



# The Pyrolysis Perspective: Insights from managing waste variability

As a group of technologies, chemical recycling is joining up two ends of linear value chain, taking industries that have been traditionally been separated and working between them for circularity. At Itero, we have been running our pilot facility for over two years, testing real-world waste in real-world conditions, constantly learning about how the variability of waste feedstock affects the operation of a pyrolysis chemical recycling process and the pyrolysis output products, and what this means for our work with our partners.

In this talk, we'll use our experience and data to explore the broader landscape and how the variance in real-world waste works in the pyrolysis process:

- After conducting numerous tests on various wastes at various different operating conditions, we have insights into waste parameters such as oxygen, chlorine, volatile matter, carbon etc and how these affect processing and the output products.
- We'll explain the challenges of the variability of waste when processing it through a pyrolysis reactor and share some of the lessons (including case studies and numerical analysis) we have learnt with respect to how this variation affects a pyrolysis process and products on a real world scale, not just on a lab scale.
- We will look at the implications of waste variability, and how to better collaborate across industries for the greatest circularity.