TRACESCAN

Digital Contact Tracing and Social Distancing Solution

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health

A Frightening Picture

Key updates as of January 15, 2021, 7 pm EST

Cases today	Total cases	Active cases	Total recovered	Deaths today	Total deaths
6,812	695,707	76,068	601,910	147	17,729

Tested today	Total tested	Percent positive (total)	People tested per 1 million
133,443	16,396,962	4.2%	436,214

Contact tracing has been used for decades to stop spread of infections disease, digitizing it makes it more effective

COVID-19 Challenges

- COVID-19 is easily transmitted, resulting in a significant rise in the number of COVID-19 cases
- Public health resources are being strained
- Government solutions have been to restrict movement leading to business shutdowns
- Current modes of contact tracing have been ineffective due to reliance on human recollection
- Contact tracing solutions are being developed in isolation from each other and national solutions

TraceSCAN's technology addresses these challenges and helps alleviate the strain on care facilities

Current Solutions

Traditional Contact Tracing	▪ Reactive ▪ Time and labour Intensive – public health typically be under resourced ▪ Individuals become less cooperative ▪ Susceptible to error due to missed contacts
Stand Alone Smartphone App	▪ Access may be restricted for safety e.g construction ▪ Citizen may not have smartphones ▪ Citizens have privacy concerns where personal data is also stored, resulting in low adoption rates
Other Wearables	▪ Repurpose legacy technology ▪ Don’t talk to other systems (you’re not protected outside your environment) ▪ Only show 1st degree exposure ▪ Lack robust reporting and analytics to improve practices ▪ Have poor measurement, accuracy and battery life

TraceSCAN

TraceSCAN is a comprehensive and customizable contact tracing solution that aims to halt the spread of COVID-19

- TraceSCAN employs **wearable Bluetooth devices** and **AI technology** that can quickly and accurately lead to the identification of potential new cases
- Through proximity tracing and exposure notification our forward looking technology driven solution **can identify more contacts than traditional contact tracing** and other wearables
- TraceSCAN wearables are an ideal **solution for all industries** especially essential workers, businesses and schools where smartphone usage may not be possible

Section 1: TraceSCAN Wearable

TraceSCAN Solution

Wearables & Integration

- Only wearable device compatible with government/international contact tracing platforms*
- Digital contact tracing and social distancing notifications through Bluetooth wearables
- Wearables designed with a privacy focus do not contain any personal information about the user

Reporting and Analytics

- **Flatten the Curve:** Forecast the spread of COVID-19 and predict any further waves of infection without compromising user identity and without tracking user's location

AI Platform

- Machine learning algorithms used to monitor infected individuals utilizing the Bluetooth wearables
- Contact tracing data, providing alerts for potential isolation
- Accelerometer and AI allow us to detect falls (fall detection for elderly)

