

## Frequently Asked Questions

Below are common questions posed by prospective Opioid Detection Challenge entrants. For a full explanation of the Challenge requirements, please review the official [Rules, Terms, and Conditions](#).

### Solution requirements

- **What types of solutions can be submitted?**

Solutions must have a detection component, which may be based on chemical detection, data analysis or another anomaly detection method that identifies parcels containing opioids. Please see [About the Challenge](#) for more information on requirements.

- **Can I submit a purely data-driven solution?**

Yes. A submission is required to include an approach to anomaly detection, but this can be accomplished in many forms, including through a data solution. A solution does not need to develop new hardware technology and may be paired with an existing hardware technology, so long as it addresses how it will detect anomalies and can successfully identify packages with opioids.

- **Must submissions include data, AI, or machine learning?**

No, solutions are not required to be data-driven. All eligible solutions that detect parcels containing opioids will be considered.

- **Can existing technologies or patents be submitted?**

Yes, we are interested in all potential solutions that satisfy the selection criteria. Entrants must declare that they have permission to use any third-party patented materials, including third-party data sources, resources, content or technology, in the submission form. Ideally, entrants should be modifying and/or optimizing existing technology in some manner to better meet the Government's requirements.

- **Do solutions need to be able to process all parcels in a facility or only some?**

Solutions are not required to process all parcels in a facility, but will be judged based on several criteria including accuracy and speed. Please see the [Selection Criteria](#) for more information. The ideal solution would have the potential to expand its processing capability over time.

- **What size parcels must the solution be able to process?**

Solutions must be able to detect fentanyl and analogous compounds in parcels up to 27" x 17" x 17", as opioids are common in various parcel sizes, including e-packets.

- **Is there a limit on how much a solution can cost?**

Solutions cannot have operational and maintenance costs in excess of 20% of initial capital per year.

- **Would a portable unit that could only partially scan the parcel be considered?**

Yes, all eligible submissions will be considered and judged based on the [Selection Criteria](#).

### Detection

- **What types of compounds do solutions need to be able to detect?**

Solutions need to be able to detect parcels containing fentanyl and analogous compounds. The ability to detect other opioids and narcotics will be judged favorably. Solutions which can be rapidly adapted to future threats – such as different synthetic narcotics will also be judged favorably.

- **Which packaging materials need to be considered beyond paper and cardboard?**

There is no formal specification or limitation regarding packaging materials to consider for a solution. A tremendous variety of materials are used in the mail today to avoid detection, and the techniques are always changing. Sometimes illicit drugs are even formed into other materials.

- **Is there interest in differentiating the detection of fentanyl from pharmaceuticals?**

Most instances of pharmaceuticals sent in the mail are also not legal and are therefore of interest. Detection of all illegally sent drugs is important.

- **Do solutions need to be able to detect opioids real time?**

The sooner a harmful material is detected, the sooner it can be mitigated. Real-time detection is, therefore, ideal. Swift detection should be the goal of innovators, but a lack of real-time detection will not specifically disqualify an otherwise strong solution. Please reference the [Target Performance Metrics](#) table on the [Additional Resources](#) page for further guidance.

## IP and Eligibility

- **Can I submit more than one time?**

Yes, entrants may submit more than one differing entry.

- **Can teammates change between Stage 1 and Stage 2?**

Yes, teammates can change between stages, and we anticipate teams may make additions to address the need for higher fidelity in Stage 2.

- **Who owns the IP?**

Entrants retain full ownership of their submissions. The government reserves the right to enter into good faith negotiations for license rights associated with the submission. For more information, please refer to the [Rules, Terms, and Conditions](#).

- **Who is allowed to enter the competition?**

Anyone that meets the eligibility requirements can enter the competition, including solvers from eligible countries outside the United States. Felons and those on government exclusion lists cannot enter the competition. Individuals under the age of 18 cannot serve as a Team Lead, which is the primary point of contact for a submission. Additionally, government employees applying as individuals or on behalf of otherwise eligible organizations are responsible for ensuring that their participation is permitted by the [Rules, Terms, and Conditions](#).

- **How do we know if an idea has been previously considered or has a patent or partial patent attached?**

IP of existing patents are the responsibility of the solver to identify in advance.

## The mail inspection process and environment

- **How is the U.S. Postal Inspection Service involved with detection in the field?**

Customs and Border Protection is primarily responsible for detection within the International Service Centers. The U.S. Postal Inspection Service coordinates with CBP to enable their work in International Service Centers. USPIS is responsible for conducting interdictions and investigations of dangerous and illicit goods within the domestic mail system.

- **What power and networking capability is available? Is wi-fi available in the facilities?**

Standard electrical and Ethernet connectivity will be available in facilities where the solutions are planned for deployment. Wireless technology (Wi-Fi) is commonly unavailable in these settings and further presents a security risk for data transmission. Solvers should not expect Wi-Fi to support their solution.

- **Do postal inspectors and customs officers currently use physical characteristics to identify risky packages?**

Yes. Inspectors do currently use physical characteristics to identify risky packages.

Please refer to the international mail system [process map](#), available on the [Additional Resources](#) page of the Challenge website, for more details on the inspection process.

- **Which characteristics on the outside of mail parcels could be considered by solvers?**

Some characteristics that solvers can consider include shape/dimension, packaging, labels, and postmarks.

- **Will it be possible to tell if a parcel has been previously inspected by an inspection officer?**

Parcels are not marked if they have been inspected by an officer, and no indicators are currently provided on whether or not a parcel has been inspected.

- **Are you planning to work with origin countries for their cooperation in interdiction?**

The U.S. Government is working with many countries on interdiction.

### Sample data

- **What kind of sample data is available and who will supply the data?**

X-ray scans of parcels that contain opioids, supplied by Customs and Border Protection, are available on the [Additional Resources](#) page of the website. In Stage 2 we anticipate making available larger and more comprehensive datasets to selected finalists, along with associated metadata.

- **Is there structured data available (such as height, weight, etc.) to complement the sample images?**

This data is not currently collected, but might be available in Stage 2.

- **Are the images provided of actual fentanyl or surrogates?**

The images included on the [Additional Resources](#) page all contain fentanyl, cocaine, or methamphetamine.

- **Will Stage 2 datasets contain x-ray images or images of the exterior of the packages?**

We anticipate having both in Stage 2.

### Stage 2

- **Can you tell us more about what will occur at the test event?**

Stage 2 finalists will need to send their prototype to the facility and may elect to be present for testing. We will aim to have testing of each prototype take less than one day. A standard testing approach will be applied to solutions, and test plans will be finalized based on the specifics of the technologies being tested. More details will be provided to finalists by the beginning of the virtual accelerator. Test results will be a factor in determining the Stage 2 winners, but not the sole basis for selection.

- **What do Stage 2 prototypes need to be capable of?**

Prototypes must be able to demonstrate effective detection of opioids without disrupting the flow of mail, and without penetrating or pretreating parcels in any way.

- **If I win Stage 1, am I required to participate in Stage 2?**

Yes. As part of their acceptance of the cash prize, finalists selected in Stage 1 must agree to participate in Stage 2.

## After the Challenge

- **Will the winners be guaranteed a contract?**

The partnering agencies are highly interested in the possibility of contracting services from finalists, winners, and potentially other entrants following the conclusion of Stage 2.

- **When will solutions be deployed in the field and in what quantities?**

This depends on the solution. We hope to find a solution that can be applied to a variety of problem areas throughout CBP facilities and the postal system and beyond.