

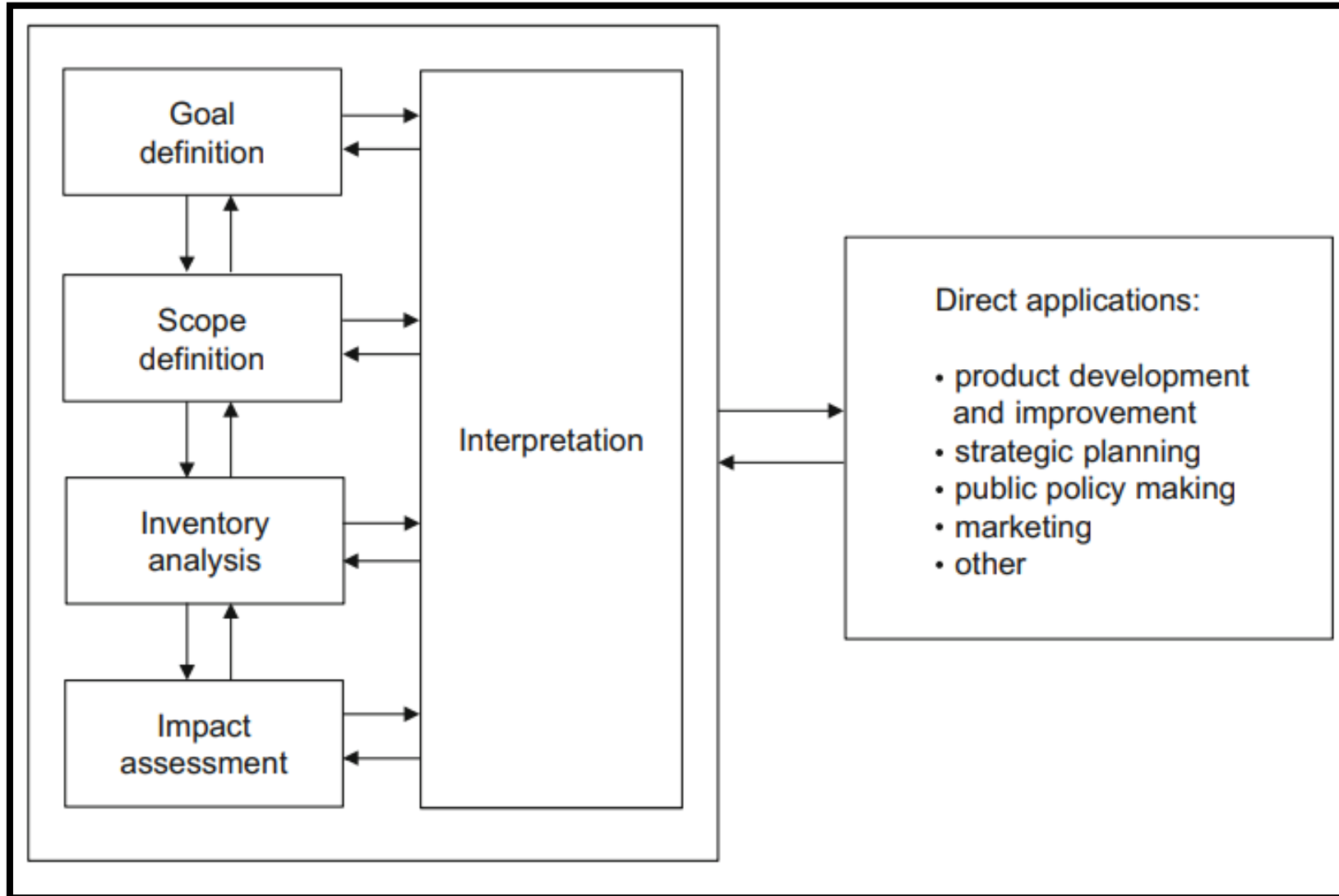


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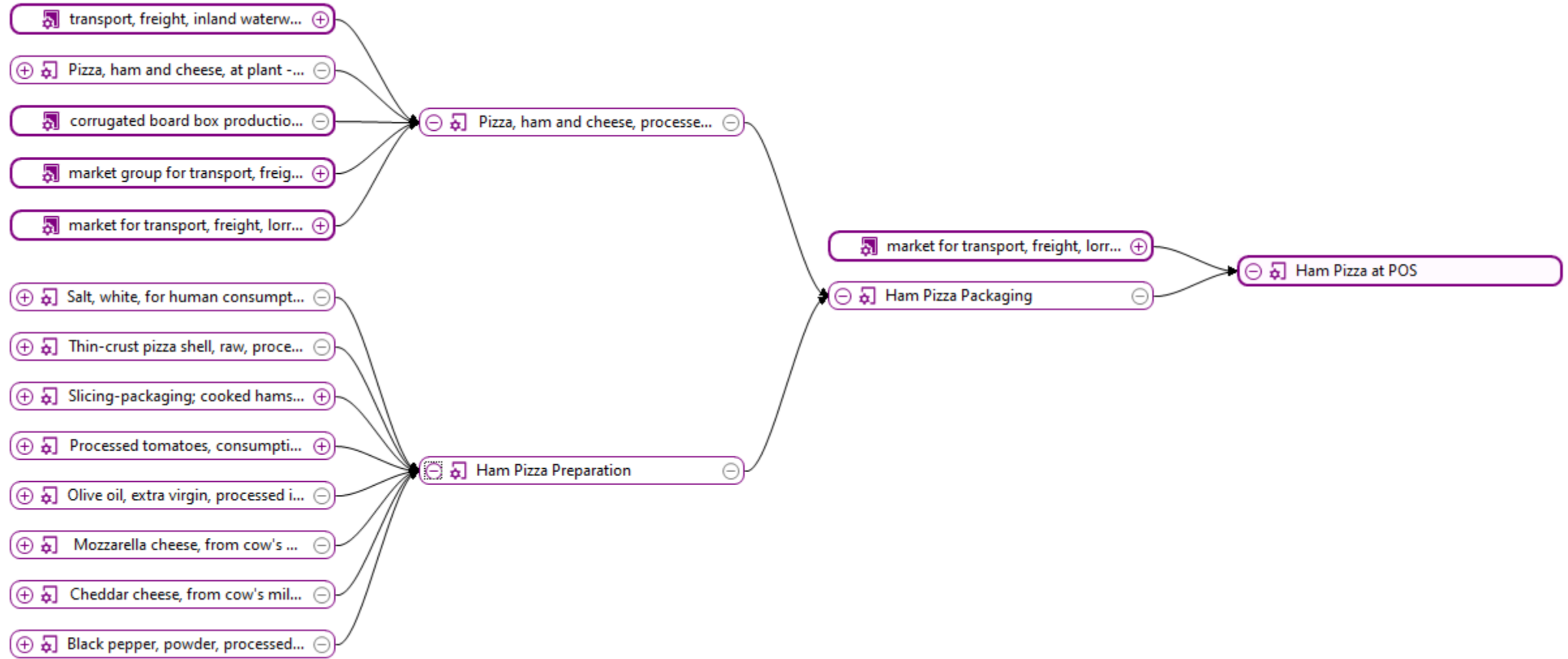
ENGR 544, Life Cycle Assessment and Management
School of Engineering, Faculty of Applied Science
The University of British Columbia (Okanagan)