The complete contact tracing solution

* Expected compatibility with COVID Alert, Alberta Trace Together within Q1/21

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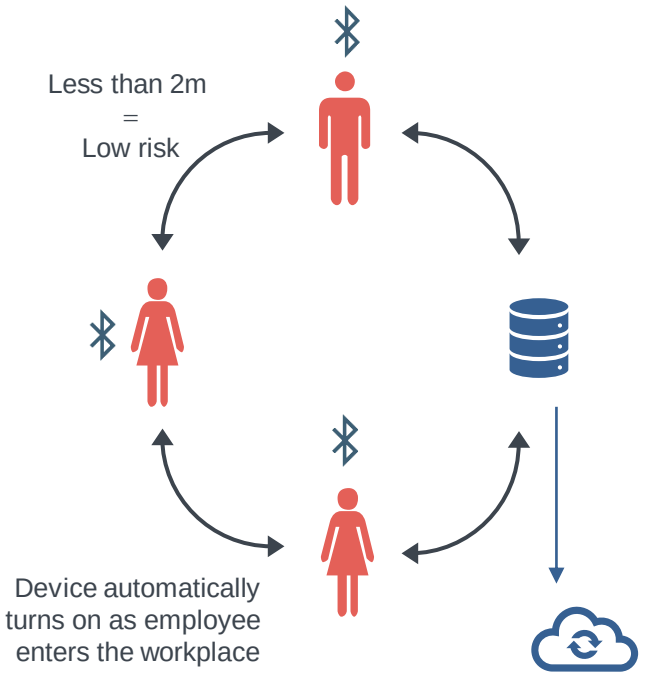
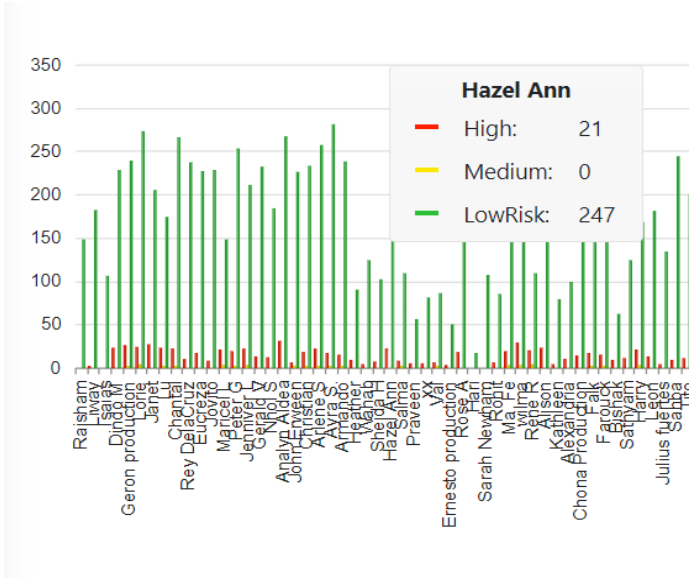
How it Works



- Each user has a Bluetooth wearable with a unique ID
- Devices can turn on and off automatically upon entry or exit to the premises (if desired)
- The wearable device communicates with all Bluetooth devices it encounters swapping specific information
  - Unique Bluetooth IDs
  - Time and distance information relating to the interaction. User can be notified of insufficient social distance by a vibration or audible tone
- Data is collected by the onsite Bluetooth gateway permitting identification of high-risk areas within an environment
- Data is sent securely to Microsoft's Azure cloud, for access and review by Health/HR administrators who are the only people that can identify the exposed individuals
- Upon notification of COVID exposure from an infected individual, the company can quickly identify potential exposed individuals using data from the wearable devices
- As our wearables are component rich, our device can provide additional features: NFC based features including Access control, Payments and Vaccine tracking

Typical Sequence



1. When a person tests positive for COVID-19, they become a **“Case”**
2. The individual will notify the Company through their normal COVID regulations. The administrator of the contact tracing platform can go onto the system and identify all individuals that have met the criteria for high/medium/low exposure **“contacts.”**
3. Not every contact needs to be identified: only those who could have been exposed to the case’s respiratory droplets from coughing, sneezing or speaking typically need to be notified
    - **Typical high risk interactions – 15 minutes of exposure inside of 2 minutes**
4. The Company’s risk mitigation team maintains the case’s privacy/anonymity when working with potential contacts
5. Contacts with symptoms are recommended to go for testing
6. If they test positive, they become a ‘case’ and the process repeats
7. Contacts with no symptoms are asked to self-isolate for a period of time
8. Contact tracing helps people get diagnosed earlier and reduces the chance of spreading the virus

A robust contact tracing platform can mitigate the risk of a complete shutdown

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What Makes us Different

Designed for contact tracing	▪ Built from the ground up to stop the spread of COVID-19 and help people interact safely
Corporate validation	▪ Implemented by the largest Canadian Airline ▪ Partnered with the biggest and best names in technology
Functionality	▪ Fully customizable solution deployable in all environments and settings including: ▪ Travel & Entertainment ▪ Construction ▪ Food service ▪ Long term care ▪ Film production ▪ Manufacturing ▪ Leading edge technology incorporating AI ▪ Upcoming V2 will include medical grade sensors ▪ Ability to warn users who are not socially distant
Integration with other platforms	▪ Only wearable that will be integrated with Alberta Trace Together and COVID Alert
Scale	▪ No other platform has the scale and resources to implement across Canada

