

## Oiconomy Pricing - Real price of a stone kitchen countertop



<b>Company</b>	Arte Groep
<b>Location</b>	Helmond, The Netherlands
<b>Product</b>	1 m <sup>2</sup> of stone kitchen countertop (exact product properties not disclosed)
<b>Currency</b>	Euro
<b>Oiconomy Assessment</b>	<a href="#">Oiconomy Sustainability Assessment Tool v1.08</a>
<b>Timeframe</b>	Data from 2020
<b>Included impact categories</b>	Pollution & Climate, Depletion of scarce resources, Land use, Biodiversity & land degradation, Waste, Labour, Various social responsibilities, Economic responsibility
<b>Case description</b>	Arte is a company that provides high quality stone kitchen counter tops. Their production facility is based in Helmond. They supply to over 200 stores in the Netherlands. Arte produces countertops for kitchens made from granite, composite, ceramics and dekton.

### Scope of assessment

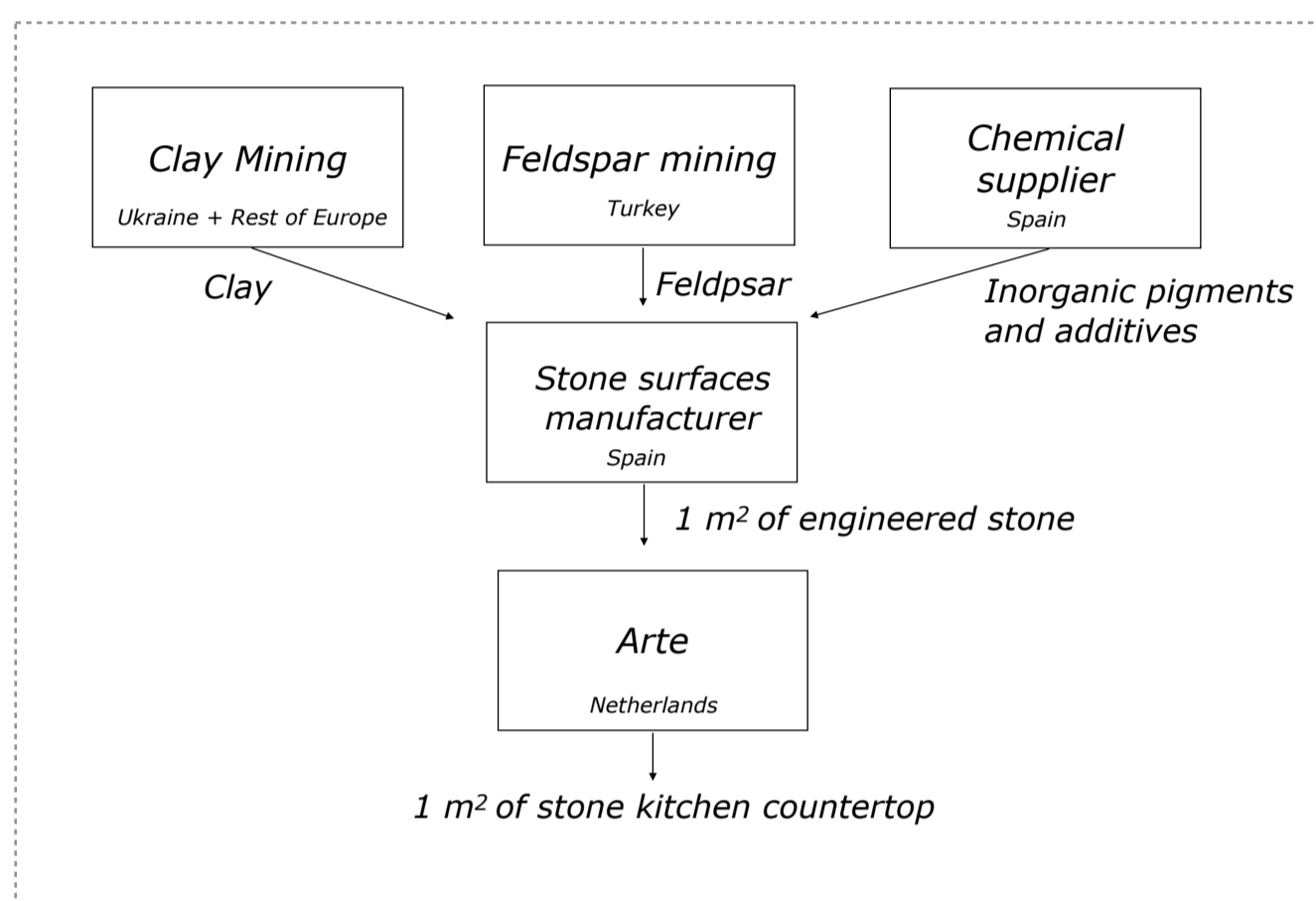


Figure 1: Scope of assessment: supply chain actors and outputs

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

In order to produce the stone countertop, clay, feldspar and various other inorganic pigments and additives are procured. These materials are mined at various locations: clay is mined mostly in Ukraine; Feldspar is mined in Turkey and other additives are from Spain. The producer of the stone surfaces subjects these materials to further processing: grinding, pigmentation, decoration, shaping and thermal processing. The stone slabs are then transported to Arte, where the slabs are cut, polished and provided with plastic and foam underneath the countertop.

### Total results

Hidden costs show what impact the product has on planet, people and prosperity, that 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 costs of prevention, meaning the costs necessary to eliminate the negative impact. The total hidden costs of 1 m<sup>2</sup> of stone countertop is **€ 32,44** (Figure 2). The sales price of 1 m<sup>2</sup> stone countertop is € 912 meaning the hidden costs are adding **3,56%** onto the sales price. Figure 3 displays the negative hidden costs per supply-chain partner.