Comparing Ham Pizza and Spinach Pizza

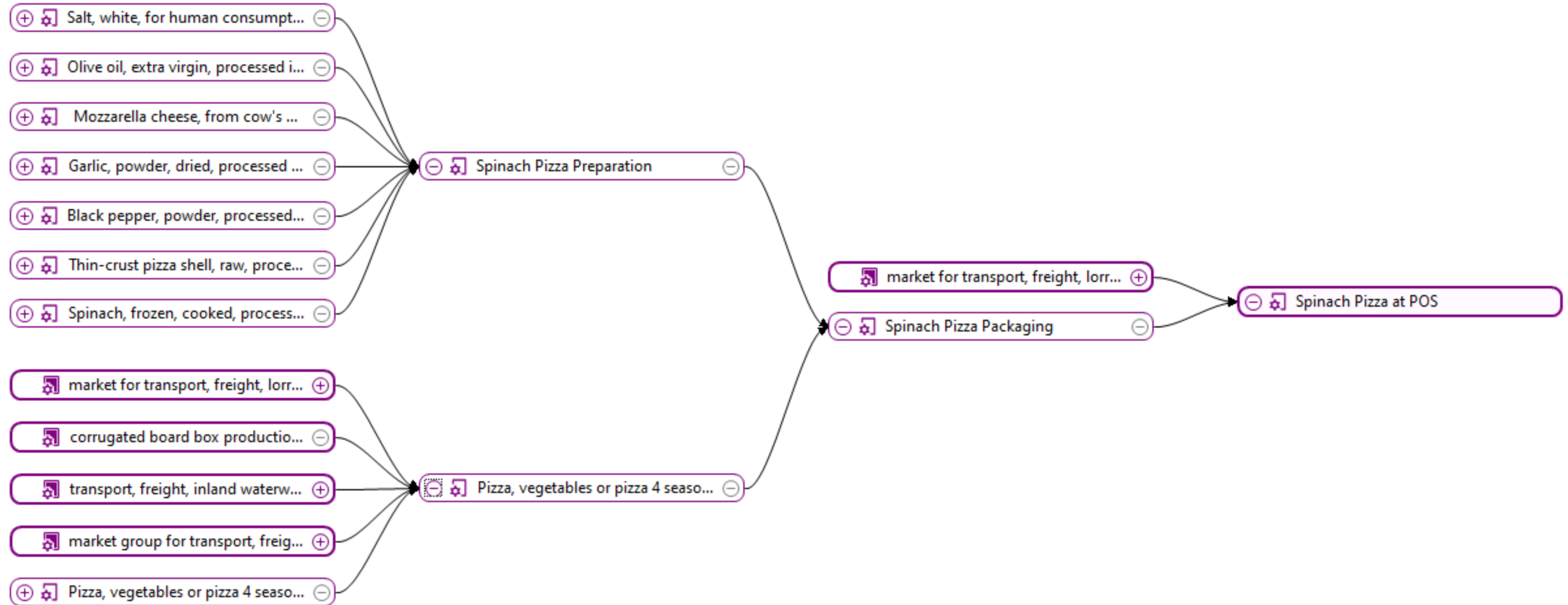


- Goal definition?
- Scope definition?
- Inventory analysis?
- Impact assessment?

Ham Pizza Production Chain



Spinach Pizza Production Chain



Create Flows

- ☐ Add new child category and name it: **Pizza**
- ☐ Create the following 6 Flows:

