positioning as green product in the building market (architects, designers, builders)



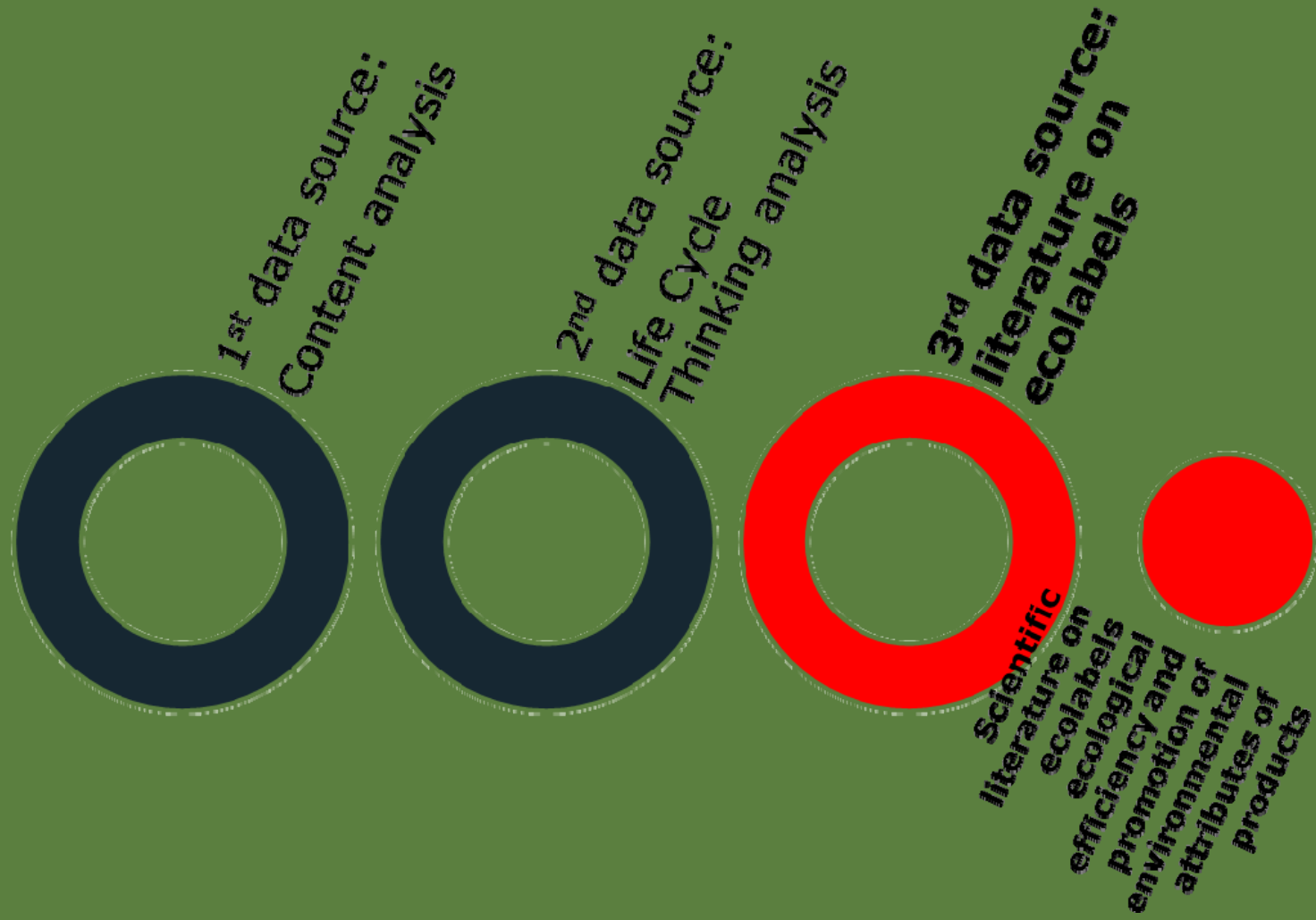
# Results (summary)



