The information included in this process overview is a high-level summary of research performed by Luminary Labs. It is not representative of this process in its entirety. The information shown is intended for the sole purpose of aiding solvers in the Opioid Detection Challenge, and does not attempt to summarize all mail processing or inspection procedures.

Mail arrives in trucks filled with pallets, each with bags of mail. Pallets are unpacked and the barcode on each bag is scanned, often manually. Parcels enter sorting process. Parcels identified as high risk by the CBP targeting system are separated by the USPS for inspection by CBP. CBP officers conduct nonintrusive inspection of the segregated parcels. Cleared parcels return to the normal mail stream.

Volume of parcels processed is variable, depending on the day of the week as well as time of year. Volume also varies by facility. John F. Kennedy International Airport (JFK), the largest of International Service Centers (ISC), processes more than half of all international mail. The ISC at JFK processes roughly 800,000 parcels per day, so efficient movement of parcels must be preserved.

This can be a highly manual process. In some facilities, USPS workers need to sort through bags of parcels by hand to find individual parcels for inspection. How traffickers package opioids is one of the signals officers use to separate parcels for closer inspection. The human-machine interface is important. Tools that can be deployed, updated, and redeployed quickly and easily will be more effective than a rigid system.

Containers and equipment used to process parcels are reused continually, so they may be contaminated with trace levels of opioids or other chemicals that could hinder chemical detection. Opioids may or may not be actively concealed within a parcel. Officers frequently share information on trafficker micro-trends.

Technology that helps officers avoid opening parcels which do not contain opioids would help save significant time.

If parcels contain substances that look like opioids, they are chemically tested at an in-house lab.

Key Considerations for Solvers

The U.S. Customs and Border Protection (CBP) uses various data sources to evaluate and triage parcels according to risk, flagging and segregating high-risk parcels for increased scrutiny.

Advanced Electronic Data (AED) from shippers is a data source received by the U.S. Postal Service (USPS). AED and other data sets are leveraged by the U.S. Postal Inspection Service (USPIS) for intelligence-based analyses, to predict the presence of illicit content and generate lists of suspicious parcels. This information is provided to CBP for action.

We advise solvers to target solutions to these stages of the process: