

Food Service Example

Analysis using MetaFlowScope™

Inputs: purchased commodities (quantities converted to kg)

- **~120,000 kg of raw and processed food ingredients and food-service supplies**
- **~5000 kg of packaging materials**

Food Service Example

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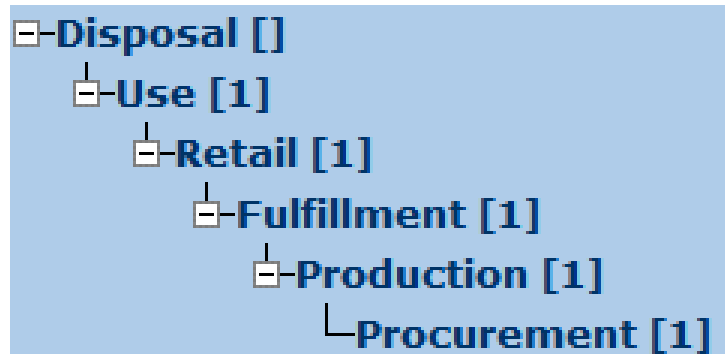
Inputs/outputs: energy/water used and aggregate waste generated

<u>Item</u>	<u>Qty</u>	<u>Units</u>
Energy:Natural gas, combusted in industrial equipment	1898.16	m3
Energy:Electricity	53245.07	kWh
Water:Water, pumping, treatment and distribution, USA	3758.03	L
Liquid Waste (Waste Water):Aerobic Treatment	3758.03	L
Solid Waste:Landfill, Anerobic	22893.01	kg
Solid Waste:Landfill, Anerobic	400.00	kg
Solid Waste:Landfill, Anerobic	50.00	kg
Solid Waste:Landfill, Anerobic	4995.00	kg

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Value-chain model template (showing life-cycle stages)

