Kays Compounds Ltd.
Production carbon footprint

KAYS COMPOUNDS
we sell solutions

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Kick-off

- Tasks: Calculating Kays Compounds Ltd.’s carbon footprint. Highlight the climate advantages the use of recycled base materials instead of virgin materials. Industry outlook.
- To detemine the Scope1-2 emissions we used Kays Compound Ltd.’s Energy report v1.
- To determine Scope3 emissions we took into consideration the followings:
  - Upstream transportation of base materials
  - Production and upstream transportation of packaging
  - Production of virgin materials

Limited liability: All calculation rely on the results of the newest scientific researches and the relevant industry specific databases. Kays Compounds Ltd. is responsible for all the input data for the calculation. We do not accept any liability for incomplete data disclosure or for any discrepancies resulting from their non-compliance.

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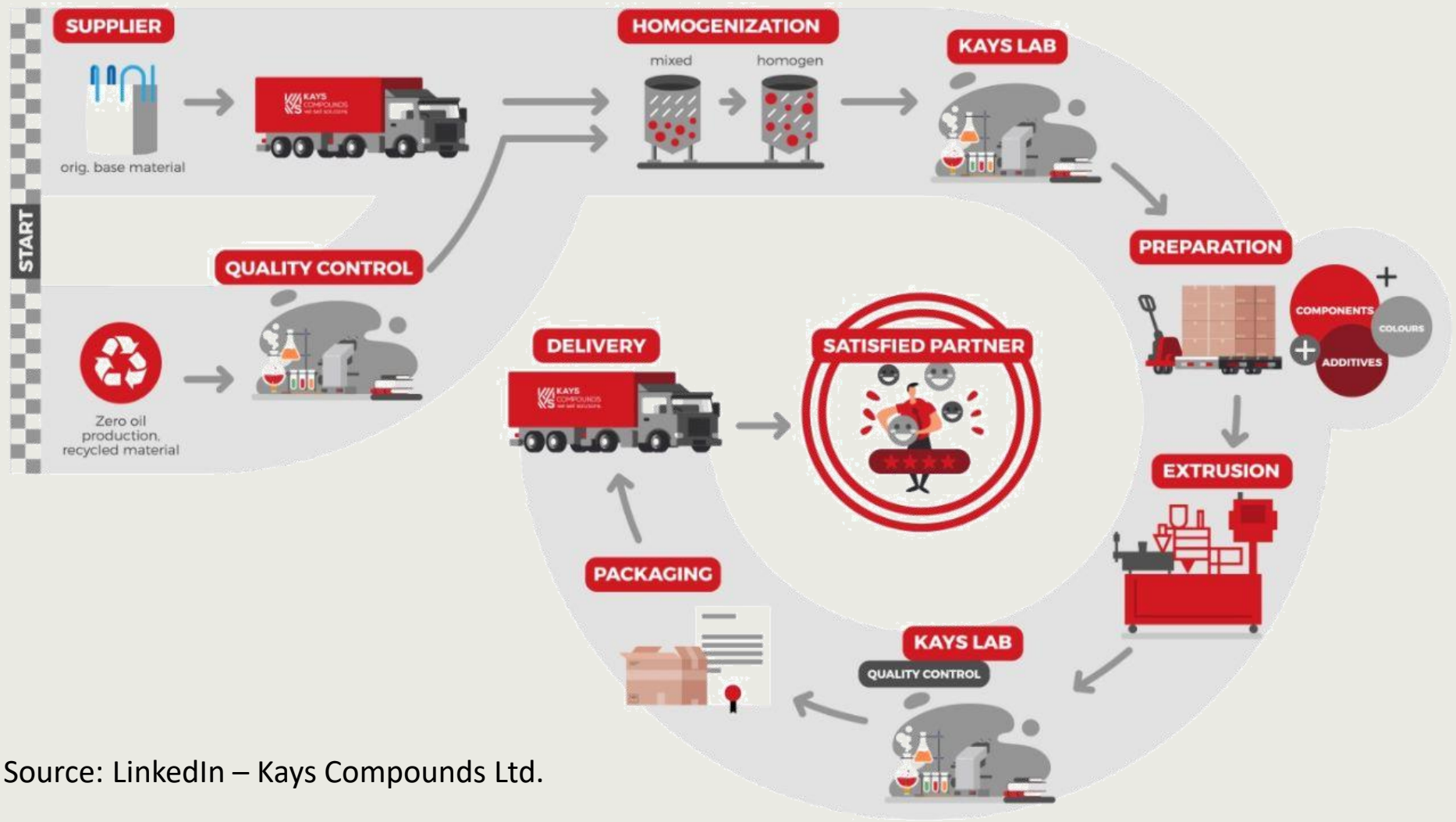
Kays Compounds Ltd.’s operation scheme



Source: LinkedIn – Kays Compounds Ltd.

