



# How new technology and real time feedback can improve transport biosecurity

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# Protocol® Biosecurity Technology Overview

**3** Controlled Entry based on biosecurity protocols



**2** Transport biosecurity monitoring with breach alerts



**1** Health status and downtime management for large systems







## 2 Truck and Trailer Biosecurity



**RECORD REAL-TIME  
TRAILER MOVEMENT**



**INTEGRATE  
MULTIPLE TRUCK  
GPS SYSTEMS**



**CONFIGURE TO YOUR  
BIOSECURITY  
POLICIES**



**CREATE TRACE-OUT  
REPORTS & MAPS**



**BIOSECURITY  
BREACH  
ALERTS**

Explainer video: <https://www.youtube.com/watch?v=cGqUTwRxBMo>



# Saskatchewan Biosecurity Technology Research Project\*



\*In collaboration with Saskatchewan Pork with funding from Canadian Agri-food Automation and Intelligence Network



## Data Analysis

- **Total Visits: 3172**
- **Phase 1 visits: 1438 (Apr 1 –Sept 1, 2022)**
- **Phase 2 visits: 1734 (Dec 1-May 1, 2023)**
- **Average daily visits: 10.3 visits**
- **Most Frequented locations: Feed Mill & Truck Wash**



# Saskatchewan Biosecurity Technology Research Project\*

**Goal: To determine the biosecurity technology for movement recording that performs the best**

Device types tested:

- Taillight powered devices
- Battery powered devices
- GPS devices using 3G
- Long Range Local Area (LoRa LAN) Network devices