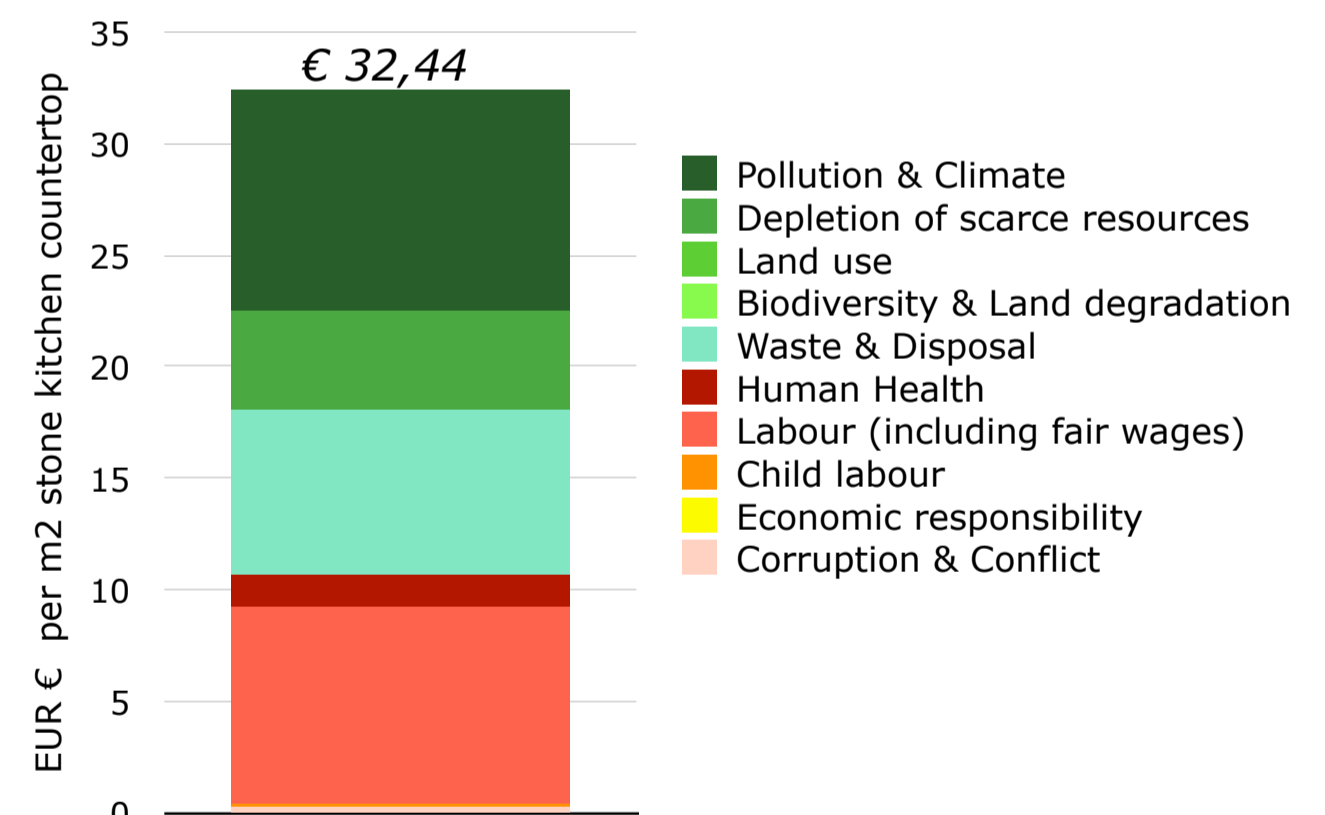


Figure 2: Negative hidden costs of 1 m<sup>2</sup> of stone kitchen countertop

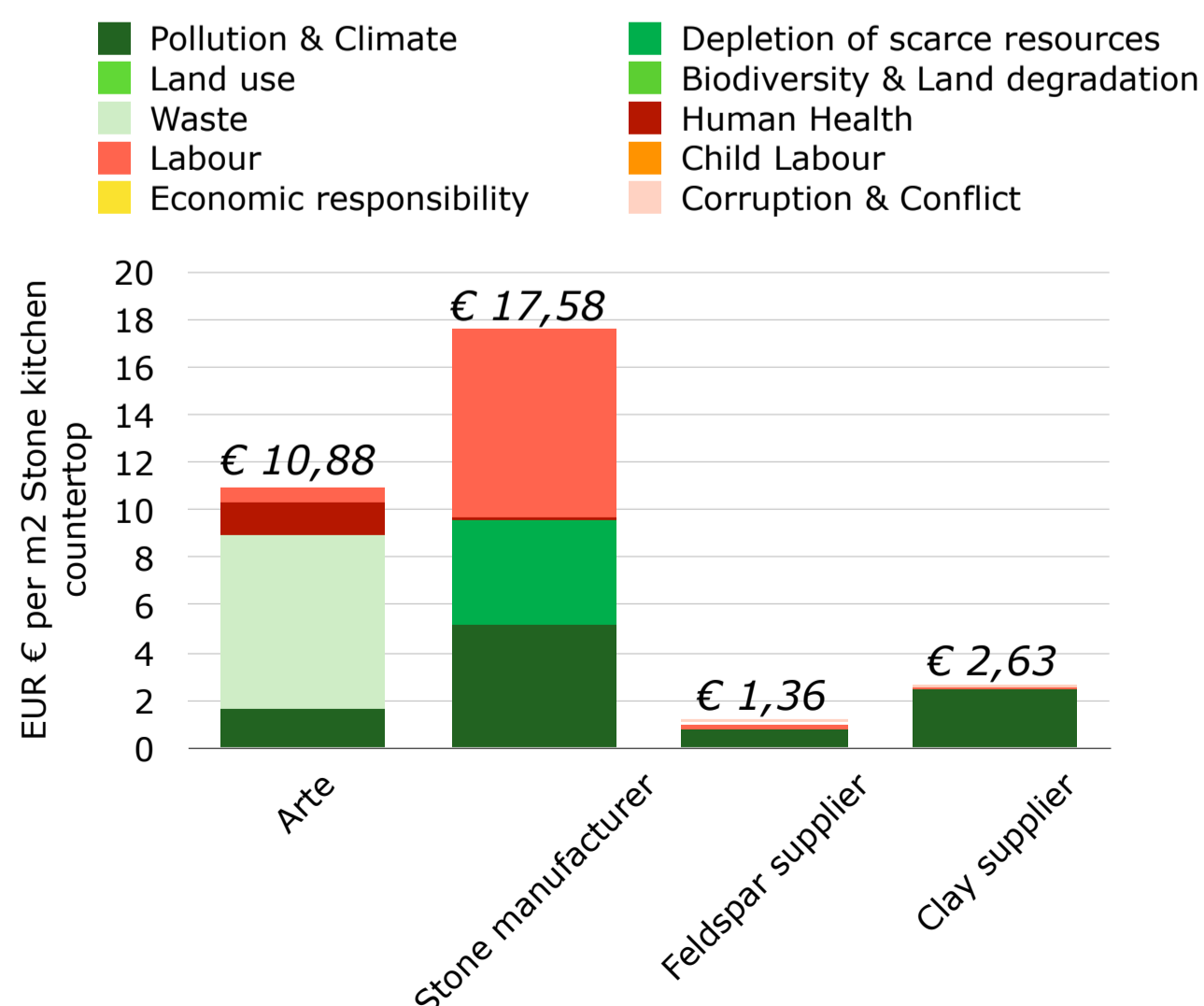


Figure 3: Negative hidden cost per supply-chain partner

The main negative hidden costs come from the category **Pollution & Climate**. **Pollution & Climate** measures the costs to prevent polluting emissions to soil, air and water. Most of the costs come from the manufacturing process and transport of stone to the stone surfaces producer (€ 5,15), other costs include the energy usage of Arte (€ 1,54) and the mining operations of clay and feldspar (€ 2,41 and € 0,85).

The second biggest category is **Labour**. Labour measures fair wages, fair inequality and other labour conditions. The bulk of the costs come from the stone surfaces manufacturer in Spain as they could not demonstrate the absence of various labour aspects.

There is a high risk of child labour in the feldspar and clay mines in Ukraine and Turkey. The lack of demonstrated evidence of the absence of child labour led to the allocation of €0,12. € 0,12 is the amount necessary to replace children with adults earning the fair minimum wage.

In the category **Waste & Disposal**, the cost-distance to sustainable disposal is measured for both processing-waste and end-of life waste. Negative costs emerge from the end-of-life disposal as the demolition of the countertop creates inert waste (€ 4,20).

Furthermore, hidden costs found include cost to prevent the depletion of scarce resources. The stone surfaces manufacturer uses a lot of fossil resources, that lead to costs of € 1,33. Additionally, the water consumption for 1 m<sup>2</sup> of countertop is 0,17 m<sup>3</sup> and is extracted in a water-scarce area, which accounts for negative hidden costs of € 3,09.

Other hidden costs that were found include costs to prevent **Corruption & Conflict**. According to the Corruption Perception Index, Ukraine and Turkey are sensitive to corruption. No evidence was demonstrated that the clay and feldspar mines have governance systems in place to prevent corruption. This leads to negative costs of € 0,25.



Figure 4: Photo of a rock quarry  
Note. Photo of a rock quarry, by Borchee, 2015, iStock. (<https://www.istockphoto.com/nl/foto/rock-quarry-gm474242832-65261069>).

