

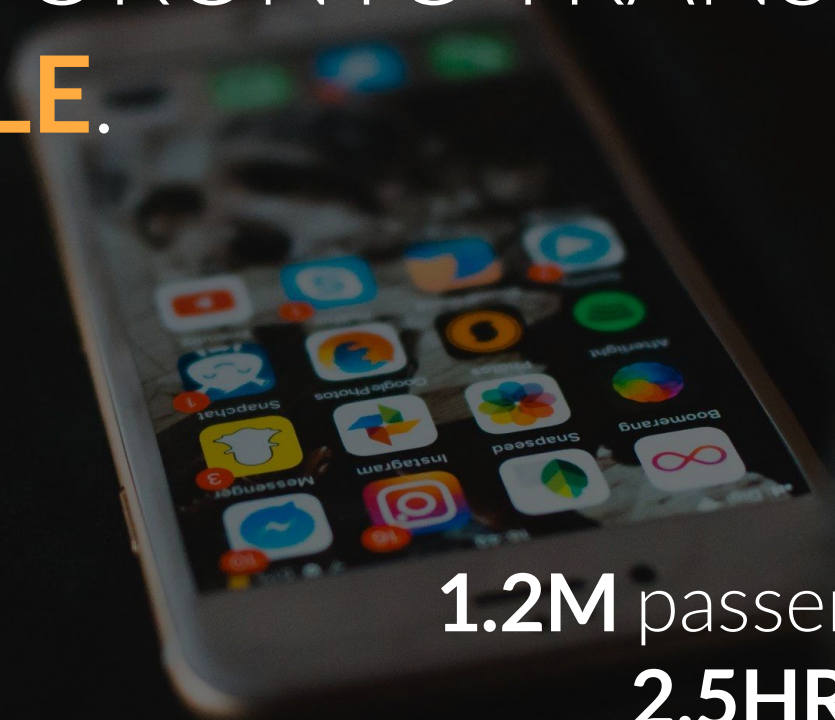
TKS

x



| Interac In Transit

MAKING TORONTO TRANSIT GO **MOBILE**.



1.2M passengers daily
2.5HRS / person



“ Why do I have to tap my physical Presto card through the NFC **instead of just using my phone?** My card is already in my Presto account... It doesn't make sense that I should have to tap my physical card on the bus.

From **Google Play**

1

System Quality
Control

2

High Expenses,
Low Returns

3

Low Customer
Satisfaction

1 System Quality Control

Distributed

All Presto account information is stored on the fare card itself.
Updated information is distributed to fare devices across the transit system.

Offline

The updated account information is only transmitted to a customer's physical card once they tap it on a Presto device.

Slow

Many Presto devices connect to the central network less often than others.
TTC (mobile network) → Quick update
Go buses (agency garages) → once a day

2 Low Customer Satisfaction

Google Play



“It takes 12 hours, but still didn’t update my current amount. What is the point to have a refresh function if its not working. **Just got kicked out from the bus,** because I thought I had enough to get on the bus.”

Yelp



“Slow to reflect real-time changes, systems always down, not user friendly...”

3
High Expenses,
Low Returns

1.2 Billion in Capital Costs

"Presto could end up being one of the world's priciest fare-card systems."

PRESTO Implementation Operating Cost 2018: \$13.1 M

Continued PRESTO Implementation: \$8.2M



Expansion



Competitiveness



Presto Volume
2.2M users | 350M taps | \$1B volume

Canadian Public Transit Market
\$16B in revenue

Digital Security

An aerial photograph of Hong Kong at dusk, showing a dense urban landscape with numerous skyscrapers and residential buildings. The Victoria Harbour is visible in the background, with many boats and ships. A prominent yellow vertical bar is positioned in the center of the image, separating the title text on the left from the descriptive text on the right.

Hong Kong

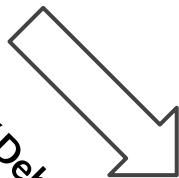
Case Study

Gemalto enables **digitalization** of
Hong Kong's Octopus card into
Samsung Pay.