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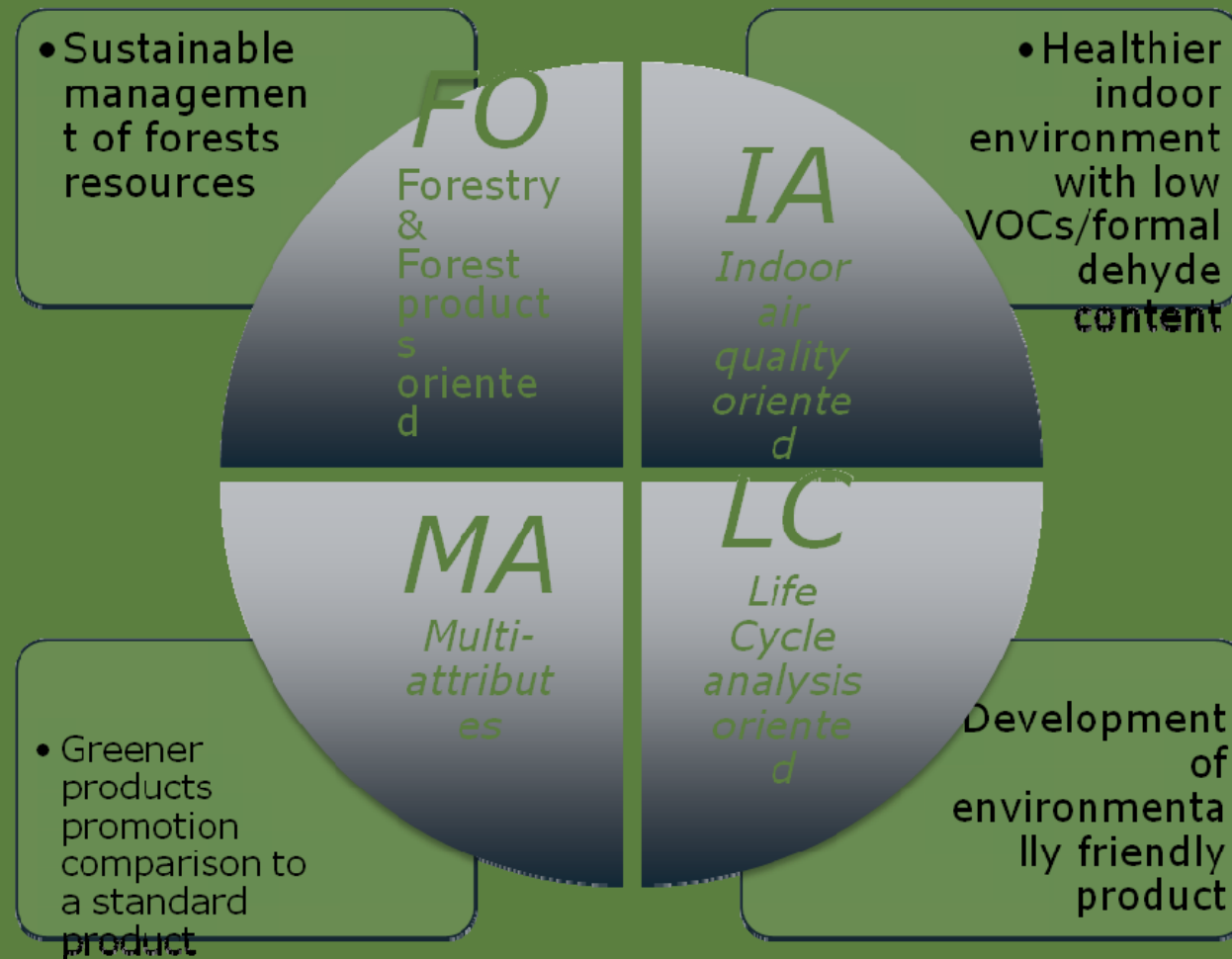
# Results (summary)