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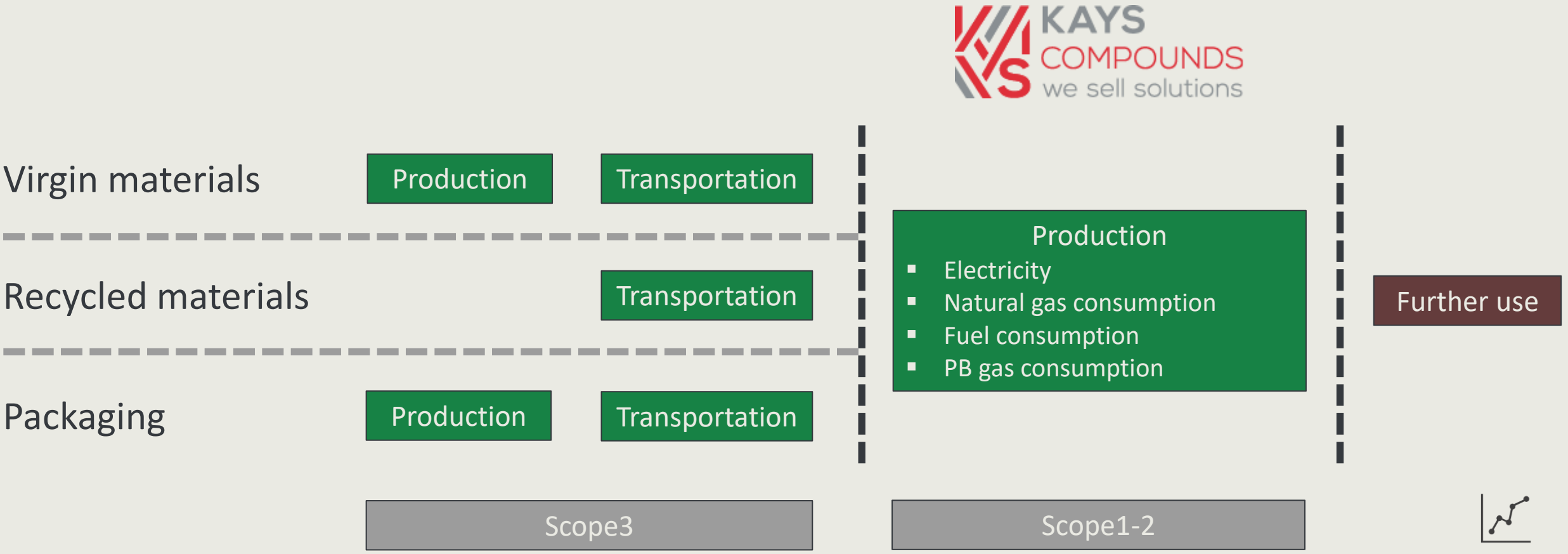
Methodology

The production process of Kays Compounds Ltd. interpreted in the following model.



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Methodology

In addition to industry emission standards, the following sources were used to calculate the carbon footprint:

- GHG Protocol
- DEFRA Greenhouse gas reporting: conversion factors 2020
- Inventory of Carbon and Energy
- European Environmental Agency
- PlasticEurope

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Emissions from production

Scope1-2 emissions (2019)

Scope1 sources

- Natural gas consumption — 22 840 m^3
- Fuel consumption — 10 800 liter
- PB gas consumption — 3.16 tons