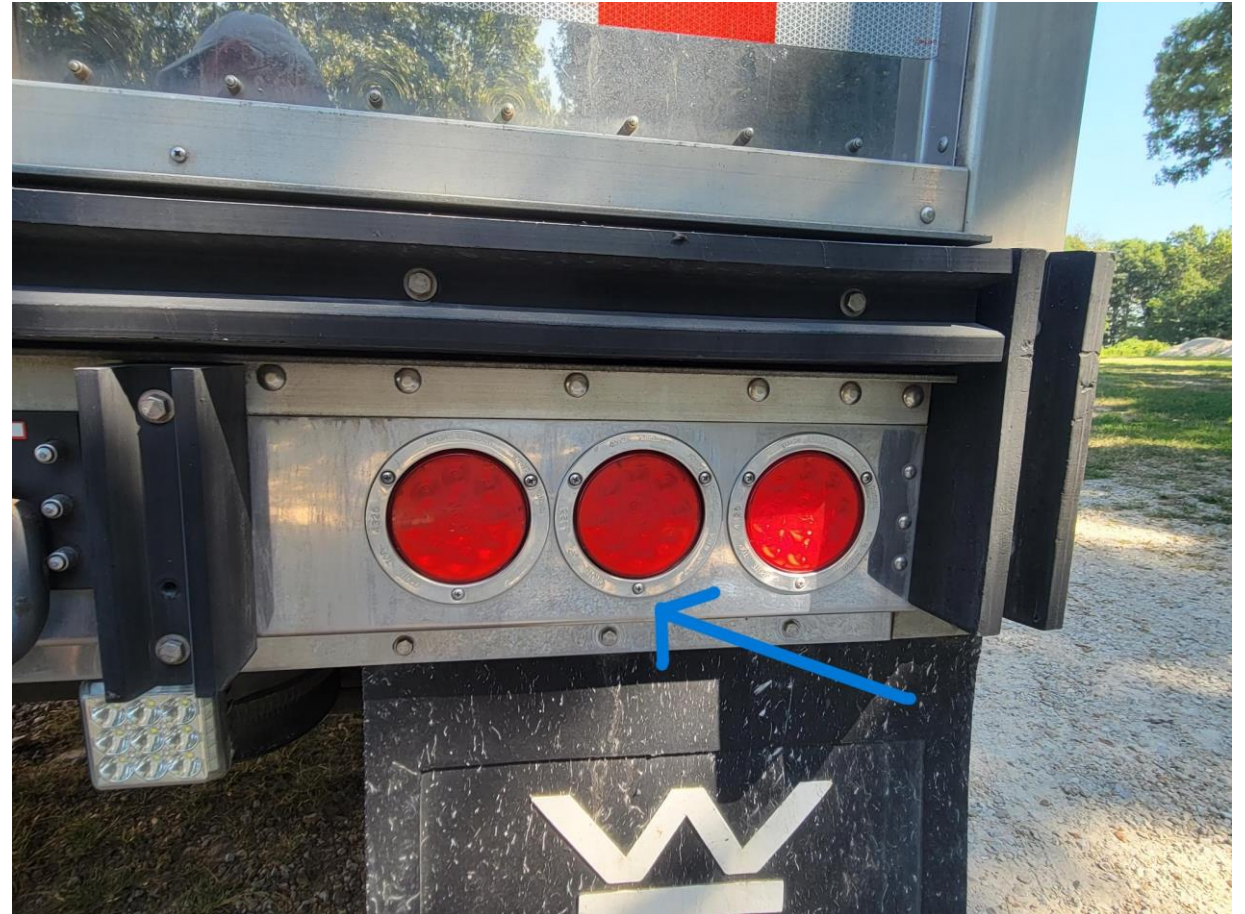




# Research Project Observations

## GPS Vehicle Devices not Equal

- Not all devices are created equal!
- Of the technologies tested, three GPS devices (two wired or powered, one fully battery powered) showed reliable performance