Customer



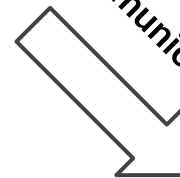
Credit / Debit Card



Smart Octopus
Trusted Service Hub



Near Field
Communication



Securely Digitized



80 000+ touch points in Hong Kong

including retail outlets, online shopping, recreational facilities, vending machines, and self-service kiosks

34.5M+ active Octopus cards

14.5M+ transaction counts

HK \$200M daily in volume



“

Smart Octopus in Samsung Pay delivers a **convenient** yet **secure** payment option for consumers in Hong Kong, and help the city realize its **vision of transforming into a cashless society**.

Given its **robustness**, the **TSH** is already in use by various organizations such as banks and retailers wanting to offer secure mobile payment solutions to their customers.

We hope that the success of Smart Octopus in Samsung Pay will spur other global operators to roll out mobile payment offerings that are **easy to use** and **do not compromise on security**.

VP, **Gemalto**



KEY TAKEAWAY

Digitalizing transit cards is perfectly viable, and **it's happening right now.**

A nighttime photograph of the Portland, Oregon skyline, featuring various skyscrapers and city lights. A prominent yellow vertical bar is positioned in the center of the image, separating the title text on the left from the descriptive text on the right.

Portland

Case Study

Trimet collaborates with Hop for
contactless mobile ticketing using
NFC payment apps.

Pay-as-you-ride model

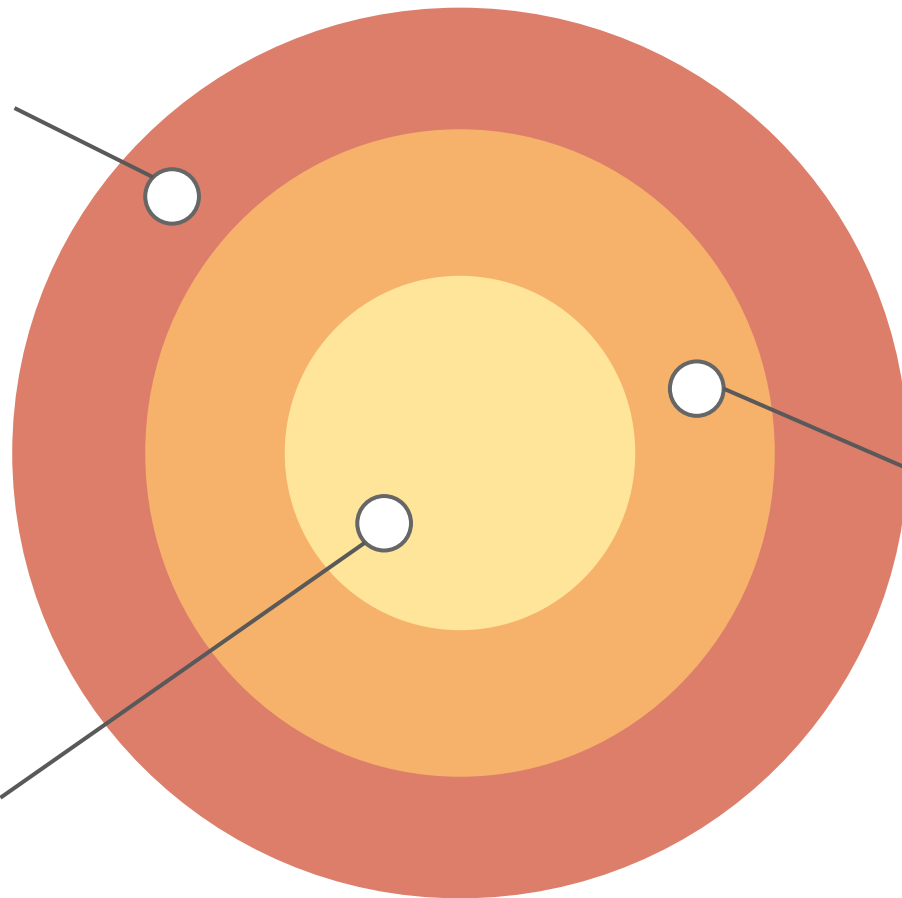
Virtual HOP card

4% in 2017 → **23% in 2018!**

Contactless
Payments

Host Card
Emulation

Near Field
Communication



A photograph of a London Underground train (a red and grey tube train) stopped at a station platform. The platform has a white tactile paving strip along the edge. The background shows the brick wall of the station with arched windows. The text 'KEY TAKEAWAY' is overlaid on the image.

