

# Oiconomy Pricing - Real price of a stone kitchen countertop (pilot 2)

**Company** Arte Groep  
**Location** Helmond, The Netherlands  
**Product** 1 m<sup>2</sup> of stone kitchen countertop (exact product properties not disclosed)  
**Currency** Euro  
**Oiconomy Assessment** Oiconomy Sustainability Assessment Tool v2.04  
**Timeframe** Data from 2021

**Case description**

Arte is a kitchen countertop manufacturer from the Netherlands. They provide high-quality products made from natural stone, composite, ceramics and Dekton to local customers and over 200 stores. Their production facility in Helmond processes materials according to tailor-made designs. Arte has been devoted to projects that create positive impacts across the supply chain. In this case study, complete specifications within the chosen product line are examined to select a representative functional unit, compared to the first pilot study published in 2022.



**Scope of assessment**

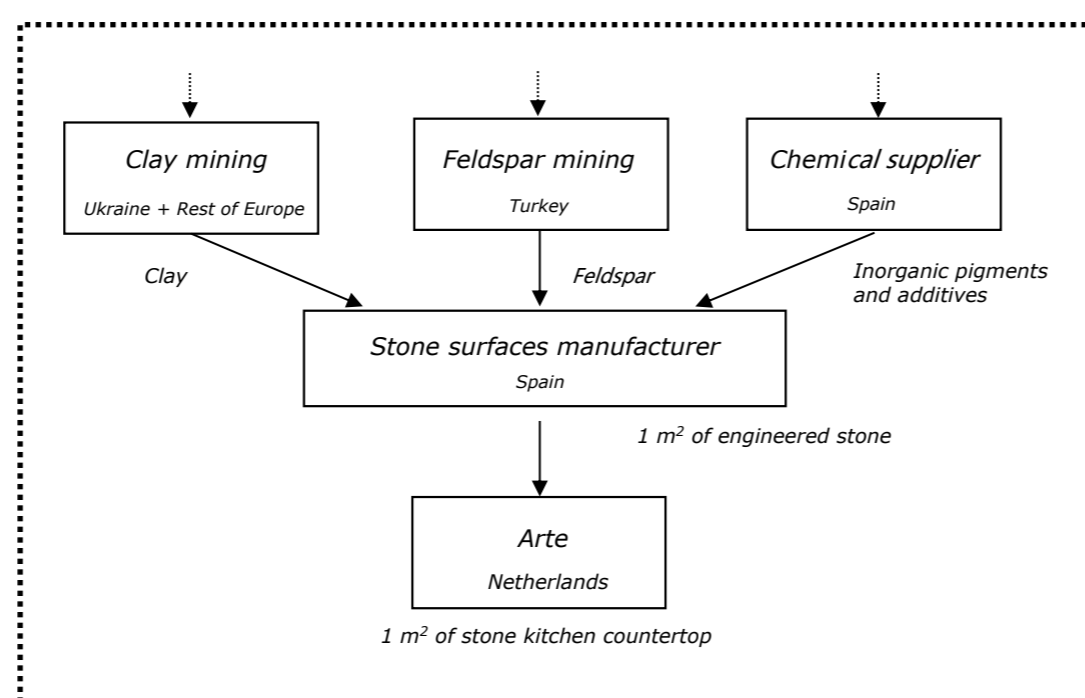


Figure 1: Scope of assessment: supply chain actors and outputs

The supply chain of the stone countertop was traced back by including 80% of the purchased value. This identified the most relevant supply chain: **the stone surface** (Figure 1).

To produce the stone countertop, clay, feldspar, and various other inorganic pigments and additives are acquired. These materials are sourced from different regions as shown in the figure. The manufacturer of the stone surfaces in Spain carries out additional steps to refine these materials, including grinding, pigmentation, decorating, shaping, and thermal processing. The finished stone slabs are then transported to Arte, where they are cut, polished, and provided with plastic and foam underneath for the countertop's final touch. The 2<sup>nd</sup> tier suppliers are only assessed for the impact of pollution and resource depletion, due to data availability.

