

25 July 2023

# Operational Challenges with Automated Detection – a New Zealand Perspective

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NEW ZEALAND  
**CUSTOMS SERVICE**  
TE MANA ĀRAI O AOTEAROA

Protecting and promoting  
New Zealand across borders

# So What? Who Cares?

- › **Mission:** to enhance our ability to detect prohibited items/contraband crossing the New Zealand border
- › **Problems needing solutions:** how we effectively integrate the capabilities of next generation x-ray equipment, particularly algorithms, into our existing processes



# What we currently have

- › 2D x-ray equipment deployed across our air freight and sea cargo inspection facilities
- › X-ray equipment is a layer in our risk management and inspection processes



# Automated Detection and Algorithms

- › Opening mid 2024, will be a new international mail centre; this will be a purpose built building, and integrate in next generation technology and equipment
- › Loan RTT110 currently operating at our Auckland Air Cargo Inspection Facility (which examines all air cargo and fast freight arriving into Auckland)
- › Proof of concept work to develop an automated algorithm for the detection of drugs



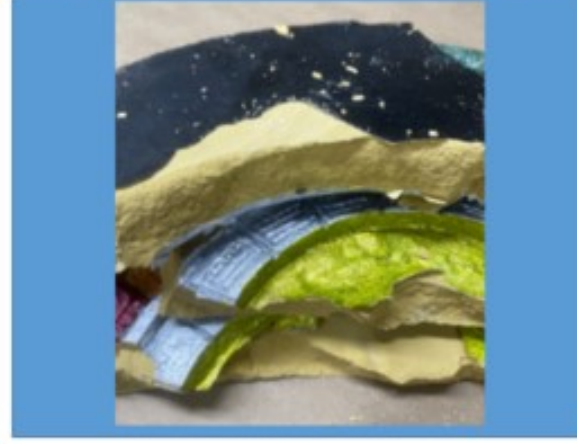
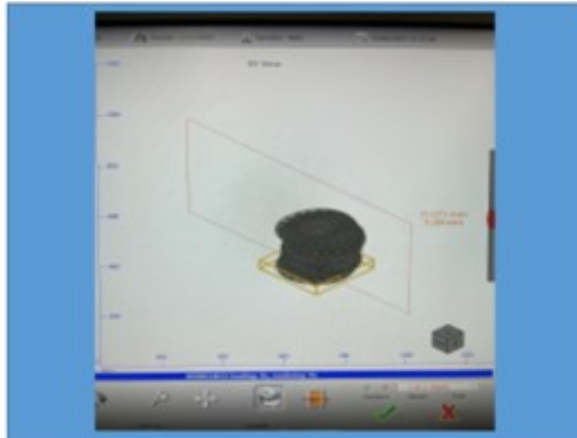
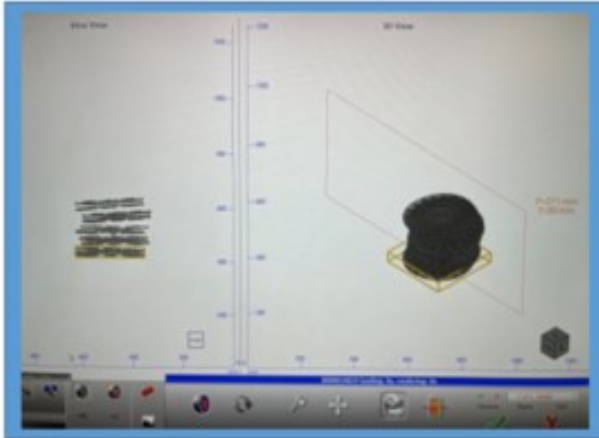
# Operational Challenges

- › Where to next?
- › How effective can algorithms be in detecting drugs in particular?
- › How broad can algorithms be?
- › How many different algorithms can we effectively develop and maintain?