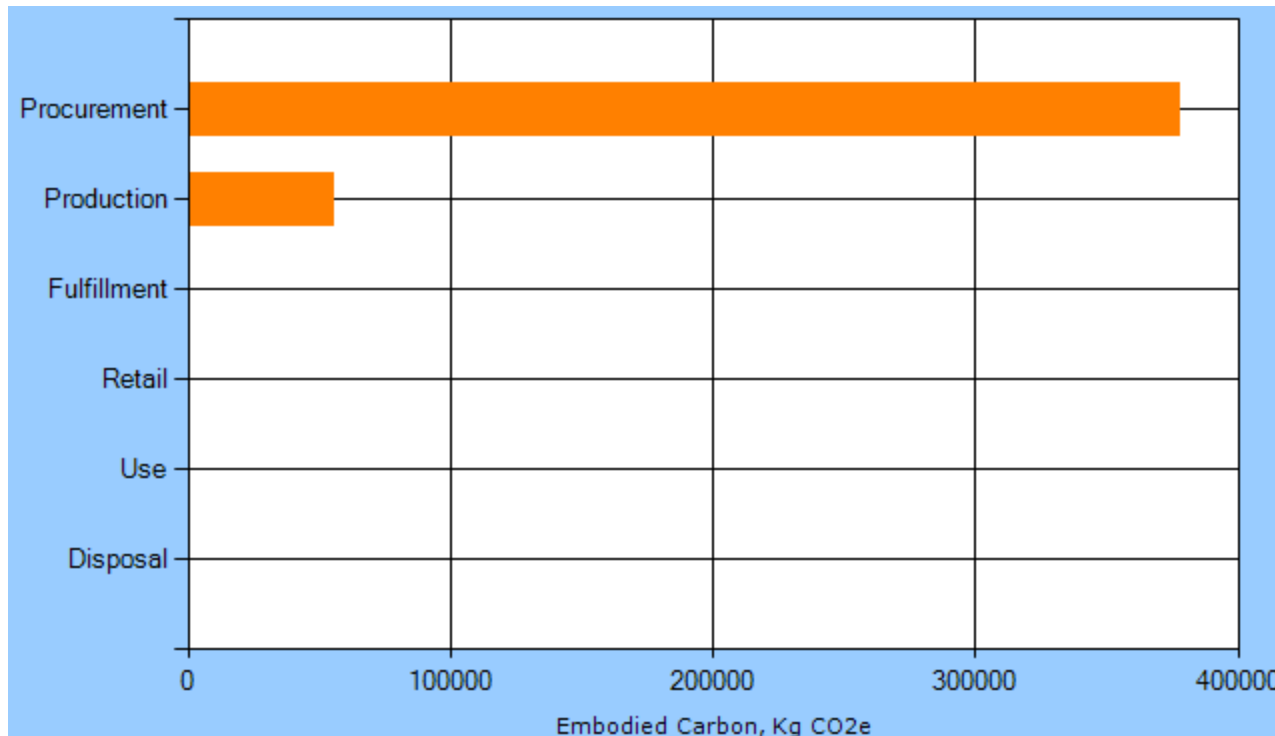


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Results by life-cycle stage

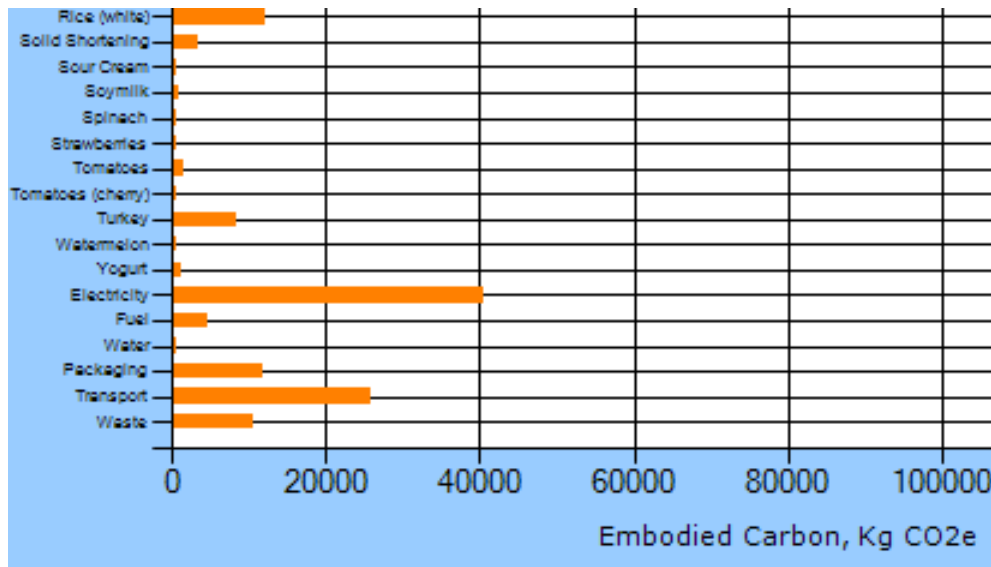
(end-of-life disposal excluded in this example; showing embodied carbon/GHG here – other views include embodied energy & water)



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Results by process (showing partial results)



