

QRP bulletin becomes ValueFlex bulletin

#4 – Summer 2022

Dear Stakeholders,

We are delighted to announce that our **Quality Recycling Process** is evolving into the **ValueFlex project**. This new name reflects our objective to maximize the **value capture** from the recycling of all PO-based household **flexible** plastic packaging at scale. It also reflects the aspiration for the demonstration **plant design** to be **flexible** versus **future market demand**, and to optimize the production of high quality recyclates from mechanical recycling and of granulates for chemical recycling depending on the economics.

ValueFlex, a unique ambition

The combination of the following objectives makes our project unique:

- Demonstrate the opportunity to create value from recycling of **flexible household plastic** packaging.
- Demonstrate **commercial viability** of such recycling business **at scale**.
- **Valorise** the full PE flexible and PP flexible streams, utilizing **complementary** outputs of:
 - a) Mechanical recycling **film grades**, both **rPE** (natural and colour) **and rPP**.
 - b) Mechanical recycling grades for technical **injection moulding**, thermoforming, extrusion blow moulding applications.
 - c) rPO mix **suitable for chemical recycling** with efficient yields.
 - d) Potential other offtakes for aggregation and processing at a specialized plant (e.g. multi-materials, surface printed structures).
- Ensure a **flexible plant design**, accommodating for combinations of the above outlets, depending on feedstock compositions and market demand, while remaining financially viable.

ValueFlex, a unique flexible plant design

With the support of HTP, multiple plant configuration options were studied in the Roland Berger led pre-feasibility study:

- The **scale of 50kt** is recommended for economies of scale.
- **Modular design** (QRP sorting line + multiple lines for washing/ extrusion/ filtration/ deodorization) optimized between cost, flexibility and expected market demand.

- **Additional treatments** (eg deinking, delamination) require additional scale to be economic, i.e. via a separate facility.

ValueFlex, a positive business case

- Main drivers include plant scale, location (labor, energy) and recyclates price levels.
- The business case renders both positive EBIT margins and positive capital return (IRR >10%)*.
- Gate fees (via EPR) protect profitability in the pessimistic scenarios and represent an upside revenue in optimistic scenarios.

* Detailed assumptions available upon request.

Risks analysis and contingencies

Key risks:

- **Feedstock availability** for flex PE and flex PP/PO bales → Support from local PROs should be considered to de-risk.
- **Selling prices** (some premium assumed supported by the expected regulatory landscape) → can be underpinned by offtake agreements. Ability to achieve quality requirements is however critical.
- **Regulatory landscape** (acceptance of chemical recycling) → risk mitigated by options to supply other markets.

Immediate Next steps

Interested investors will be invited to express interest and bid for building and operating the demonstration plant, in return for technical support from CEFLEX and risk sharing capital structure facilitated by the Alliance, subject to further approvals. **Bidding package launch: early Q4 2022.**

Meet the members of the core team

Dragos Popa



Principal consultant at Roland Berger. Dragos holds 14 years of consulting in the field of plastics collection, sorting and recycling for global FMCGs, PROs, packaging producers and recyclers in Europe. Dragos is leading the project Pre-Feasibility phase with a team of experts in recycling and circularity subject matters, as well as business planning and modelling.