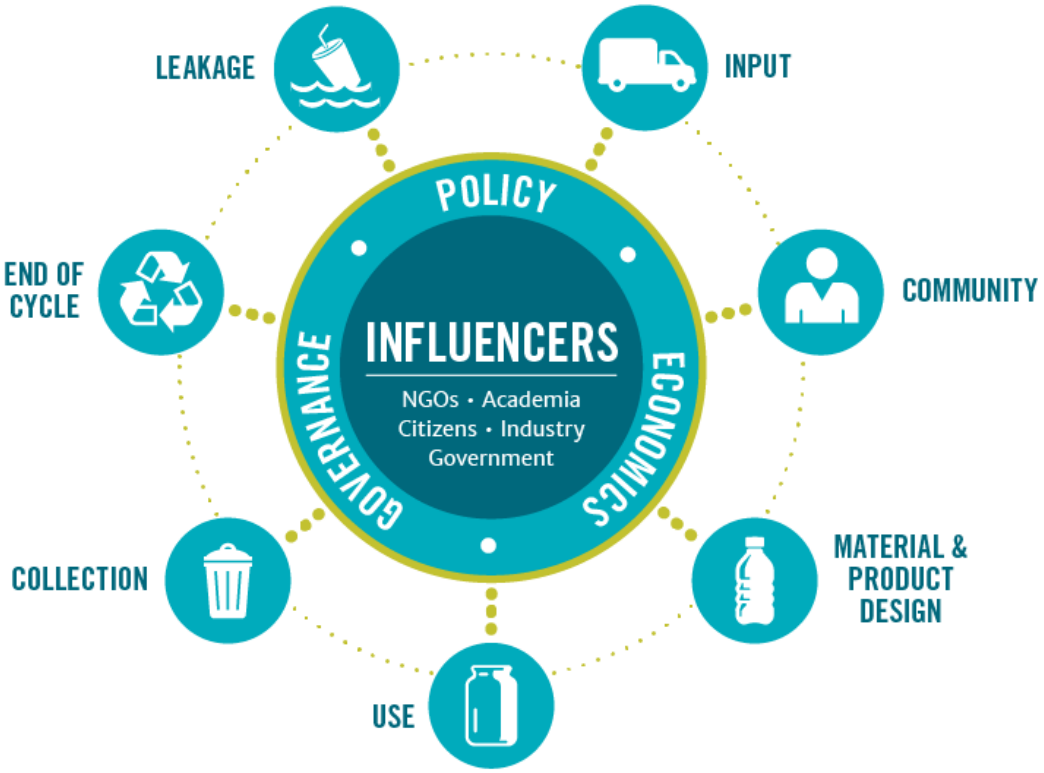
UNIVERSITY OF GEORGIA
College of Engineering

The Circularity Assessment Protocol

Decision-makers need data to take an informed approach to identify research-driven solutions in policy, infrastructure, and innovation. Developed by the Circularity Informatics Lab at the University of Georgia, the Circularity Assessment Protocol (CAP) is a standardized assessment protocol to inform decision-makers by collecting community-level data on plastic usage and alternative materials. CAP is a hub and spoke model that provides a snapshot of a city's circularity that can provide data for local, regional, or national decision-making to reduce leakage of waste (like single-use plastic) into the environment and increase circular materials management. Grounded in materials flow and systems thinking concepts, the CAP uses a hub-and-spoke model, shown below, to holistically characterize how consumer plastic flows into a community, is consumed, and flows out, either through waste management systems or leakage into the environment. Since 2019, the CAP has been implemented in 16 countries and 56 cities.



The CAP characterizes seven community components:

INPUT
What products are sold in the community and where do they originate?

COMMUNITY
What conversations are happening and what are the stakeholders' attitudes and perceptions?

PRODUCT DESIGN
What materials, formats, and innovations are found in products, particularly packaging?

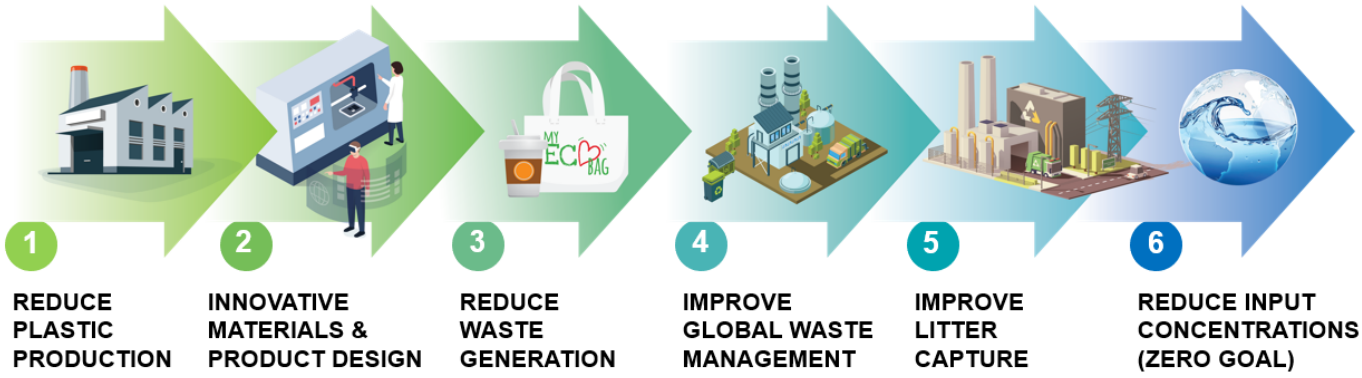
USE
What are the community trends around use and reuse of product types?

COLLECTION
How much and what types of waste are generated? How much is collected and what infrastructure exists?

END OF CYCLE
How is waste disposed? What is the fate of waste once it is properly discarded? How is it treated?

LEAKAGE
What waste ends up in the environment? How and why is it getting there?

The CAP can help to guide the most effective strategies for a community to improve circularity by delivering key metrics and targeting potential actions to areas most in need along the entire value chain of plastic. Addressing multiple intervention points can reduce the quantities of plastic entering the environment, aquatic systems, and, subsequently, our ocean.



Core tenets of our work include:

- **Information sharing** – The local community's knowledge and expertise is honored. Partners and teams build capacity through learning methods and collaboration. Debris Tracker is an important tool that is used by researchers and the community alike.
- **Data analytics** – Data for each city's CAP is analyzed and co-owned by the researchers, city, and sponsors. Trends across cities, countries, and regions can illuminate global narratives and influencing factors. Open data is important to the process.
- **Empowering communities –** Communities are empowered by local and global CAP data to inform their decisions about what is working - or where and how to intervene to increase circularity. Communities that participate in CAP can better define resource needs and participate in knowledge exchange.
- **Systems change –** information is power that can result in community-based systems change.

What to expect during 2-3 weeks of field work


litter transects


waste surveys


shop interviews

Join us! You and your Community can download the Debris Tracker app to join our team and help collect data today!