AI PILOT PROJECT

Artificial Intelligence

THE PROBLEM

Over the last five years, **PACT** (*Pre-load Air* Cargo Targeting) received an average of 900,000 shipment messages per year.

For example, if one employee, working at an unrealistic rate of one message per minute, spent all their time reviewing messages, they wouldn't even have enough time to review 10% of all messages received in a year.

FWB/16 814-12345678FRAYYZ/T17K981.6MC15.46 FLT/AC875/08/AC69011/09 RTG/YULAC/YYZAC

GERMAN FREIGHT FORWARDER FRANKFURT FLUGHAFEN 999 Frankfurt De/60549/Te/-/Te/-

CNE
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. NC/Consolidated Cargo A OTH/P/MYC902SCC135.30CGC5
PD/WT5461.12

How can we improve our

effectiveness and efficiency

when assessing risk in air

of resources, PACT can use Al to increase capacity, PH-INVIDIOLIZ
CERIALL KOC
ISLINITOCTISHRANKE-URT
OSIA-E-RIL.Q. 1 ONE DOC ATT TO AWB
SPH/SPX/DOC while minimizing the number of required FTE's. OCIDE/ISS/RA/001000-999 #SIM/AOM BY X RAY SEE ATT

PACT + AI

Carriers Reviewed

AI IMPROVES SAFETY & SECURITY

(1) THINK BIG

Al augments every process & procedure at TC, freeing up humans to work on the 'sticky' problems

START SMALL

Demonstrate that AI can augment part of **one** process at TC through a "Pilot Project"

Partnership between three areas within TC



SCALE FAST

Pending the results of the AI Pilot

Project, implement the Pilot for

PACT processes



Develop a proof-of-concept for using AI and Machine Learning within PACT

If Pilot is successful, scale lessons

Explore options for adapting AI to

other areas of Transport Canada

learned to whole process.

and to other areas at TC

AVIATION SECURITY'S (PACT)

Began as a joint initiative between...



Digital Research Lab

Step within The HUB where

development of proof-of-con-

cept pilots and prototypes occur to establish viability of



THE HUB

A new IM/IT intake process, including the 'Digital Research Lab,'

meant to introduce user-centered design, problem definitions,

and experimentation using disruptive technologies.



Transport



OVERSIGHT

MODERNIZATION

Support evidence and risk-based

proactive decision-making that

enables timely response to risk

Integrate the design, delivery,

management of regulatory and

PROPOSAL GOING FORWARD

PACT (Pre-Load Air Cargo Targeting) continues its

outreach to explore expanding the number of

To meet evolving security risk, Aviation Security may require more air carriers to submit data to

In both cases, AI will allow PACT to add future

new air carriers, while still dealing effectively with

security risks and without compromising efficiency

and effective approach to

oversight programs

carriers that supply data

PACT in future

Use pre-load air cargo information to identify high risk, air cargo threats (i.e. "bomb

PACT (Pre-Load Air Cargo Targeting) analyzes data submitted by air carriers and coordinates risk mitigation before cargo is loaded.

Shift from inspection-based oversight to risk-based oversight

Streamline business processes by

re-engineering them to be more

Strengthen policy capacity to

better respond to the transporta-

effective and efficient

tion issues of the future

cargo shipments? risk-based oversight?

ABOUT AI PILOT PROJECT

An experiment with a disruptive technology to solve a common problem – improving risk-based

Can we use artificial

intelligence to improve

our ability to conduct



GCStrategies cultivates and represents a flourishing network of firms and experts in AI, cloud and blockchain, providing clients a single point of contact for results-based problem solving.

THE SOLUTION

AI will increase safety

and security 15-fold (!),

as every single message

NOTE: Through better use

will be risk-assessed.

Use AI to test and develop risk assessment and mitigation processes for air cargo shipments.

The AI would use various input sources to determine risk and support assessors in recommending shipments for Canada Border Services Agency inspection.





PACT'S CAPABILITIES TODAY

- Burdensome to do data analysis
- Duplication of effort in data handling tasks (200+ hours to import, clean, and archive data)
- Single, dedicated resource for targeting through batch processing

PACT'S CAPABILITIES WITH AI

- Save 1,000's of workhours by allowing for timely and proactive analysis of shipment data
- Conduct risk assessment on any shipment data received
- AI will support PACT in meeting its security outcomes, while allowing PACT to target shipments from more

WHAT IS AI?

Artificial general intelligence

"As yet nonexistent software that displays a humanlike ability to adapt to different environments and tasks, and transfer knowledge between them."

Artificial intelligence (AI)

"Development of computers canable of tasks that typically require human intelligence."

Machine learning (ML)

"Using example data or experience to refine how computers make predictions or perform a task."



Lixar is an award-winning, Ottawa-based company with expertise in providing enterprise-level solutions in artificial intelligence, data science, and cloud.



Transport's Deputy Minister (DM) tasked IM/IT & Transformation with leading this project.

Project originated as Transport's project for Deputy Minister's Committee on Policy Innovation (DMCPI).

TIMELINE



TC begins exploring options for an experiment with disruptive technology (AI)

JAN 2018

Hired Free Agent to lead

MAR Deliverables completed 2018

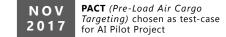
2019

Phase III of the AI Pilot project Contract with an AI firm to bring AI into TC's IT environment











Contract signed with GCStrategies, subcontracted to Lixar

SPRING 2018

Phase II of AI Pilot Project Continue the AI experiment through A/B testing