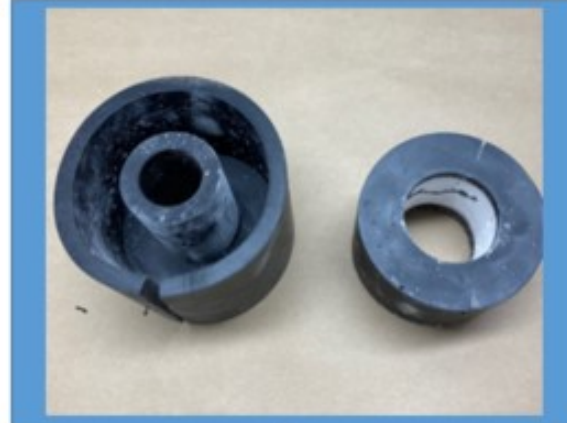
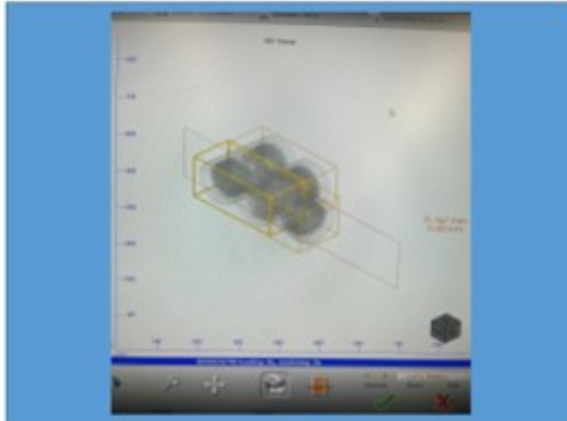
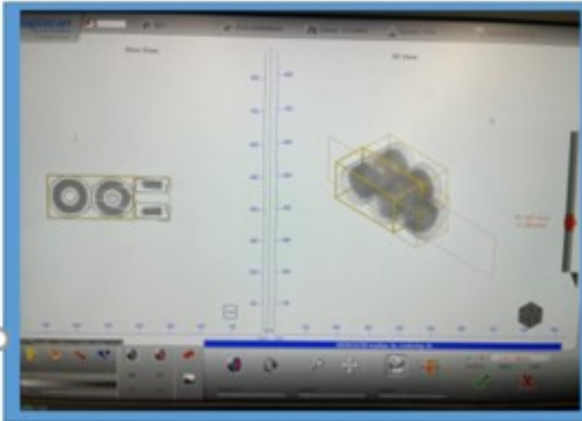
# Customs RTT Intercept Image

Concealment Method: Mixed into Gypsum and moulded into art pieces  
Form: Paste/Solid