Scope2 source

- Electricity — 1 468 MWh

- Production volume: — 3 168 628 kg

Scope1-2 emissions: — 563.1 tons CO_2e

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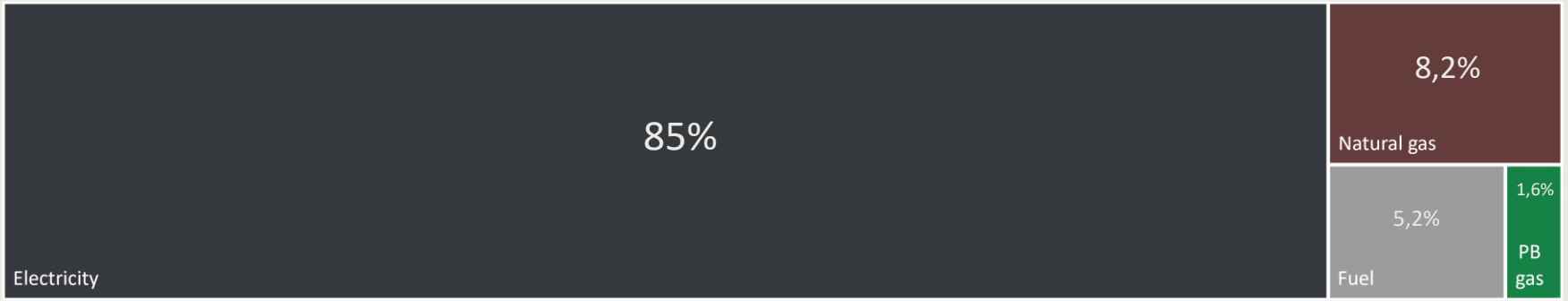
0.178

$kgCO_2e/kg.product$



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Scope 3 emissions

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Emissions from the production of different base materials

There are no emissions from the production of recycled materials.

Emissions from the production of virgin materials (cradle-to-gate) [$kgCO_2e/kg.product$]:

ABS	Acrylonitrile Butadiene Styrene	3,1
SAN	Styrene Acrylonitrile	3,0
PC	Polycarbonate	3,4
PA	Polyamide PA6	6,7
PA	Polyamide PA6.6	6,4

ASA	Acrylonitrile styrene acrylate	1,2
POM	Polyoxymethylene	3,2
PP	Polypropylene	1,6
PS	Polystyrene	2,4
PMMA	Polymethyl methacrylate	3,8

Source: Plastic Europe

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Carbon intensity - transportation

kgCO$_2$e/kg.product

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0.073

kgCO$_2$e/kg.product

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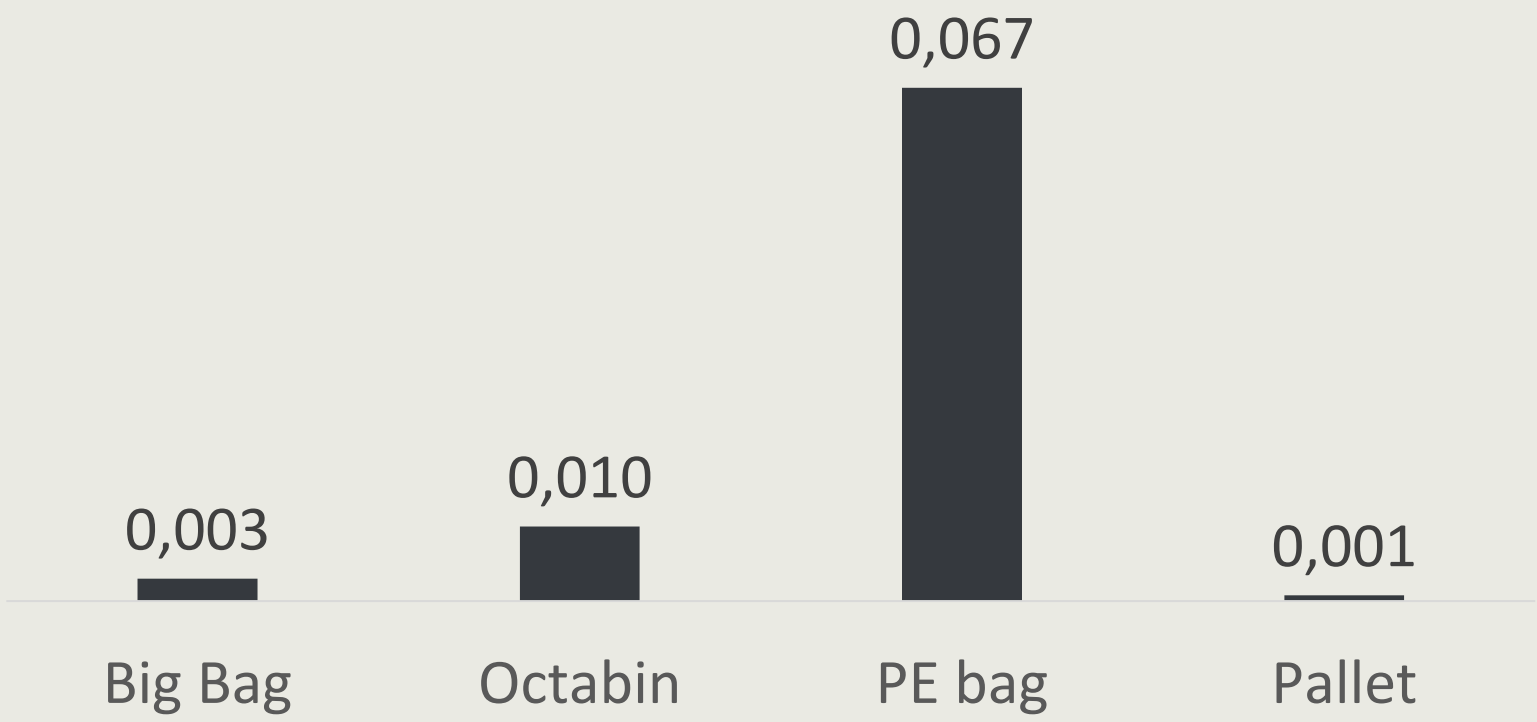
Carbon intensity - packaging