## Positive costs

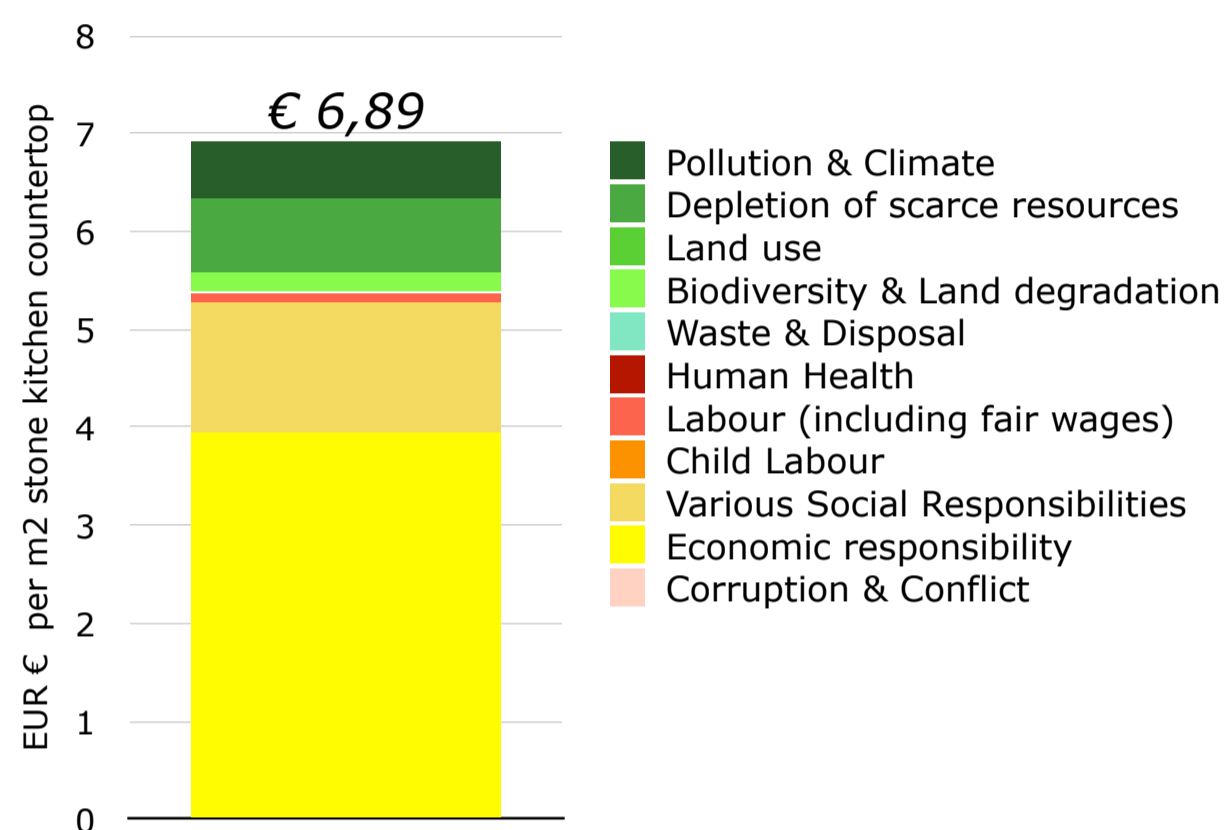


Figure 5: Positive costs of 1 m<sup>2</sup> of stone kitchen countertop

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 € 6,89 were found, which was spent by Arte and by the stone surfaces manufacturer. Among other things, Arte invested in extra preventative medical care for their employees (category: Social Responsibility), and set up the Responsible Stone Foundation that aims to eradicate child labour in the communities nearby stone quarries by supporting quality education (category: Economic Responsibility).

## 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 generic database-sourced.

**Performance data** are measuring the sustainability performance of companies (e.g. kWh used). The data specificity of performance data of this analysis is displayed in Figure 6. Arte was able to complete the assessment using mainly company-specific data. The stone surfaces manufacturer also actively took part in this pilot but was not able to demonstrate all the data, so partly background data was used. Regarding the feldspar and clay supplier only background data was used.

**Prevention costs** are data on the costs of sustainability mitigation measures (e.g. investing in solar panels). The data specificity of prevention data are displayed in Figure 7. 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 impact. This should be a focus when the assessment is repeated.