KEY TAKEAWAY

NFC mobile payments offer the convenience transit riders need, and **adoption happens fast!**

TKS x



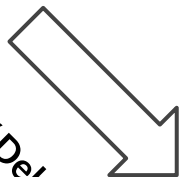
| Our Solution



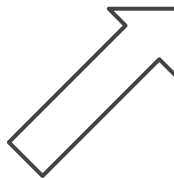
Customer



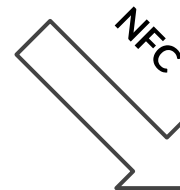
Credit / Debit Card



Smart Octopus
Trusted Service Hub



Securely Digitized



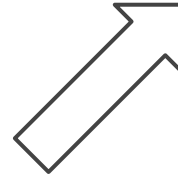
Customer



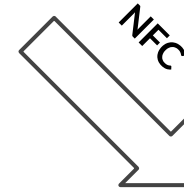
Credit / Debit Card



Gemalto
Trusted Service Hub



Securely Digitized



NFC

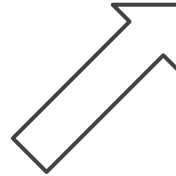
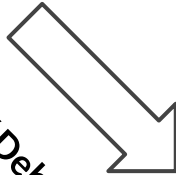
MIFARE DESFire



Customer



Credit / Debit Card



Gemalto
Trusted Service Hub +



UpTeq Multi
Tenant SIM



NFC

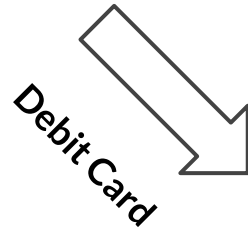


Securely Digitized



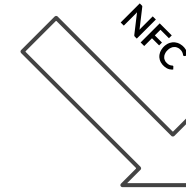
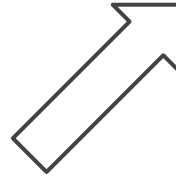
S

Customer



Interac / Presto App

Gemalto
Trusted Service Hub



Securely Digitized



A photograph of students in a classroom, with one student in the foreground writing in a notebook. The text 'THE IMPLEMENTATION' is overlaid in the center.

THE IMPLEMENTATION

A photograph of three people (two women and one man) looking at a laptop screen. The laptop screen displays the Unsplash website. The man is wearing glasses and a denim jacket. The woman next to him is smiling. The woman on the left is looking at the screen. The background is dark and out of focus.

1

Presto and Gemalto: Who to Speak With?



Andrew Thornicroft

Partnerships at Metrolinx

Contact

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Didier Dahan

Strategic Partnerships at Thales

Contact

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A photograph of three people (two women and one man) looking at a laptop screen. The man on the right is wearing glasses and a denim jacket. The woman in the middle is smiling. The laptop screen shows a website with the word 'Unsplash' visible.

1

Presto and Gemalto: Who to Speak With?

A close-up photograph of hands holding a smartphone. The phone is tilted, and the screen is visible. The background is blurred.

2

Host Card Emulation: Following Interac Flash's Footsteps

-
- 1 **Host Card Emulation acts out functional responses of NFC cards** → exact virtual representations of electronic identity cards
 - 2 **Cryptographic processes** → Leverages methods traditionally used by hardware-based secure elements without the physical secure elements
 - 3 **Interac Flash** → Interac already has experience working with HCE to bring Interac Debit onto NFC payments apps like Apple Pay

A photograph of three people (two women and one man) looking at a laptop screen. The man on the right is wearing glasses and a denim jacket. The woman in the middle is smiling. The woman on the left has blonde hair. The laptop screen shows a website with the word 'Unsplash' visible.

1

Presto and Gemalto: Who to Speak With?

A close-up photograph of hands holding a tablet device. The background is blurred, showing what appears to be a desk or office environment.

2

Host Card Emulation: Following Interac Flash's Footsteps

A photograph of a desk setup. In the foreground, there is a laptop keyboard, a pen, and some papers. In the background, there is a white coffee cup on a wooden tray, a glass of red liquid, and a small potted plant.