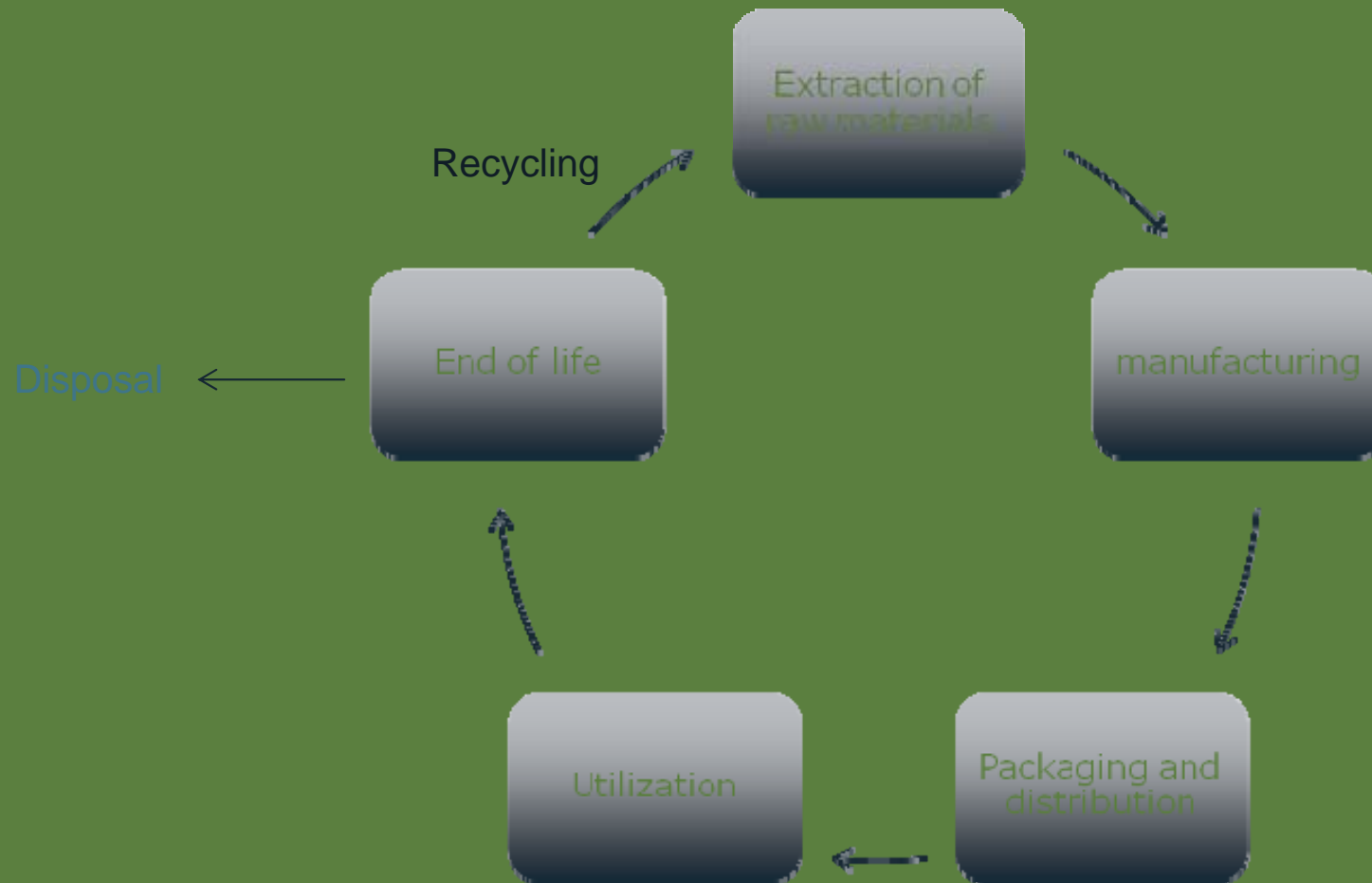
# Results (summary)