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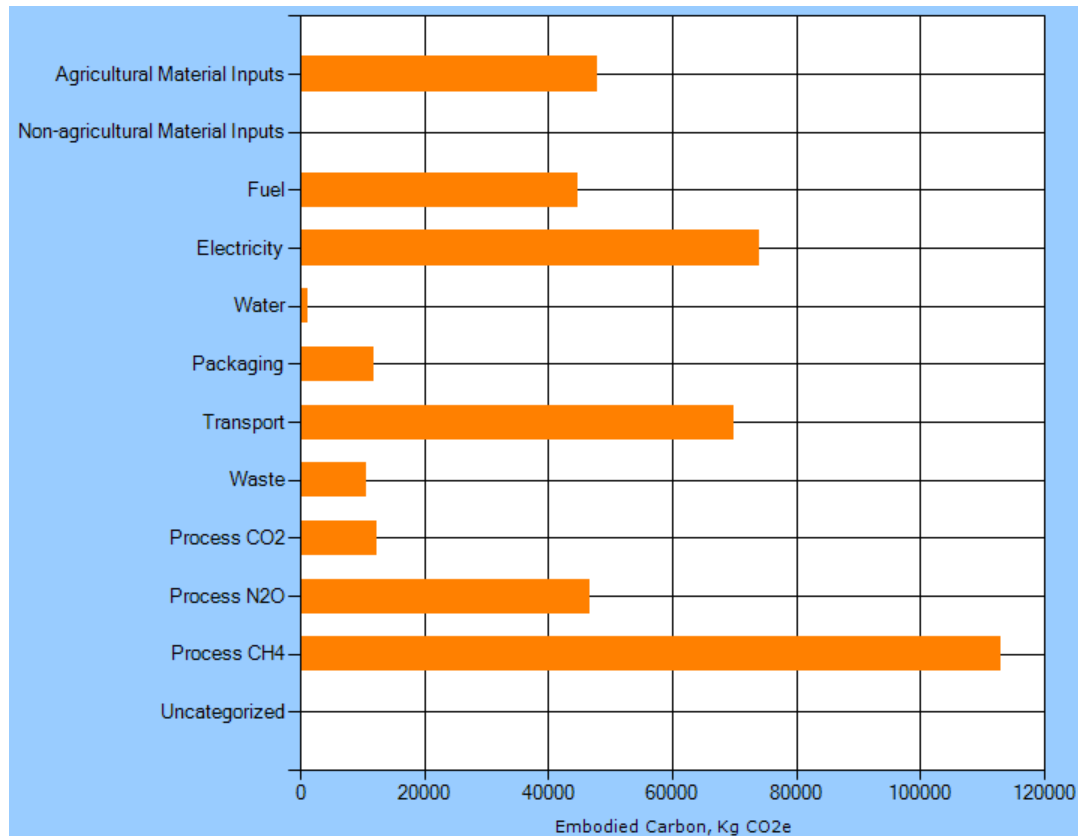
Results by model element (showing partial results, including emission scopes)

Model Element	Quantity	Unit	EE (MJ)	EW (L)	EC (Kg CO2e)	Scope	ScopeCategory
Apples (Granny Smith)	360.000	kilogram	599.129	67843.064	38.029	3	1
Apples (Granny Smith):Cardboard, corrugated, 38% recycled	0.020	kg	209.260	0.000	8.667	3	1
Apples (Granny Smith):Semi-trailer truck+Single-unit truck	2560.000	km	1029.110	0.000	78.375	3	4
Beef	8899.574	kilogram	555656.186	34956754.420	140208.294	3	1
Beef:Polystyrene (PS), general purpose, Europe+Low Density Polyethylene (LDPE), resin, Europe	0.030	kg	22261.660	28443.037	780.493	3	1
Beef:Semi-trailer truck+Single-unit truck	2560.000	km	26494.756	0.000	2017.780	3	4
Bread (pita)	562.460	kilogram	5939.949	297576.009	471.867	3	1
Bread (pita):Polyethylene (PE), general	0.033	kg	1542.435	0.000	36.009	3	1
Bread (pita):Semi-trailer truck+Single-unit truck	2560.000	km	1599.029	0.000	121.778	3	4
Bread (wheat)	870.912	kilogram	8487.288	458461.145	720.261	3	1

