



## refurbed and Fraunhofer Institute Unveil Groundbreaking Model Calculating the Environmental Impact of almost 10,000 Consumer Electronics.

*refurbed and Fraunhofer Austria have developed a globally unique calculation model, which generates ISO-verified life cycle assessment data for the majority of current smartphones, laptops and tablets, thus representing a milestone in the ecological transparency of electronics.*

**Dublin, 22nd April 2024** - Today, [refurbed](#), the leading online marketplace for refurbished products in Ireland has taken the next step towards ecological transparency of electronics with the [Fraunhofer Research Institute](#), based on the findings of last year's pilot study.

In 2023, refurbed commissioned the Fraunhofer Institute to compile a scientifically approved life cycle assessment for five selected electronic reference products\*, allowing for the evaluation of the environmental impact of refurbishment at product level for the first time. On behalf of refurbed, this year the Fraunhofer Institute has developed a globally unique calculation model that provides a reliable calculation for almost 10,000 smartphones, laptops and tablets. The calculation model, verified in accordance with ISO 14040/44, provides scientifically validated life cycle assessment data for refurbished electronic devices.

Speaking on the launch, **Peter Windischhofer, co-founder of refurbed** said, *"We founded refurbed with the aim of offering consumers the opportunity to make sustainable consumption more accessible. We wanted to show that ecological transparency is now possible. Today, we have come one big step closer to achieving this goal. We now have the opportunity to share transparency for consumers that everyone said was desirable, but not possible."*

With its unique and ISO 14040/44-verified calculation model, refurbed is now the first marketplace in the world to provide its consumers with key figures on the ecological footprint of almost 10,000 electronic products.



**Co-founder of refurbed Kilian Kaminski** adds: *"Although planned political measures, such as the introduction of the digital product passport, which will bring transparency, are welcome, it will be years before they are finally introduced. We wanted to show that ecological transparency is possible today."*

Similar to last year's [pilot study](#), three ecological indicators for electronic products were generated for the calculation model: Water consumption\*\*, CO<sub>2</sub> emissions and electronic waste saving, all comparing those of a new device vs a refurbished alternative of said device. The calculation model now makes it possible to assess these ecological key figures for any electronic product transparently.

*"Once created, we can now use this calculation model to carry out a large number of assessments with relatively little effort, thus providing consumers with detailed information about the ecological impact of their products,"* says project manager **Paul Rudolf from Fraunhofer Research Institute** about the significant innovation.

As refurbed has grown since its foundation in 2017 and established itself as Ireland's leading online marketplace for sustainable electronics, the scale-up's sustainability strategy has also become more differentiated and is reflected in four corporate divisions:

1. Expansion of the circular economy through the refurbed business model;
2. Engagement at political level (national and EU) to drive forward European processes such as the Right to Repair;
3. Diversified impact investment in environmental projects for carbon reduction, e-waste recycling and landscape restoration;
4. Creation and transparent publication of scientific key figures on the ecological footprint of our consumer behaviour.

The ecological key figures determined for all electronic products available from refurbed are publicly available at [www.sustainability.refurbed.ie](http://www.sustainability.refurbed.ie).

\* The 2023 data survey covered the entire impact of the products in the first usage phase (new purchase) and the second usage phase (refurbishment). The data was calculated for the Apple iPhone 11, the Samsung Galaxy S20 FE, the Apple iPad Pro 4 2020, the Apple MacBook Air 2017 13.3 and the Lenovo Thinkpad T460 i5.

\*\* Virtual water consumption according to Developer Environmental Footprint Version 3.1 (EF v3.1)

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