Product Specifications

Key FOB

Wrist Band

- NRF52 SoC
- Bluetooth 5.0 and based contact tracing
- Social distancing notifications
- Ability to store more than 20,000 data sets
- Personal social distancing score
- COVID-19 exposure alerts
- Customizable bands
- Option to white label wearable devices
- Waterproof and Dustproof
- 7 - 14 day battery life

Implementation Options

	Decentralized	Centralized	Centralized with AI
Devices employed	Wearables	Wearables + Sync Stations/Gateways	Wearables + Beacons
Identify users exposed	Using app	Online dashboard	Online dashboard
Exposure notifications	Manual	Manual or Automatic	Manual or Automatic
Risk categorization	1st degree	2nd and 3rd Degree	2nd and 3rd Degree +
Social distancing reminder	Yes	Yes	Yes
Reporting & Analysis	No	Descriptive	Predictive

Centralized – Data is stored at an organization level (large businesses, corporate offices, etc.)
Decentralized – Data is stored within the device until tested positive (patients, customers, public)

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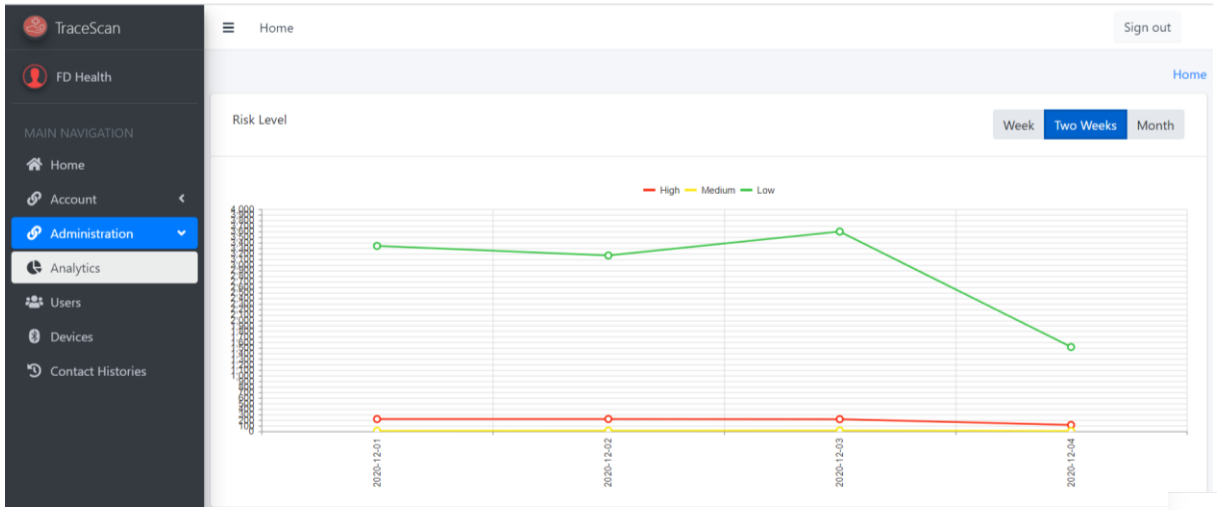
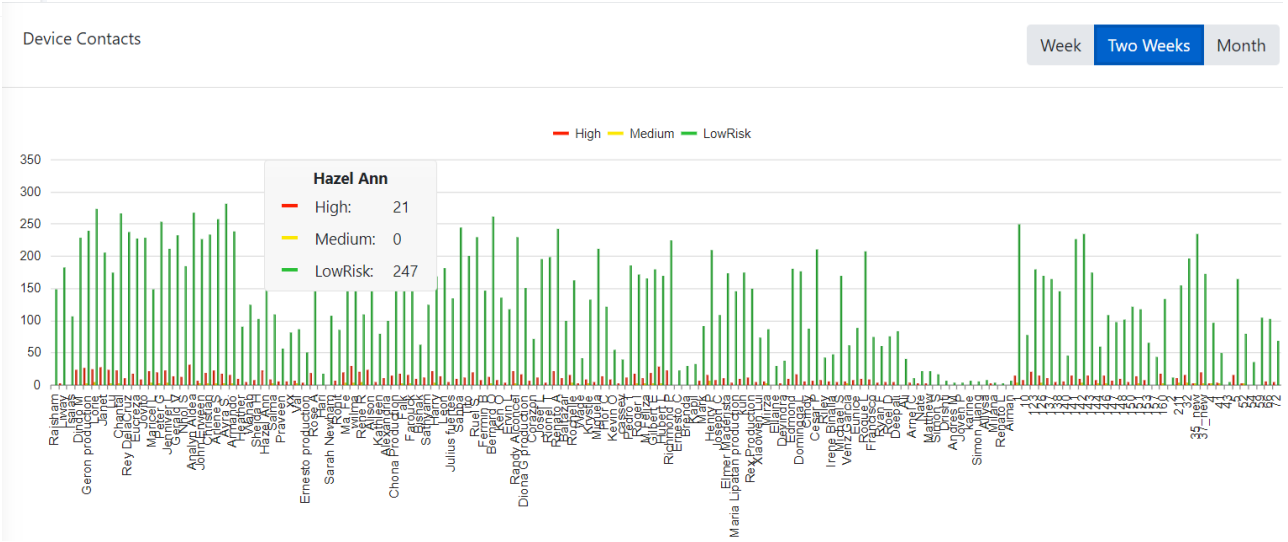
HR Control