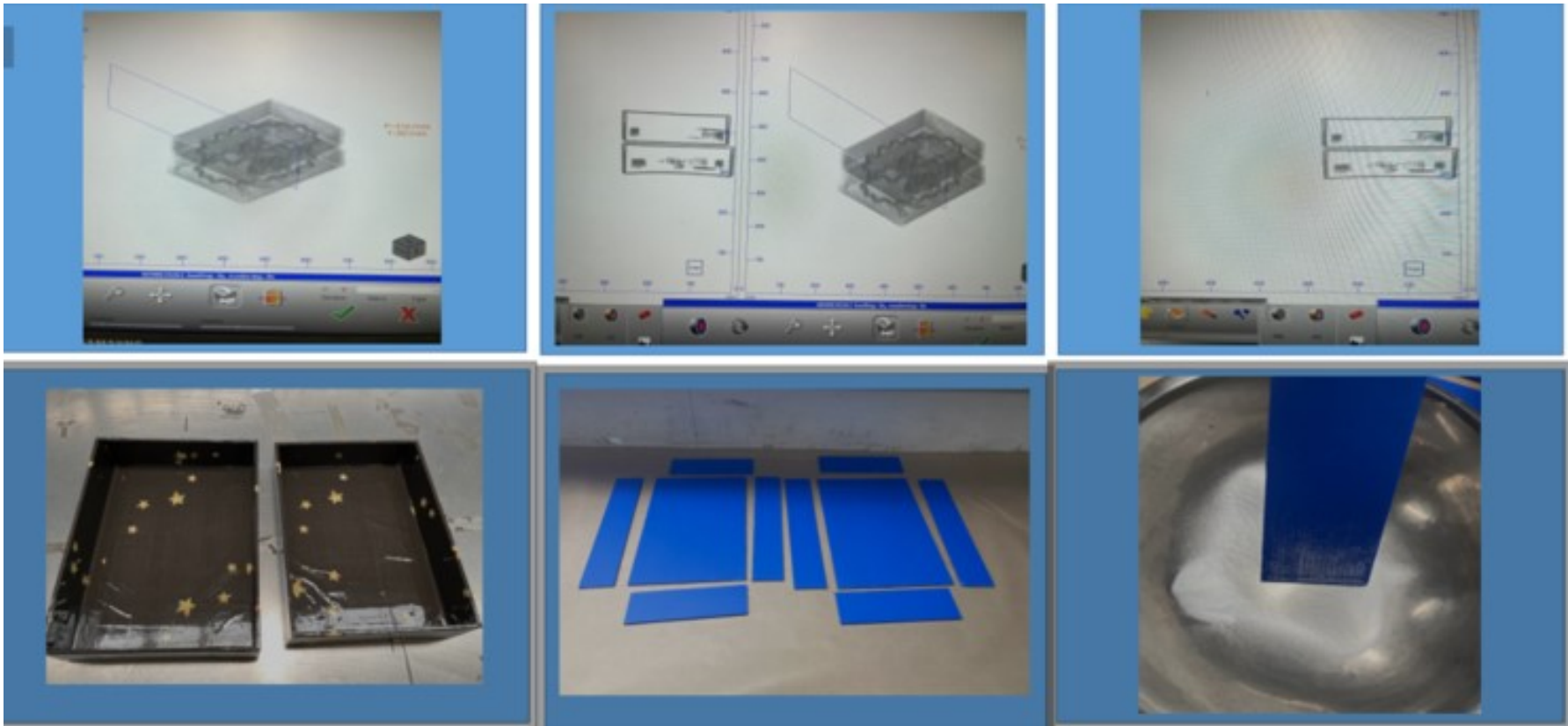
# Customs RTT Intercept Image

Concealment Method: Within Void Space of Buffer Blocks  
Form: Crystals



# Customs RTT Intercept Image

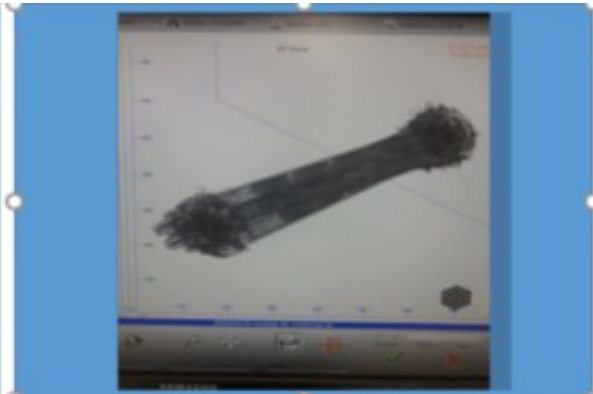
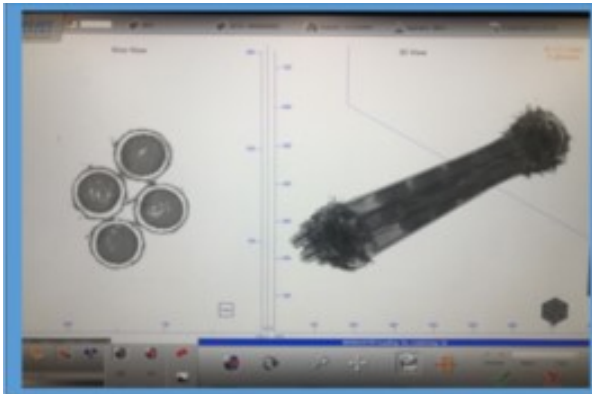
Concealment Method: Within corrugated backing boards (Table Lamp)  
Form: Powder





# Customs RTT Intercept Image

Concealment Method: Within Void Space of driveshaft  
Form: Powder



# Questions