The Compost Research & Education Foundation (CREF) investigates the breakdown of compostable foodware and packaging products. The foundation aims to uncover the relationship between various composting methodologies and the disintegration rate of biodegradable materials. This research is conducted through the Compostable Field Testing Program (CFTP), which sends a standardized set of biodegradable products to external facilities for independent disintegration trials, with results subsequently sent back to the CFTP. The program aims to help composters make informed decisions about which products to accept at their composting facility, thereby restoring trust between industrial composters and manufacturers of biodegradable products.

The Compostable group at the Data Science Institute focused on three main objectives. First, they standardized trial results into a consistent database format, addressing the challenge of previously disorganized data. Second, they designed a data schema that connects each table, ensuring data integrity and boosting future data processing efficiency. Lastly, they created an online interactive dashboard that provides a transparent analysis of composting methods and material types.

The main result was the deployment of a public-facing dashboard designed to assist composters with making informed decisions about which types of materials to accept at their facility to achieve an optimal decomposition rate. As shown in the figure below, the current data suggest that composters should be most willing to accept foam and certain rigid biopolymers (>0.75 mm). At the same time, they should be skeptical of lined, unlined fibers, as well as some rigid biopolymers (<0.75mm), as those have been shown to resist decomposition under research trial conditions.