Overall analytic chart provides information of users interactions. Customizable groupings can be represented with high, medium and low risk interactions

Filter by “high, medium and low risk” interactions down to each employee



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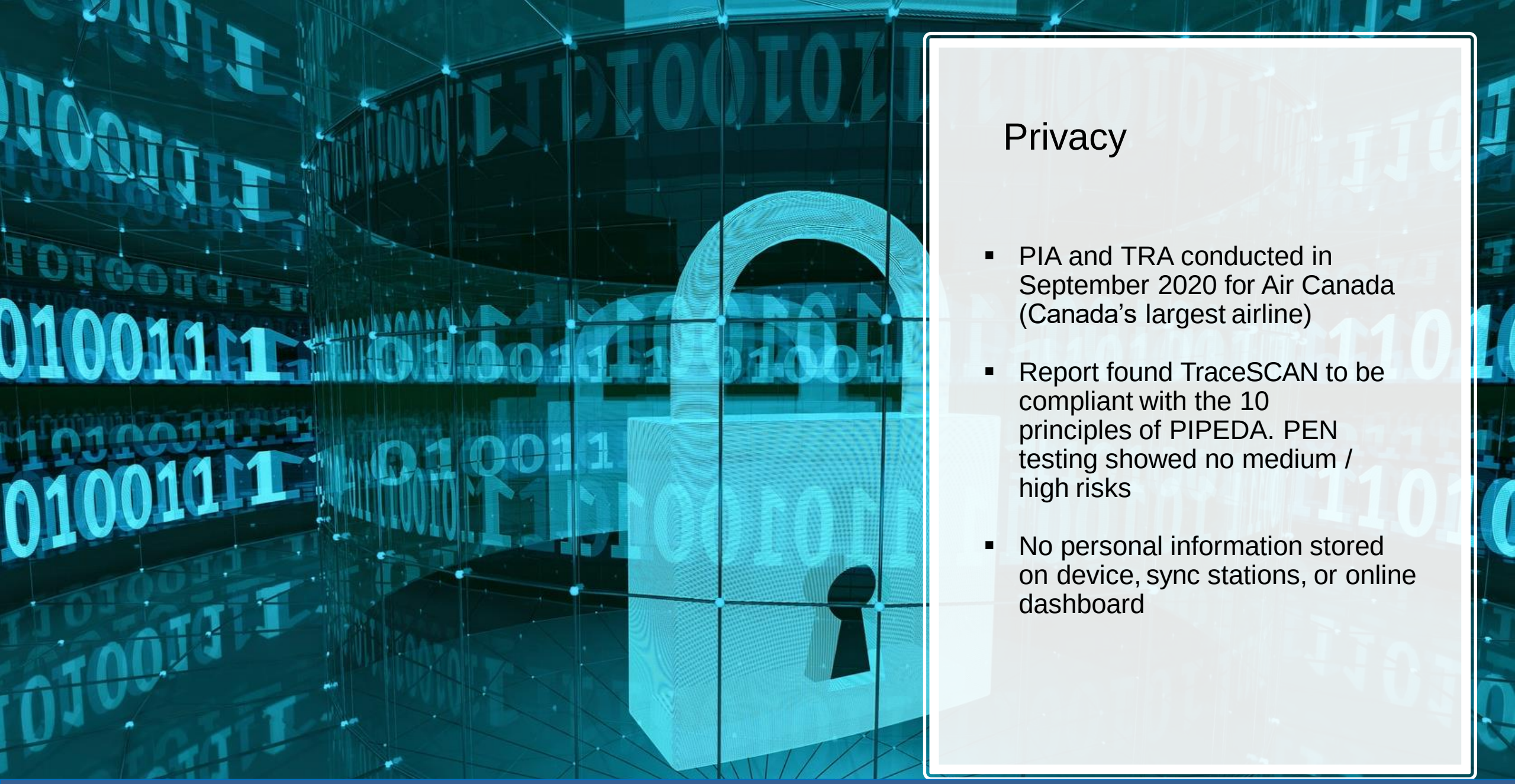