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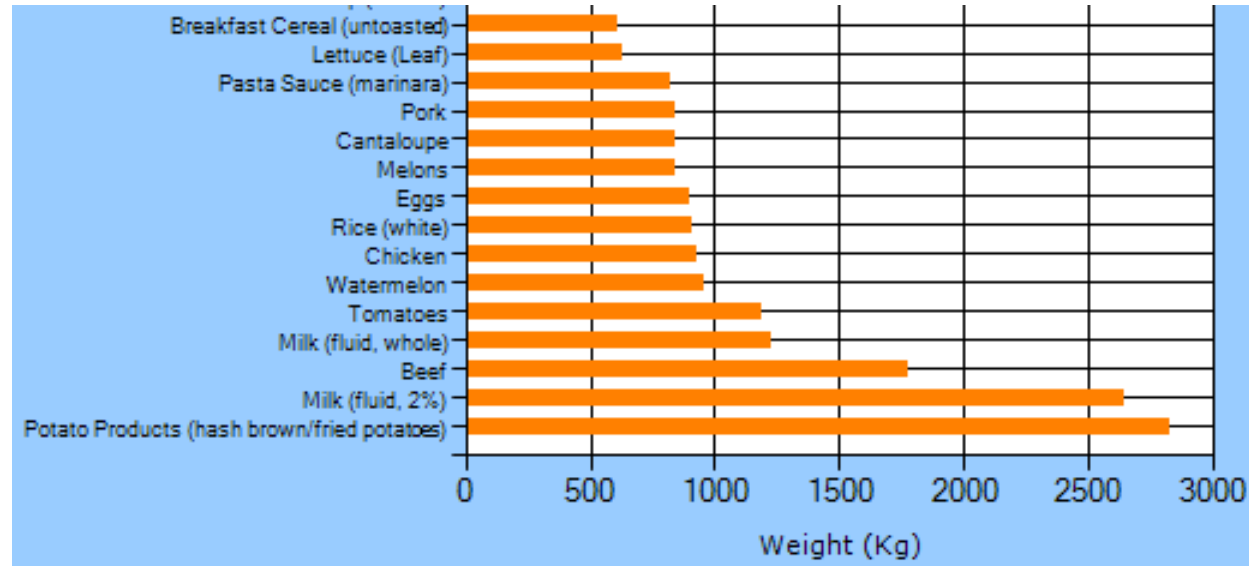
Results by emissions sources



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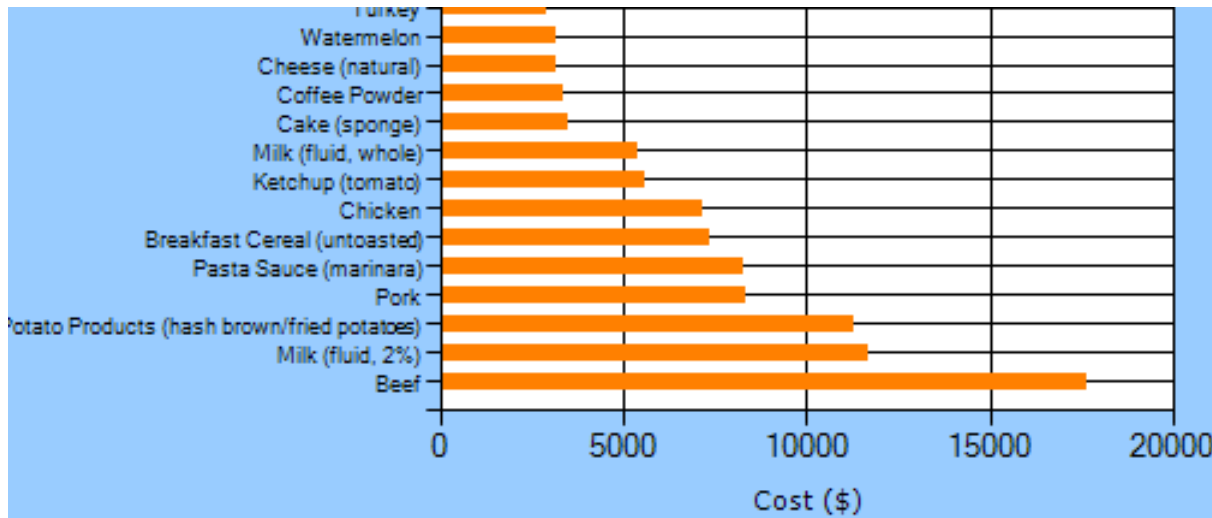
Materials flowing into waste stream (20% average waste; showing partial list)



Food Service Example

Analysis using MetaFlowScope™

Economic value of waste components (showing partial list)



Food Service Example

Analysis using MetaFlowScope™

Environmental value of waste components

(using carbon as example; partial list)

