

**Area of interest** Online smartphone purchase and sale.

**About the company** Subito is part of Schibsted Media Group, a Norwegian multinational founded in 1839 that operates successfully in 27 countries in publishing (newspapers and the printed press), online (classified ad sites and digital services) and mobile markets. Most of the products sold through the platform have already been used at least once and this supports the strategy of extending product life (re-use) within the context of the circular economy.

**Relevant business model**

Sustainable inputs	<b>End of life</b>	Life Extension	Sharing platforms	Product as service
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**Business requirement and proposed solution**

Of the diverse categories of products bought and sold on Subito, mobile phones are among the objects with the highest rate of exchange. Taking into account the data relating to the commercial exchanges between smartphone users for the one-year period (01/07/2016 - 30/06/2017), the circularity of mobile phones in terms of materials saved was measured. For the sake of transparency and the accurate interpretation of the circularity measurements, it is necessary to point out that the total number of 486,207 units of smartphones placed on sale is an aggregate amount. Therefore, we know neither the reasons that led users to sell their smartphone nor how long each smartphone was used before its sale. The assumption referred to in the calculation of the measurement of circularity is that all users have used their smartphone for the average industry period, and then sold it to buy a new model.

**Selected solution and details**

To collect the data necessary for calculating the circularity of resources used and saved, twenty different models of smartphones were considered. Subsequently, the composition of each device was analysed and the average weight of the different components was calculated.

Overall, the purchase and sale of 486,207 smartphones made it possible to save materials and components equal to about 75 tonnes of resources, consisting of:

- 15.7 tonnes of materials from the battery,
- 14.3tonnes of materials from the display,
- 12.9 tonnes of aluminium,

- 11.8 tonnes of stainless steel,
- 8,8 tonnes of glass,
- 5,9 tonnes of printed circuit boards,
- 3,5 tonnes of plastic,
- 1,9 tonnes of other materials.

The precious metals present, which account for about 6% of the total, included:

- 4376 kg of copper,
- 122 kg of silver,
- 12 kg of gold,
- 4 kg of platinum.

While for the lithium ion battery of the smartphone, the rare materials saved are:

- 1702 kg of cobalt,
- 486 kg of rare-earth metals.

They represent around 14% of the resources present in the battery.

### Main benefits

With reference to the initial assumption of the management and processing of data, the sale of mobile phones via Subito for a one-year period produced environmental benefits in terms of saving the resources in 486,207 smartphones, equivalent to about 90 tonnes of materials, equal to 2.6% of all the materials present in smartphones sold in Italy in 2015. This means that, considering the average usage time of a cell phone, which is about two years, and extending the life of the asset through sale, we are actually saving the use of new resources for a similar period (useful technological life of 4 years).

### Performance Indicators

To further improve the level of recovery and recycling of resources contained in mobile phones, it would be useful to make users aware of the savings in materials and the economic benefits, which may derive from the sale of a still functioning smartphone, which its owner no longer intends to use.

### Potential for roll out and development

This solution can easily be adopted by both private and commercial users in order to optimise from an economic and environmental point of view products that might otherwise be lost or that may terminate their life cycle without being recuperated.

## Information on the Circularity Index.

We have developed a calculation model, called **CirculAbility Model** ©, which returns a synthetic index, a value indicating the degree of circularity of a certain product/service, called circularity index or Circular Index (CI).

This case considers the whole life cycle of a mobile phone. The model examined so far used input data provided by Subito regarding the components present in a mobile phone and the energy required to produce it. On the other hand, it did not consider the energy needed for recharging during its life cycle. According to statistics, in Italy mobile phones are changed on average every 2 years, while their useful technological life is 4 years.

Extending the life of a mobile phone by two years, thanks to its sale on the second hand market, means producing, for all purpose, one less mobile phone, a result that is achieved by Subito. Another data revealed by industry research indicates that only 18% of mobile phones at the end of their life cycle are intercepted and sent to be recycled, but as many as 96% of their components could be reused/recovered. In this case, we considered a recycling process efficiency of 90%.

With these data, the circularity of the mobile phones resold on Subito is about 31%. The weight of Subito has not been considered on the whole of Italy's mobile phones.

[Scopri di più sul CirculAbility Model](#) ©