# Two Ways to Connect Trucks & Trailers to Farm Health Guardian



**GPS link with  
existing fleet  
tracking systems  
via API**



**Use of FHG's GPS  
devices for trailers  
and other vehicles**





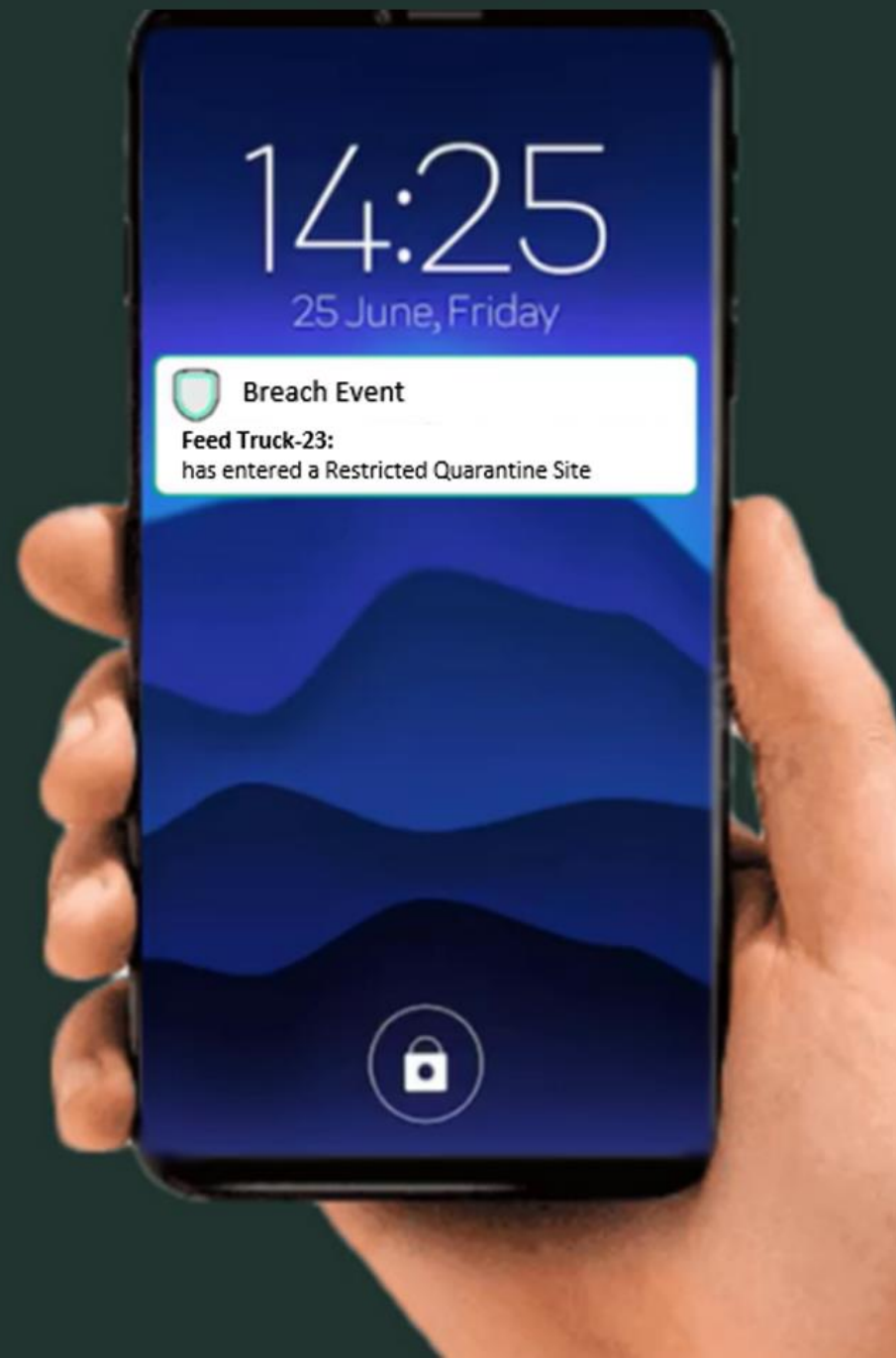


# Biosecurity Breach Alerts - Truck & Trailer

Software can be configured to monitor your biosecurity protocols

## Protocol examples:

- Truck wash completion
- Dedicated trailers assigned specific flow/group of properties
- Pyramid / Visit Order
- Trailer downtime
- More to come...





# Transport Biosecurity: MidWest Key Findings and Success Stories

**A**

Truck and trailer biosecurity breaches happen more often than we think

**B**

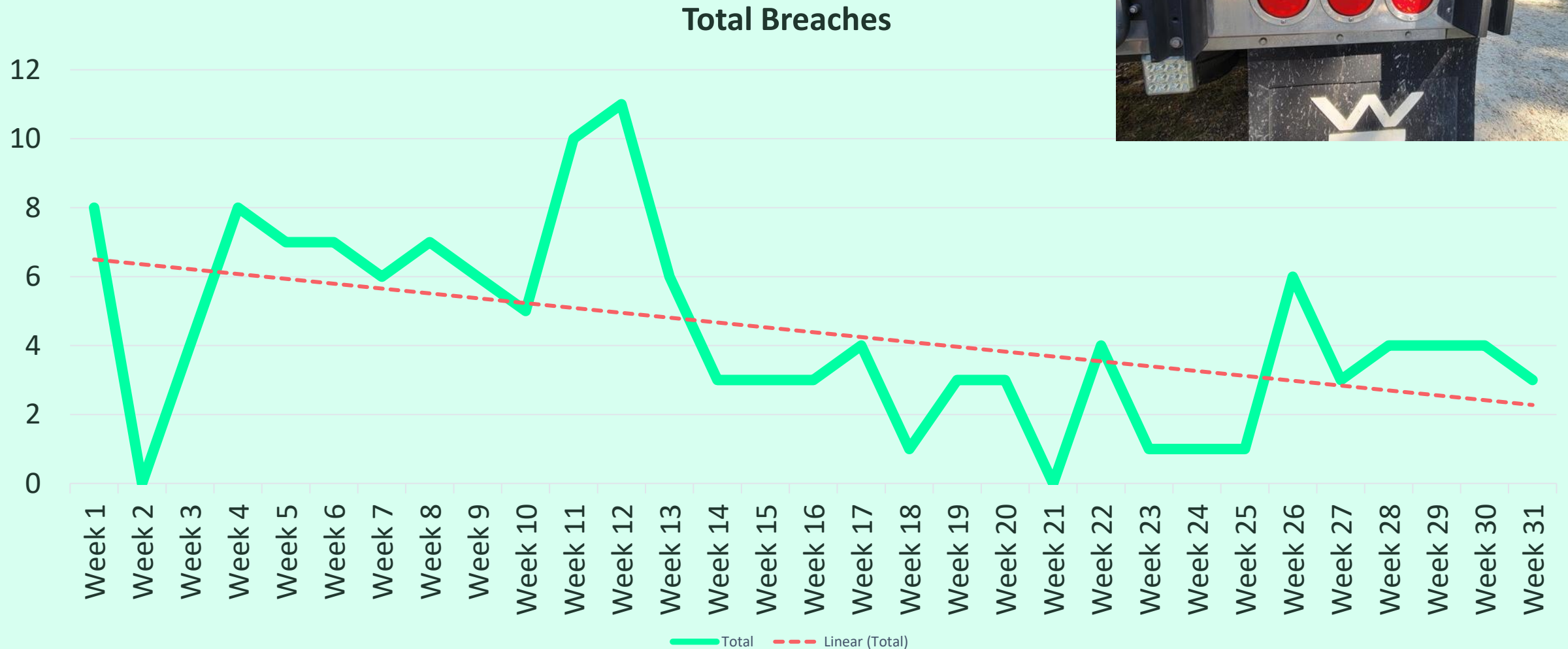
Real-time feedback greatly improves biosecurity compliance