Privacy

- PIA and TRA conducted in September 2020 for Air Canada (Canada's largest airline)
- Report found TraceSCAN to be compliant with the 10 principles of PIPEDA. PEN testing showed no medium / high risks
- No personal information stored on device, sync stations, or online dashboard

PIA: Privacy Impact Assessment
TRA: Threat Risk Assessment
PIPEDA: Personal Information Protection and Electronic Documents Act
PEN: Penetration testing

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Business Outcomes

- Create a shield to protect families & reinstate trust and comfort within the community
- Ensure appropriate social distancing
- Quickly and easily identify individuals exposed to COVID-19 and notify them of potential exposure (shrinking spread)
- Help reopen the economy and support mental wellbeing

TraceSCAN Qualifications

TECHNOLOGY PARTNERS

Microsoft

aws

UNIVERSITY OF WATERLOO

vmware

MT Ventures

CLIENTS

YAMAHA

AIR CANADA

Riverside Natural Foods Ltd.

LiUNA! Laborers' International Union of North America

Waywayseecappo Treaty 4

RED TABLE TALK
A TALK SHOW THAT LISTENS

Alberta

SAFE-TECH TRAINING

Ontario

eldoradogold

TMAC RESOURCES

Section 2: What's Coming Next

In 2021

In the 1H2021 TraceSCAN expects to have implemented full integration of the global interoperability and launch of the generation 2 wearables that provide the enhanced capabilities below

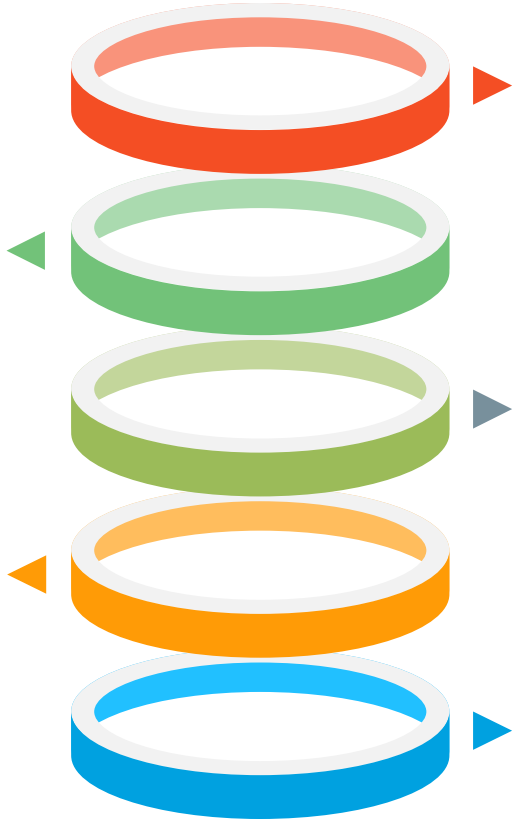
Health and Wellness

Medical grade sensors enable health measurements to be recorded autonomously:

- Heart Rate
- Oxygen Saturation
- Surface Temperature Sensor

Activity & Protection

Accelerometer activates fall detection technology for seniors in addition to traditional activity tracking



Global Interoperability

Integration with COVID Alert, Alberta Trace Together and other native contact tracing applications that will be required for future travel

Health Record Validation

As vaccine management and COVID testing becomes increasingly important for countries, TraceSCAN can become a register/database of vaccine history and COVID test results

Near Field Communications

NFC technology expands utility including payments and automation

Long Term Care Home Challenges

The Challenge

COVID

- **840 outbreaks of COVID** in LTC retirement homes accounting for more than 80% of COVID deaths at May 25th 2020 [1]
- Provinces hardest hit include Quebec, Alberta, Manitoba, Saskatchewan

NON COVID

- Falls are the number 1 reason for injury-related hospitalizations for older adults and in Canada, more than **1.6 million seniors fall each year**

The Solution

- TraceSCAN generation 2 band will include:
  - Surface temperature sensor – Studies show surface temperature can be an indicator of COVID exposure[3]
  - Heart rate monitor – provide regular baseline readings with limited interaction, allowing for use of predictive tools
  - Oxygen sensor
  - Accelerometer – Provides tools for fall detection in senior care facilities

[1] https://www.cihi.ca/sites/default/files/document/covid-19-rapid-response-long-term-care-snapshot-en.pdf?emktg_lang=en&emktg_order=1
[2] https://www.cihi.ca/en/injuries-among-seniors
[3] https://doi.org/10.1038/s41598-020-78355-6 (Scientific Reports: Feasibility of Continuous Fever Monitoring Using Wearable Devices)

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Vaccine Management System

OPINION

A COVID-19 vaccine would only be the beginning of the end of the pandemic

BOB BELL
CONTRIBUTED TO THE GLOBE AND MAIL
PUBLISHED NOVEMBER 17, 2020

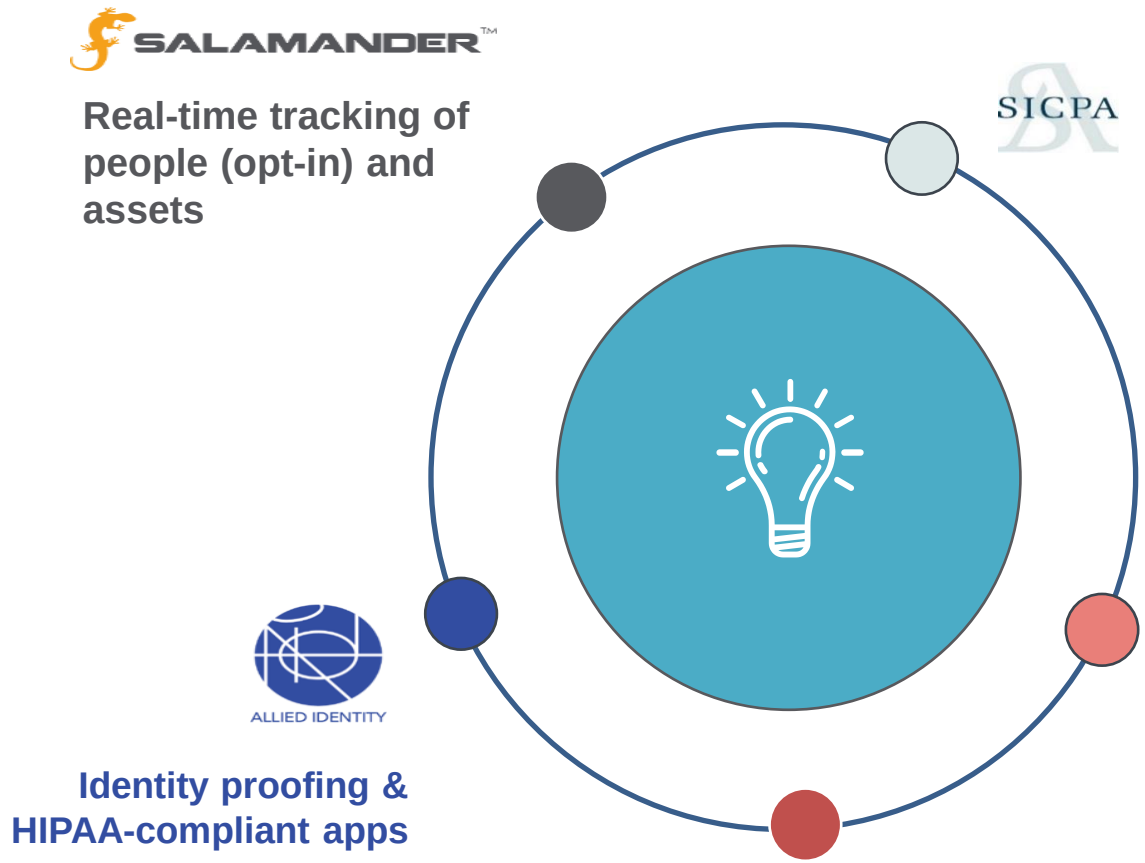
The current system of recording immunization is woefully inadequate for these purposes. Right now, individuals are responsible for maintaining their own immunization records, using a paper Proof of Vaccination Record (POVR) they take to a health care provider whenever they receive a new vaccination. If they lose their POVR, or if it is incomplete, there is no central, secure database to recreate it. Patients must contact whoever administered a vaccination to get a new POVR, and if they can't find a record of their immunization, they may even need to be revaccinated.