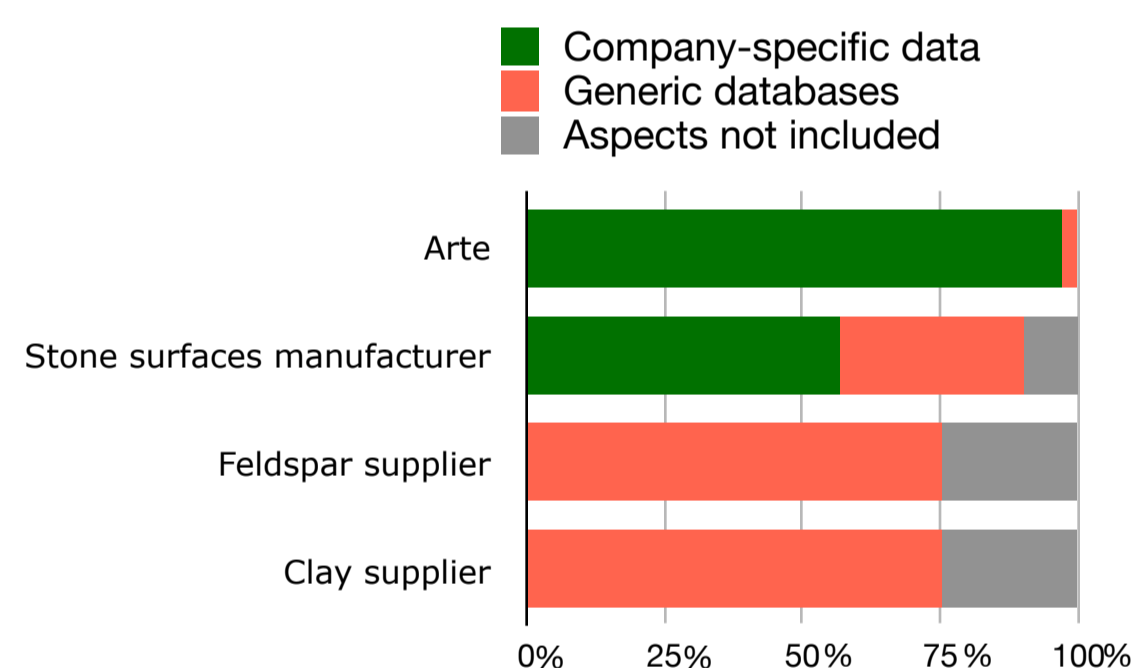


Figure 6: Data specificity: performance data

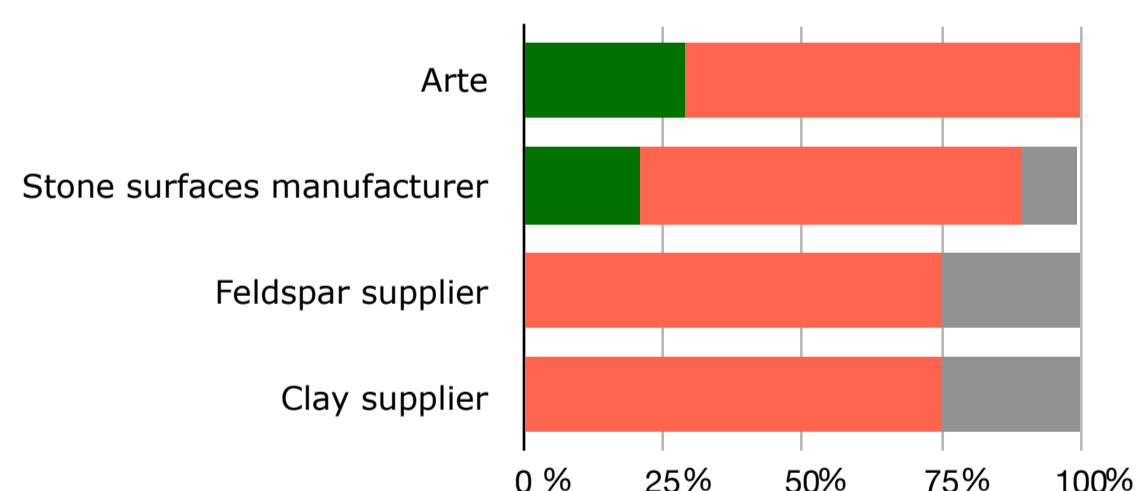


Figure 7: Data specificity: prevention data

## Company reflection

"The Oiconomy pricing tool is a good tool to open a dialogue with suppliers, and to see how to improve the collaboration to tackle sustainability."

"Without our UU trainee conducting the Oiconomy Assessment for Arte, it would not have been possible as doing the assessment takes considerable time. However, if we were to continue with this, we would need some internal resources committed to this."

Utrecht University thanks Arte for their transparency and cooperation. More information is available online on the [explanation of 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)

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Date of publication: 10-05-2022  
DOI: 10.5281/zenodo.6535581