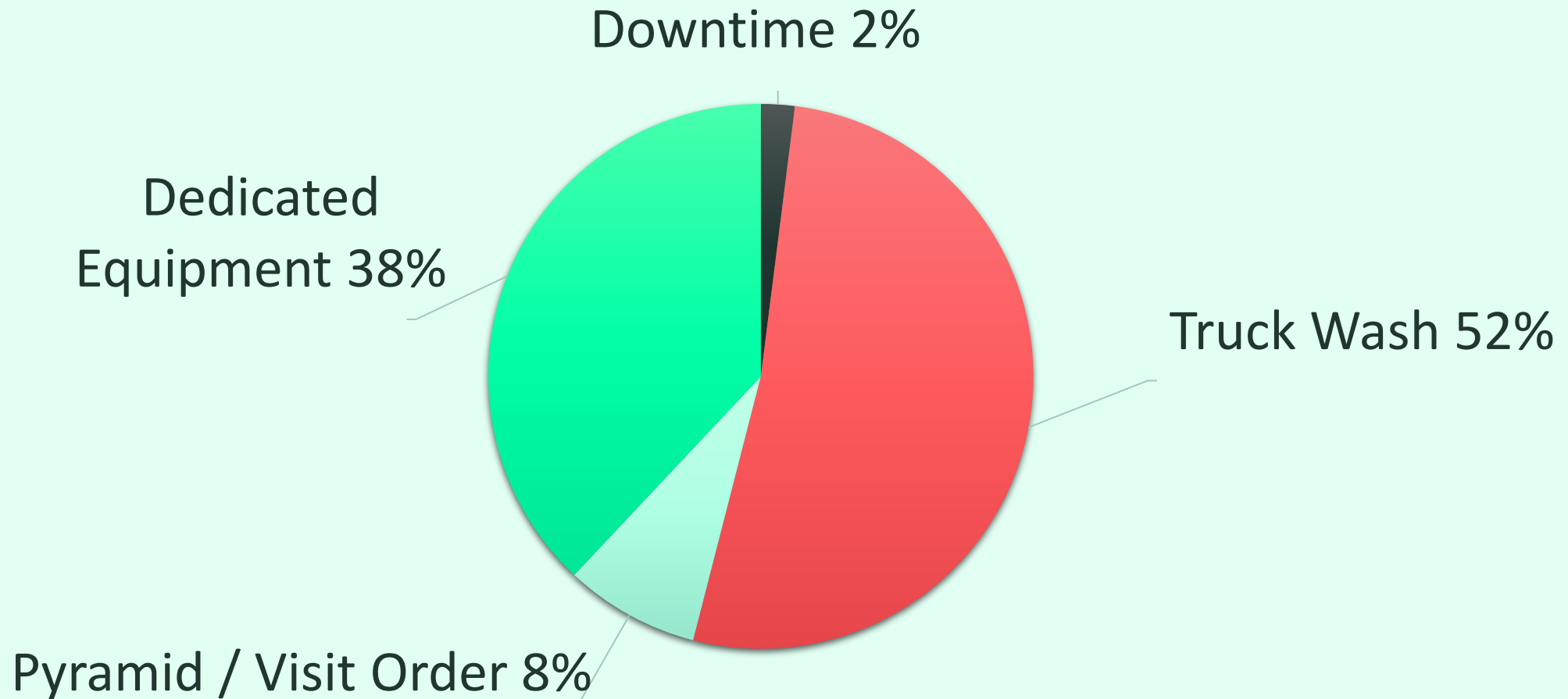
# Breaches Per Week

## Example 1





# Transport Biosecurity Breach Types 2024



A photograph of two small, pink piglets standing in a blue plastic crate. The piglet on the left is looking towards the camera, while the one on the right is looking slightly to the side. The crate has a blue plastic floor with a grid pattern.

# Conclusions

1. Not all GPS devices are created equal for use in agricultural settings
2. Truck and trailer biosecurity breaches happen more often than we think
3. Measure biosecurity so you can manage it
4. Real-time feedback greatly improves biosecurity compliance



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