$kgCO_2e/kg.product$

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0.019

$kgCO_2e/kg.product$

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Comparison the carbon intensity of products from different base material

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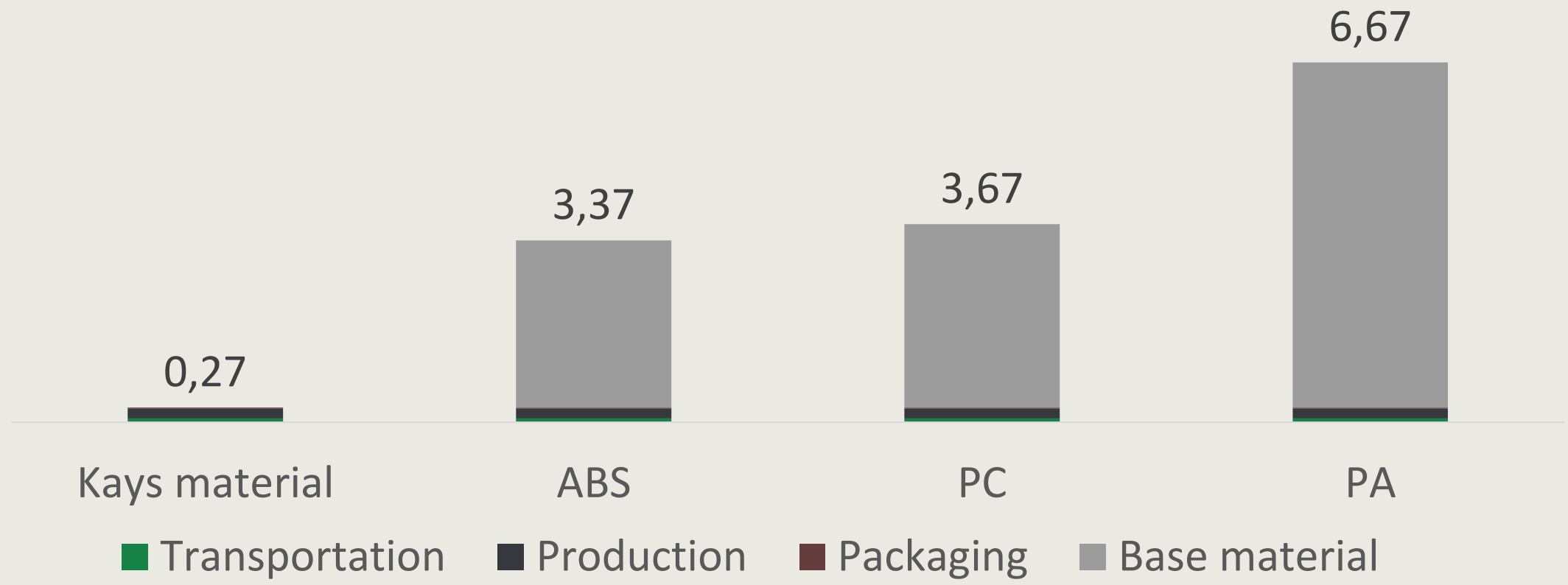
Carbon intensity of production from different base materials