- Possibility of ecolabels classification in **4 categories**



# Results (summary)

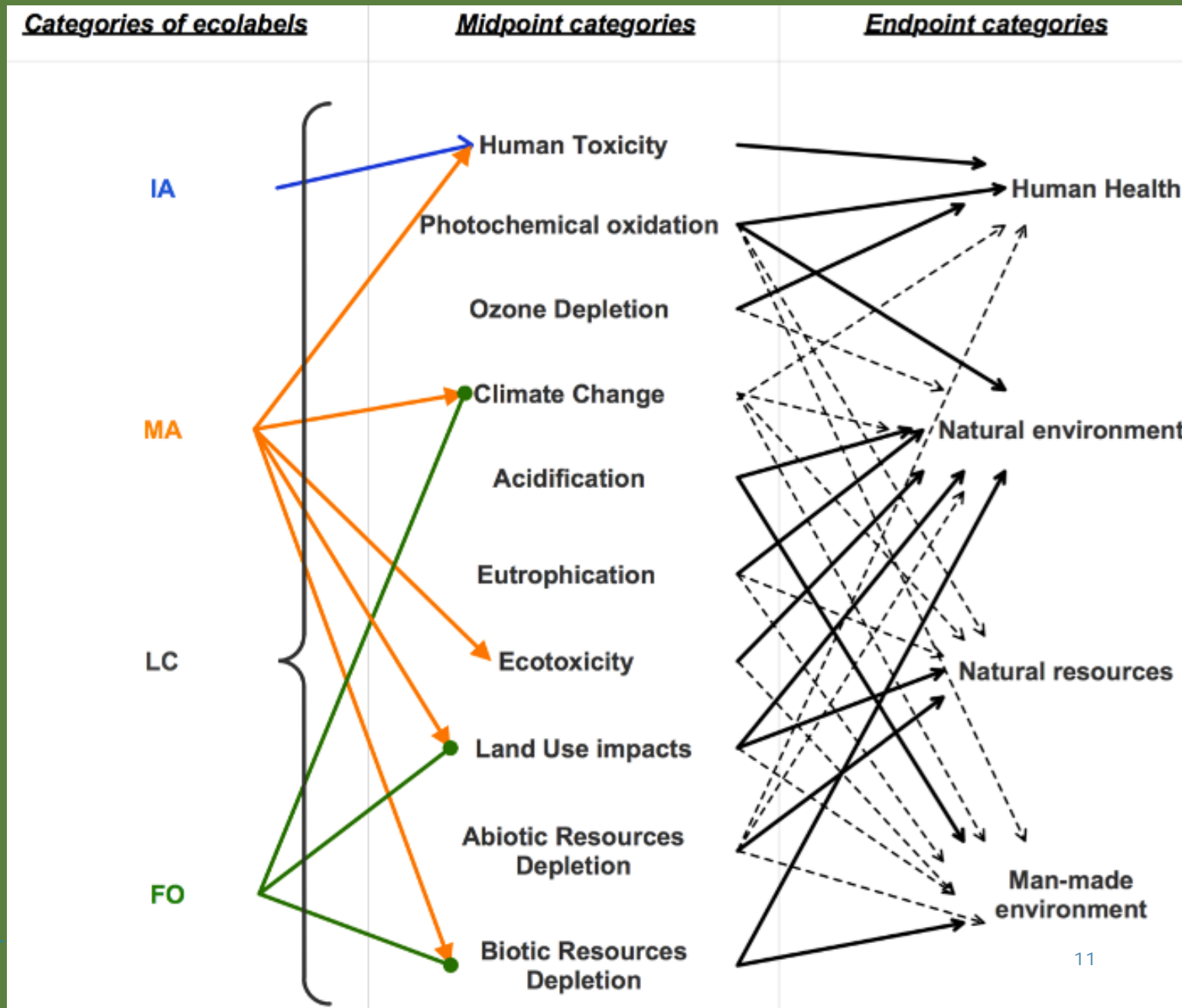
- The life cycle of a product is composed of 5 stages



# Results (summary)



- Ecolabels vs. Environmental impacts



# Conclusions on label, standard and certification inventory

- Content analysis
  - Ecolabels for appearance wood products can be classified in 4 categories
  - MA and LC ecolabels assess the product over its entire life cycle but differently (MA – fragmented, LC – holistic)
  - LC seems to have a more appropriate approach
- Life Cycle Thinking approach
  - IA and FO ecolabels are limited in coverage of life cycle stages and environmental impacts
  - MA ecolabels have a broader coverage of environmental impacts and generally full coverage of life cycle stages
  - LC ecolabels have the best coverage
- Literature on ecolabels
  - LCA oriented ecolabels are assumed to be better than the others because of their broader spectrum of environmental impact coverage and their holistic approach of the life cycle.
  - Many authors agree that the use of the LCA tool is synonym of effective and appropriate environmental improvement of products

# The future



- LCA of commercial doors
  - LCI almost completed
    - Process consumption defined
    - Components inventory realised
- Iteration on the LCA model
  - Define sensitive component
  - Define sensitive process steps
  - Try various material as component
- Transpose on other products
  - Use main conclusions from the doors