



LCA Video FAQ

Who is Ramboll?

Founded in 1945 in Denmark, Ramboll is an independent expert company ranked as the number two environmental consultancy firm in Western Europe. Owned by Rambøll Fonden (the Ramboll Foundation), Ramboll supports the European Commission on many regulatory topics such as the recent SUPD guidelines (Directive 2019/904), the Water Framework Directive, and the improvement of European batteries. Ramboll employs around 16,500 experts and is present in 35 countries.

What makes this study so unique?

Ramboll identifies a number of unique features of the study including the following:

- **“Approach:** *the main goal of the LCA study is to compare for the first time through a system approach the environmental performance of single-use and multiple-use tableware options for in-store consumption in quick service restaurants (QSR) in Europe and not focused on the environmental performance of a single product.*
- **Robustness and reliability of the investigated system:** *the incorporation of representative data and information with regards to the functional unit, inventory data as well assumptions around the systems. Primary data and information (reflected in the functional unit) for single-use system are obtained from EPPA members’ whose market share is over 65% of QSRs in Europe. This is particularly relevant since previous LCA studies based on secondary data for paper upstream processes do not represent state-of-the art for the investigated single-use system.”*
- **Primary data** from QSR restaurants and dishwasher manufacturers.
- Contrary to most existing studies, all data are recent and updated as of September 2021.

Has this study been double-checked and independently verified?

Yes.

The Ramboll LCA meets ISO 14040 and 14044 standards and has been independently verified by Germany’s TÜV (Technischer Überwachungsverein). TÜV stated that: “All significant parameters are available and representative and have been systematically derived and duly assessed. All type approvals have been checked. The assessments and the underlying data collection and calculation procedures are transparent and traceable.”

The Ramboll LCA has also been recently audited by the specialized environmental agency In Extenso on behalf of ADEME, the French national agency for Environment, and is now part of ADEME referential bibliography.



Is it true that tableware glass is not recyclable, ceramic is very rarely recyclable, and plastic reusable tableware is not widely recycled yet?

According to European legislation, “recycling’ means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.”

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01994L0062-20180704>

Current discussions consider that a recyclable product :

1. Has an existing scalable technology,
2. And is widely available across a country.

In this respect:

- **Tableware Glass:** According to the French Trade Union Chamber of Mechanical Glassware: *“Culinary glass and ‘glass’ tableware often have a different chemical composition from packaging glass that makes it impossible to integrate them with the cullet used in glass furnaces. The ‘transparent dishes’ (plates, dishes...) is most of the time made from a ceramic that melts at a much higher temperature than the glass of a bottle. This is called an infusible. If it cannot be removed before baking, these pieces are found in the finished objects, which leads to defects in the packaging. It goes to landfill or an incinerator. It is therefore lost forever and unnecessarily ‘clutters’ landfill or incinerator. In addition, the cost of treatment per ton must be paid.”* <http://www.verre-avenir.fr/Le-recyclage-du-verre/Questions-Reponses>
- **Ceramics:** Ceramics can't be easily melted down and reused for the same purpose or recycled as part of a new material. Most waste facilities do not accept it and ends up in landfills. Crushed ceramics can be used for very limited uses such as drainage systems and foundation base for driveways (though this is excluded from the European recycling legislation). Existing recycling streams for ceramics are very limited.
- **Reusable plastic tableware:** can be recycled, but there are very few - if any - currently existing national schemes in the European Union. When assessed in the Ramboll LCA, the 30% and 70% plastic tableware recycling hypothesis do not change the outcome in terms of environmental performance in favour of paper-based single-use packaging. More generally, the recycling rates of plastic in Europe are low and dominated by PET and bottles.