**Total results**

Hidden costs show what impact the product has on planet, people and prosperity, which are currently not reflected in the prices charged for the goods along the value chain. The impact can be negative or positive. The negative costs are based on the costs of prevention, meaning the costs necessary to eliminate the negative impact. The total hidden costs of 1 m<sup>2</sup> of stone kitchen countertop are **€ 17,35** (Figure 2). The sales price of 1 m<sup>2</sup> stone kitchen countertop is € 595, meaning the hidden costs are adding **2,91%** onto the sales price. Figure 3 displays the negative hidden costs per supply-chain partner.

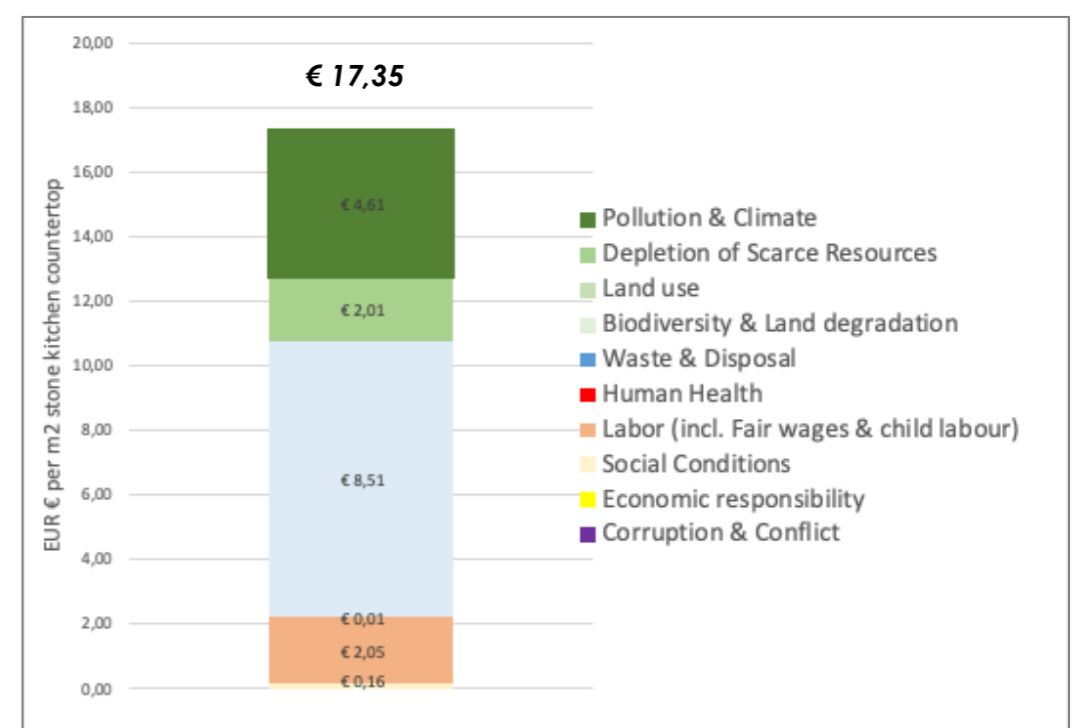


Figure 2: Negative hidden costs of 1 m<sup>2</sup> of stone kitchen countertop

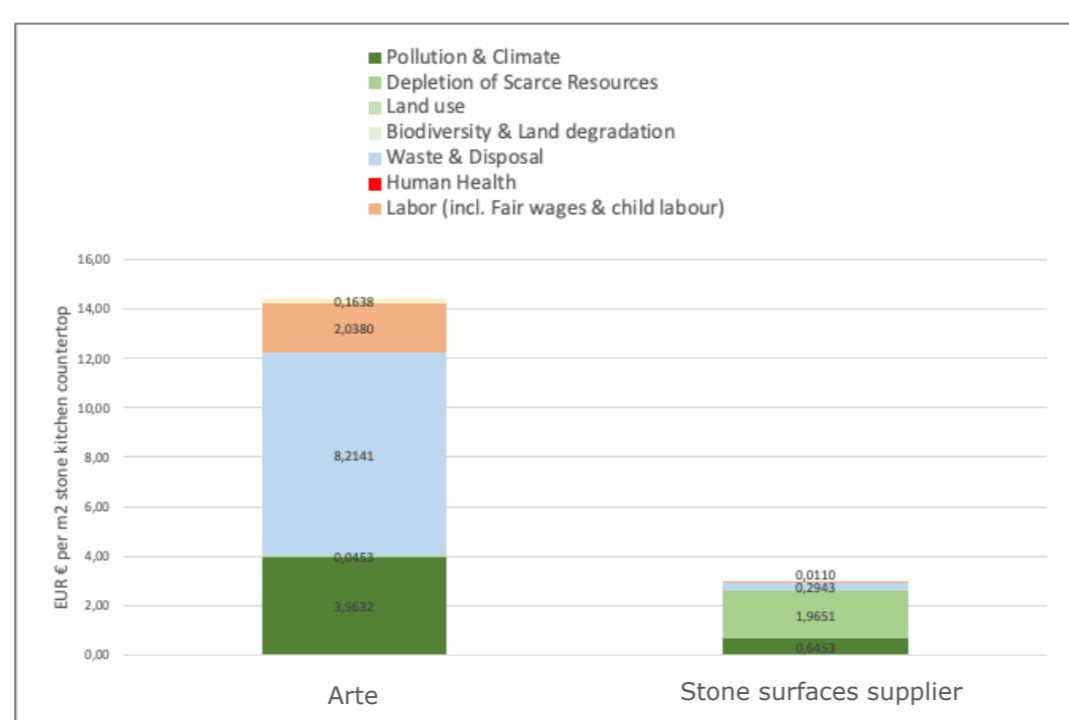


Figure 3: Negative hidden costs per supply chain partner

The main negative hidden costs come from the category **Waste & Disposal**, measuring both the production waste and end-of life waste. These costs arise from two key aspects: leftover materials generated during the processing of stone slabs (€3.20) and the disposal of inert waste when demolishing kitchen countertops (€4.90).

The second biggest cost category is **Pollution & Climate**. Pollution & Climate assesses the expenses incurred to prevent pollution emissions into the soil, air, and water. Most costs are attributed to the manufacturing process and transportation of stone to the stone surfaces producer (€5.50). There are other expenses including the energy usage of Arte (€2.68) and the mining operations involved in extracting clay and feldspar (€0.10).

Other significant negative hidden costs associated with the planet aspect were found for **Depletion of Scarce Resources** resulting from the extraction of water in a water-scarce region, Almería, Spain for producing the engineered stones (€1,90). Land use and biodiversity are considered non-relevant categories for this case study.

Additionally, factors such as fair wages, equitable inequality, and other labor conditions are evaluated in the **Labour** category. Employees in the supply chain are paid fairly and ensured to work in an equal environment. However, both Arte and the stone supplier failed to demonstrate strong health insurance and personnel development plans. The cost distance to sustainable labour practices amounts to €2,00 in total. A negative cost of €0,01 also originate from the stone supplier for **Human Health**, as they were unable to provide evidence of sound PDCA policies for workplace health and safety.

An additional cost of €0,16 is attributed to **Various social issues**. This results from the lack of assurance on preventing is issues around sustainable property rights when acquiring nature recourse such as clay and feldspar in the long term.

This assessment shows the absence of negative impacts on the categories of **Economic Responsibility** and **Corruption & Conflict**. The risks of these issues in the Netherlands and Spain are very low.