3

Future Steps: Generalizing the Process



Compass Card
Vancouver



PRESTO
Toronto



Carte OPUS
Montreal

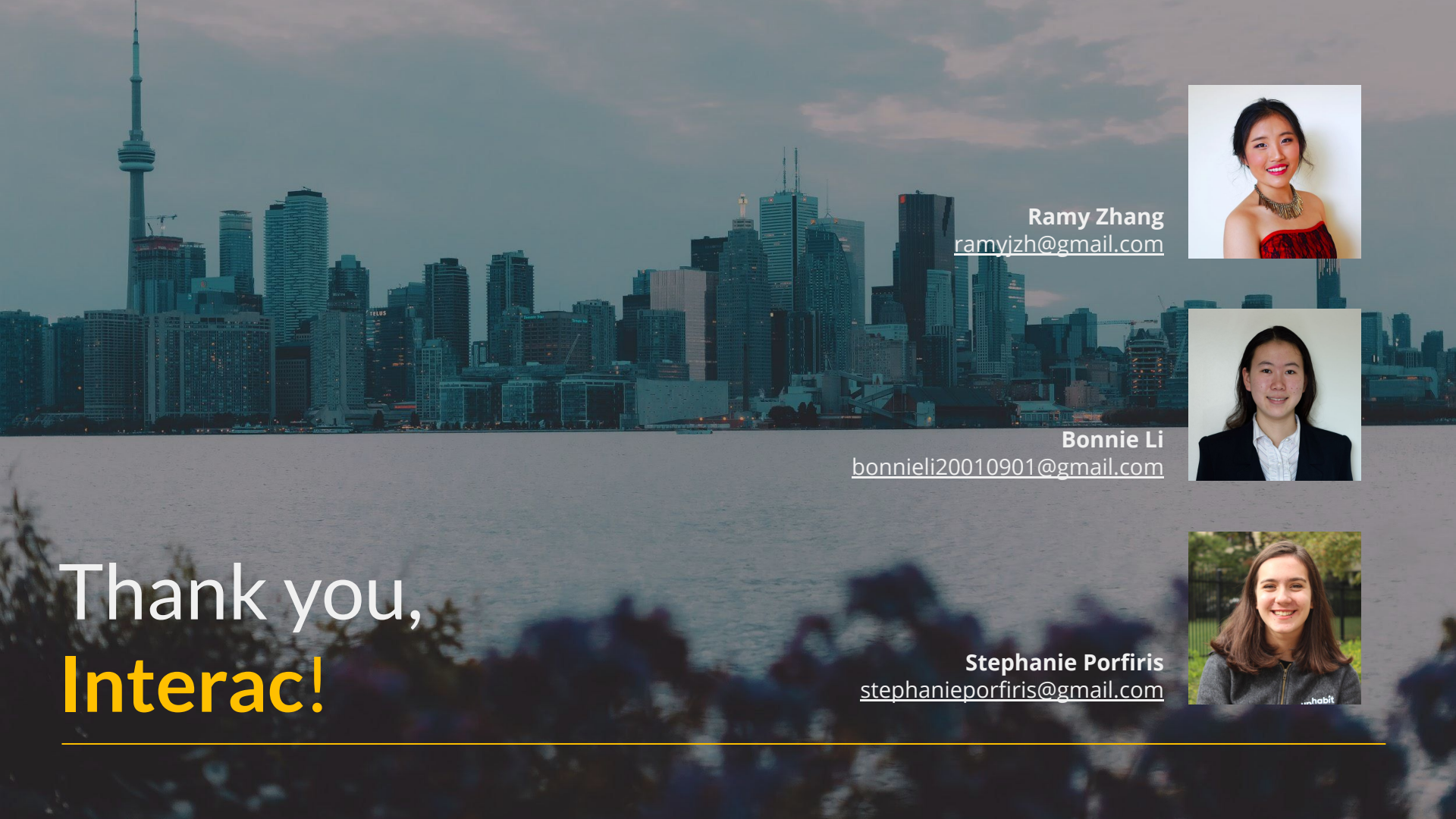
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1.2M passengers daily

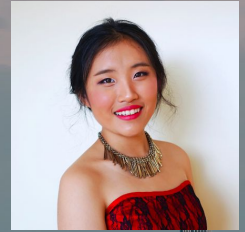


~~**2.5HRS** / person~~

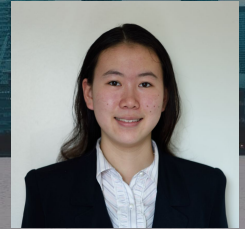
40MINS / person



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Thank you,
Interac!

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