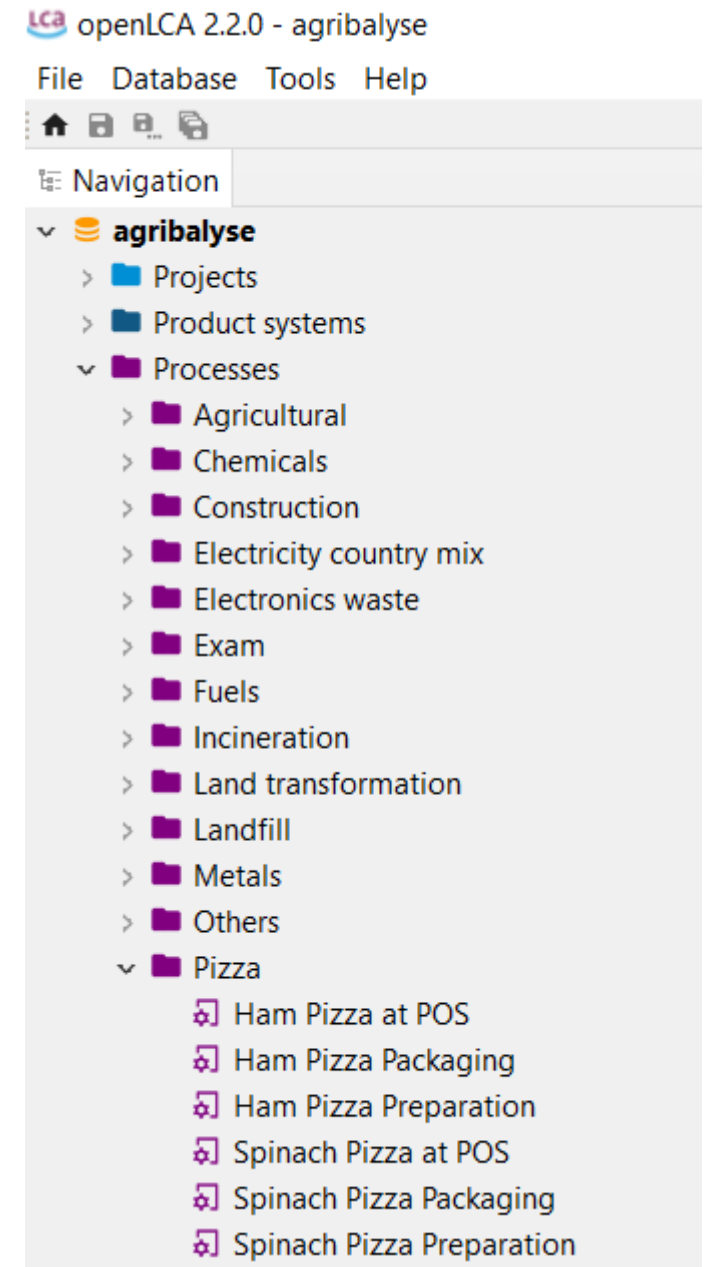


1. Prepared Ham Pizza; Flow type: Product; Flow property: Mass
2. Packaged Ham Pizza; Flow type: Product; Flow property: Number of items
3. Ham Pizza Transportation; Flow type: Product; Flow property: Number of items
4. Prepared Spinach Pizza; Flow type: Product; Flow property: Mass
5. Packaged Spinach Pizza; Flow type: Product; Flow property: Number of items
6. Spinach Pizza Transportation; Flow type: Product; Flow property: Number of items

Ham Pizza

Create Processes (Ham Pizza Preparation)

- ❑ Add new child category under **Processes**, and name it: **Pizza**
- ❑ Create relevant processes for all flows





Create Processes (Ham Pizza Preparation)

Inputs/Outputs - Ham Pizza Preparation

▼ Inputs

[illegible]

▼ Outputs

Flow	Category	Amount	Unit	Costs/Revenues	Uncertainty	
 Prepared Ham Pizza	Pizza	0.41400	 kg		none	
General information	Inputs/Outputs	Documentation	Parameters	Allocation	Social aspects	Direct impacts



Create Processes (Ham Pizza Packaging)

Inputs/Outputs - Ham Pizza Packaging

▼ Inputs

[illegible]

▼ Outputs

Flow	Category	Amount	Unit	Costs/Revenues	Uncertainty
 Packaged Ham Pizza	Pizza	1.00000	 Item(s)		none

Create Processes (Ham Pizza at POS)

Inputs/Outputs - Ham Pizza at POS

▼ Inputs

[illegible]

▼ Outputs

Flow	Category	Amount	Unit	Costs/Revenues
 Ham Pizza Transportation	Pizza	1.00000	 Item(s)	

Create a Product System (Ham Pizza at POS)

- ❑ Use the last process (Ham Pizza at POS) as the reference process.



General information - Ham Pizza at POS

▼ General information

Name


Category  Pizza


Description

Version 00.00.005   Last change 2021-10-10 18:43:13 UUID 9ac06670-429e-4e85-8548-61c430e90241

Tags

Infrastructure process ☐

 Create product system

 Direct calculation

 Export to Excel

General information

Inputs/Outputs

Documentation

Parameters

Allocation

Social aspects

Direct impacts

Create a Product System (Ham Pizza at POS)

General information - Ham Pizza at POS

General information

Name Ham Pizza at POS

Category Pizza

Description First created: 2021-10-10T18:44:32
Linking approach during creation

Version 00.00.003

Tags Add a tag

Calculate

Reference

Process Ham Pizza at POS

Product Ham Pizza Transportation

Flow property Number of items

Unit Item(s)

Target amount 100.0

Calculation properties

Calculation properties

Please select the properties for the calculation

Allocation method None

Impact assessment method EF Method (adapted)