Figure 4: Photo of a rock quarry

### Positive costs

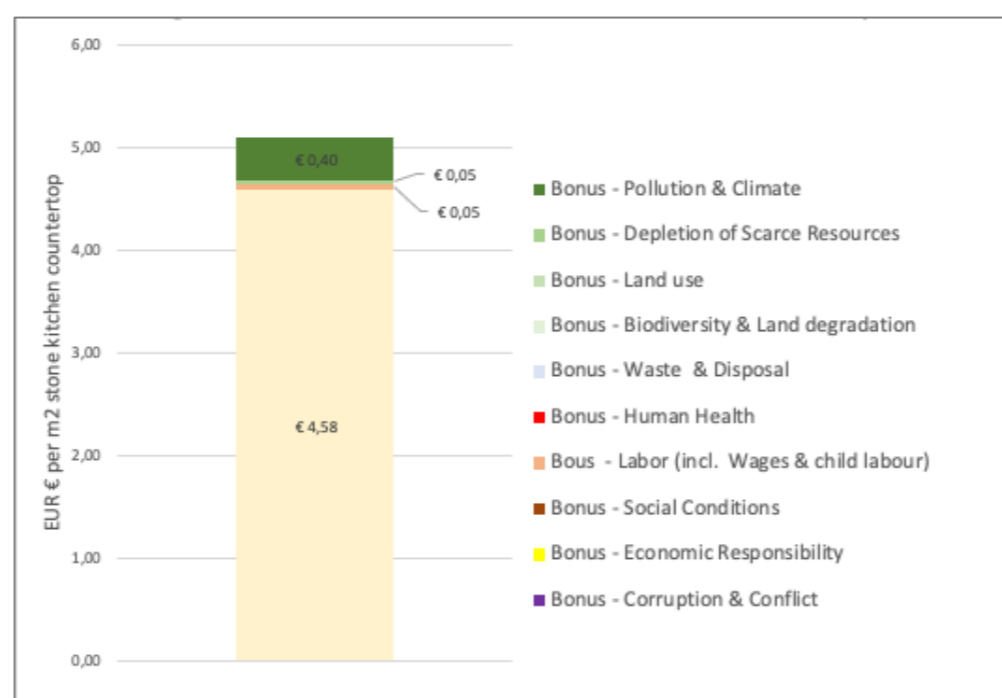


Figure 5: Positive costs of 1 m2 of stone kitchen countertop

Besides negative hidden costs, positive costs were calculated (Figure 5). **Positive costs** are based on actual company spending, benefitting others than the ones involved in the transaction. Positive costs of **€ 5,29** were found, spent by Arte and by its supplier. Arte has initiated several projects that aim to eradicate child labour in the communities nearby stone quarries and has set up the Responsible Stone Foundation to promote the basic education rights of children (category: Social Responsibility). Moreover, they are actively involved in the EKD SMART Forest Project in Bolivia, working to offset GHG emissions resulting from gas usage. Additionally, the stone surface supplier has been dedicated to the development of innovative applications aimed at reusing and recycling materials, thereby enhancing circularity.

### Data specificity

Hidden costs are calculated as the sum of the quantity of an issue (performance data), and the costs to prevent the issue (prevention costs). Both performance data and prevention costs can be company-specific or genericdatabase-sourced.

**Performance data** are measuring the sustainability performance of companies (e.g. kWh used). Both Arte and its supplier were able to complete the assessment using a greater proportion of the company-specific data for 2021. However, the performance data of the 2nd tier suppliers relies on the EPD report provided by the stone surfaces provider, which inherently imposes limitations. Additional constraints involve the assessment of positive outcomes. The supplier of stone surfaces has been recycling wastewater for irrigation purposes; however, the direct impact of this practice can be hardly demonstrated and has been excluded from this assessment.

**Prevention costs** are data on the costs of sustainability mitigation measures (e.g. investing in solar panels). None of the value-chain partners were able to provide much company-specific prevention costs, as it takes time to make investment proposals to mitigate the impact. This should be a focus when the assessment is repeated. Consequently, all prevention costs utilized in this study were computed using the default values set within the system.

### Company reflection

"We care about where our materials come from. Oiconomy has revealed hidden information about our product life cycle. However, a higher level of transparency remains the key to identifying hotspots and fostering open dialogues with our value chain partners. We will continue discussing this with our suppliers"

"We anticipate that the Oiconomy tool can be more easily understood and serve as a shared language among our suppliers."

– CEO of Arte

Utrecht University thanks ARTE for their transparency and cooperation. More information is available online on the explanation of the Oiconomy Pricing [method and its principles](#), the Oiconomy Pricing [tool](#), and [examples of companies](#) applying the method. For contact, please reach out to [oiconomy@uu.nl](mailto:oiconomy@uu.nl)

Disclaimer: this assessment was based on company data, but not independently verified.

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Date of publication: 11-9-2023

DOI: 10.5281/zenodo.8296509