Vaxtrac Consortium Can Help

Leading companies modernizing vaccination management & credentialing

Core principles:

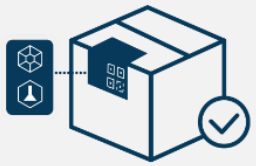
1. Preserve individual privacy
2. Architect trust in processes & credentials
3. Build on current investments



Vaccine Management & Credentialing

Flexible modules easily interface with current systems

Track and Manage



Unique security labels for individual vaccine vials supporting tracing through distribution to patients.

Identify & Validate

Authenticate and register healthcare providers on-site or with option to upload healthcare providers from existing registries

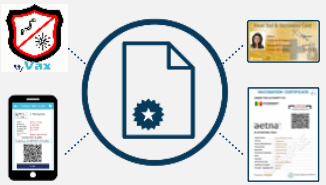
iREG

Administer & Certify

Authenticate and register (or look up) patients, administer vaccines/tests, digitally certify the record on blockchain

iPHARM

Issue Credential



CERTUS™ Server digitally signs information and transmits to iBis for immediate issuance to patients/caregivers in flexible, portable formats

Validate & Admit

Instantly verify vaccine status (web app or via iCheck app) with option to validate identity with NFC or biometrics

iCHECK

Monitor & Notify

Simple contract tracing with privacy-preserving wearable technology integrated with data on individual health status to better inform risk-based decisions

SALAMANDERLIVE™

ASSET MANAGEMENT

CERTUS™ **SECURE DATA WITH BLOCKCHAIN & GENERATE DIGITAL SIGNATURES & CERTIFICATES**

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CONTACT TRACING

iBis

RECORD, STORE, AND MANAGE TRANSACTION DATA BETWEEN ALL ENTITIES

About Us

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Facedrive is an **Environmentally and Socially Responsible "ESG"** technology focused company offering in-demand global solutions while maintaining a focus on doing business with local communities

Facedrive operates through five verticals

In April 2020, through Facedrive Health, Facedrive partnered with the University of Waterloo to develop "TraceSCAN", a contact tracing wearable technology designed to help mitigate the spread of COVID-19

Number of Employees: 194 full time employees and 19,000+ independent contractors across Canada
Locations: 18 cities in Canada (10 in Ontario), and other locations in the US

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