

The Socially Distanced Dispenser
(Technical Report)

Plastic Bag Bans in New York State
(STS Research Paper)

An Undergraduate Thesis Portfolio
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by

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Sociotechnical Synthesis

The United States is the largest producer of plastic waste in the world, having generated 42 million metric tons of plastic trash in 2016 (Parker, 2020). Many industries have strived to reduce their consumption of single-use plastics in recent years, but the COVID-19 pandemic has complicated efforts to reduce waste. Producers must develop new ways to provide consumers with sustainable options while remaining safe during the pandemic.

Food vendors have struggled to provide safe self-serve options during the COVID-19 crisis, but technology can help them solve this problem. The Socially Distanced Dispenser is a contactless, Bluetooth-enabled bulk food dispenser that allows customers to dispense variable amounts of dry goods through a mobile application interface. The dispenser is capable of detecting errors such as jams, and can provide feedback to users through the mobile app.

Legislation can also promote sustainability. New York State passed a law in 2019 banning single-use plastic bags, and many social groups actively fought for and against the ban. Environmental advocacies celebrated the ban, while plastic and food industry trade associations tried to strike it down. Both proponents and opponents of the ban have used similar tactics to promote their agendas, such as informing the public and directly participating in the legislative process.

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