Normalization and weighting set

Calculation type ☐ Lazy/On-demand ☒ Eager/All ☐ Monte Carlo Simulation

☐ Regionalized calculation

☐ Include cost calculation

☐ Assess data quality

< Back

Next >

Finish

Cancel

Spinach Pizza

Create Processes (Spinach Pizza Preparation)

🔗 Inputs/Outputs - Spinach Pizza Preparation

▼ Inputs

[illegible]

▼ Outputs

Flow	Category	Amount	Unit	Costs/Revenues	Uncertainty
 Prepared Spinach Pizza	Pizza	0.35300	 kg		none

Create Processes (Spinach Pizza Packaging)

🔗 Inputs/Outputs - Spinach Pizza Packaging

▼ Inputs

[illegible]

▼ Outputs

Flow	Category	Amount	Unit	Costs/Revenues	Uncertainty	Avoided product
 Packaged Spinach Pizza	Pizza	1.00000	 Item(s)		none	

Create Processes (Spinach Pizza at POS)

Inputs/Outputs - Spinach Pizza at POS

▼ Inputs

[illegible]

▼ Outputs

Flow	Category	Amount	Unit	Costs/Revenues	Uncertainty
 Spinach Pizza Transportation	Pizza	1.00000	 Item(s)		none


Create a Product System (Spinach Pizza at POS)

- ❑ Use the last process (Spinach Pizza at POS) as the reference process.



General information - Spinach Pizza at POS

▼ General information

Name Spinach Pizza at POS




Category  Pizza

Description

Version 00.00.002   Last change 2021-10-10 19:21:08 UUID 40d8d2fe-638d-4b39-a79c-3745e55fed38

Tags

Infrastructure process ☐

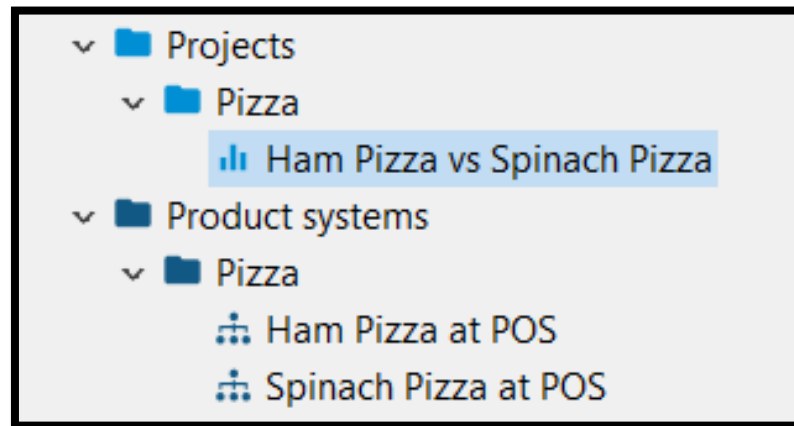
 Create product system  Direct calculation  Export to Excel

General information Inputs/Outputs Documentation Parameters Allocation Social aspects Direct impacts

Comparison between Ham Pizza and Spinach Pizza

Create a Project

- ☐ Add new child category and name it: **Pizza**
- ☐ Create a new project and name it: **Ham Pizza vs Spinach Pizza**
- ☐ Select EF Method (adapted) as impact assessment method
- ☐ Select Ham Pizza at POS and Spinach Pizza at POS for compared product systems



Project setup - Ham Pizza vs Spinach Pizza

General information

Name Ham Pizza vs Spinach Pizza

Category Pizza

Description

Version 00.00.004 Last change 2024-07-10 20:08:23 UUID bca4a19b-2668-4bb6-ae8e-7d0497e8aa85

Tags Add a tag

Calculate

Calculation setup

Impact assessment method EF Method (adapted)

Normalization and weighting set

- Regionalized LCIA
- Include cost calculation

Compared product systems

Name	Product system	Display	Allocation method	Flow	Amount	Unit
Ham Pizza	Ham Pizza at POS	<input checked="" type="checkbox"/>	None	Ham Pizza Transportation	100.0	Item(s)
Spinach Pizza	Spinach Pizza at POS	<input checked="" type="checkbox"/>	None	Spinach Pizza Transport...	100.0	Item(s)

Class Practice 12

- ❑ Compare ham pizza and spinach pizza in terms of Cancer human health effects