$kgCO_2e/kg.product$

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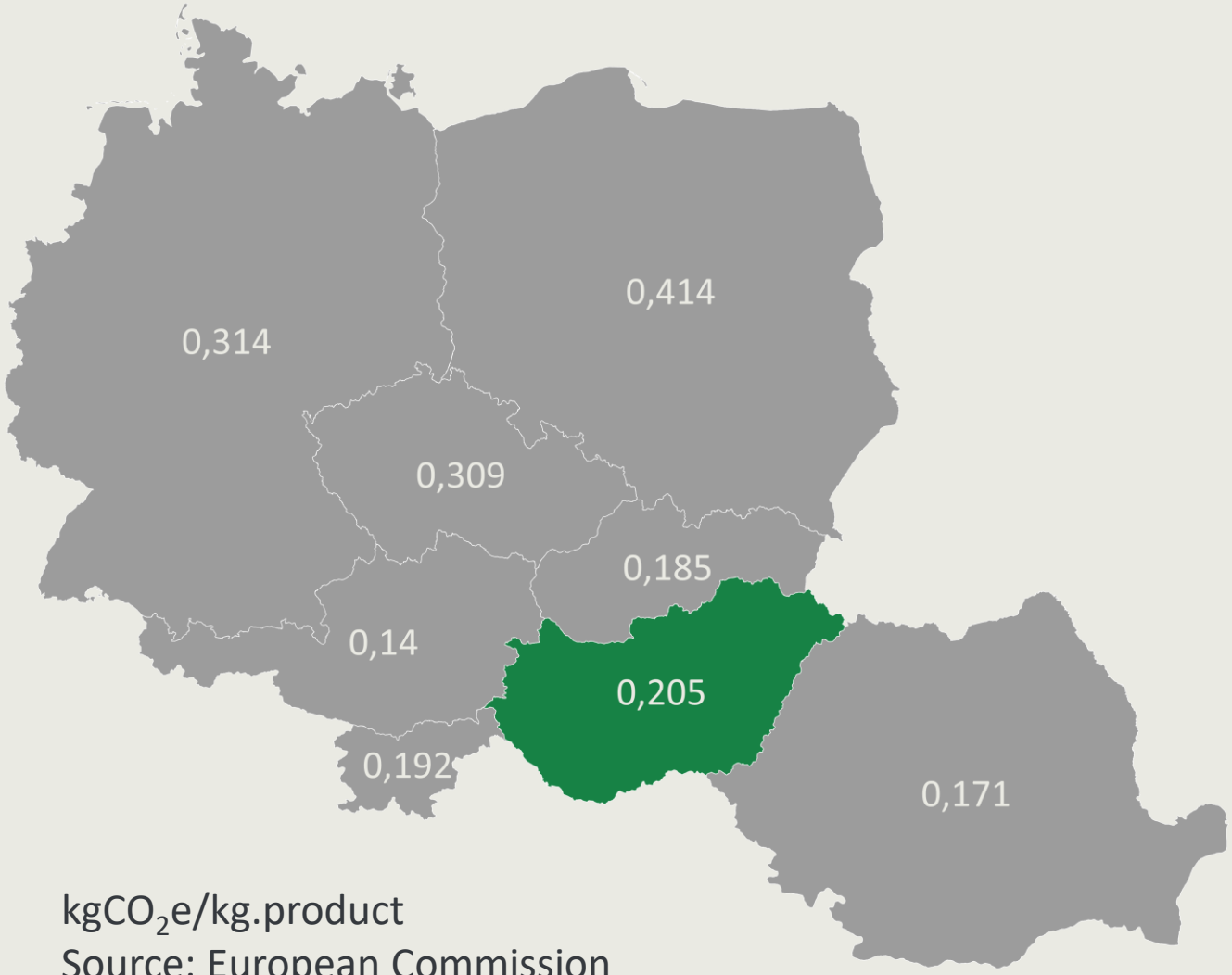
Industry outlook

Carbon intensity of compound production in EU



$kgCO_2e/kg.product$
Source: European Commission

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0.178

$kgCO_2e/kg.product$

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