

The Route to a Cardless Transit Payment System

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Cubic, Global Director of Mobile Product

What is Cardless

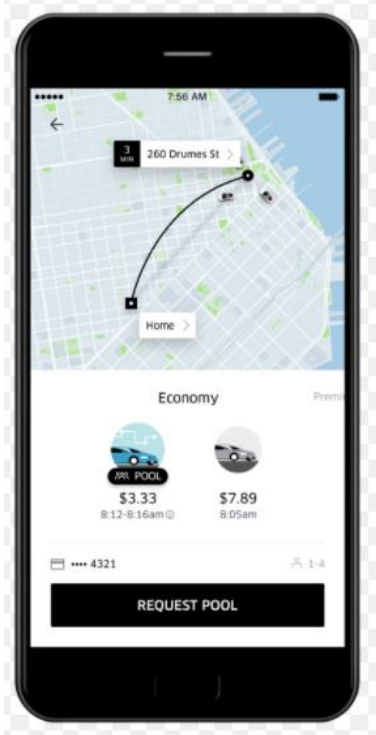
Cardless simply means eliminating points of friction
using mobile technologies



Airlines are Mobile



Taxis are Mobile



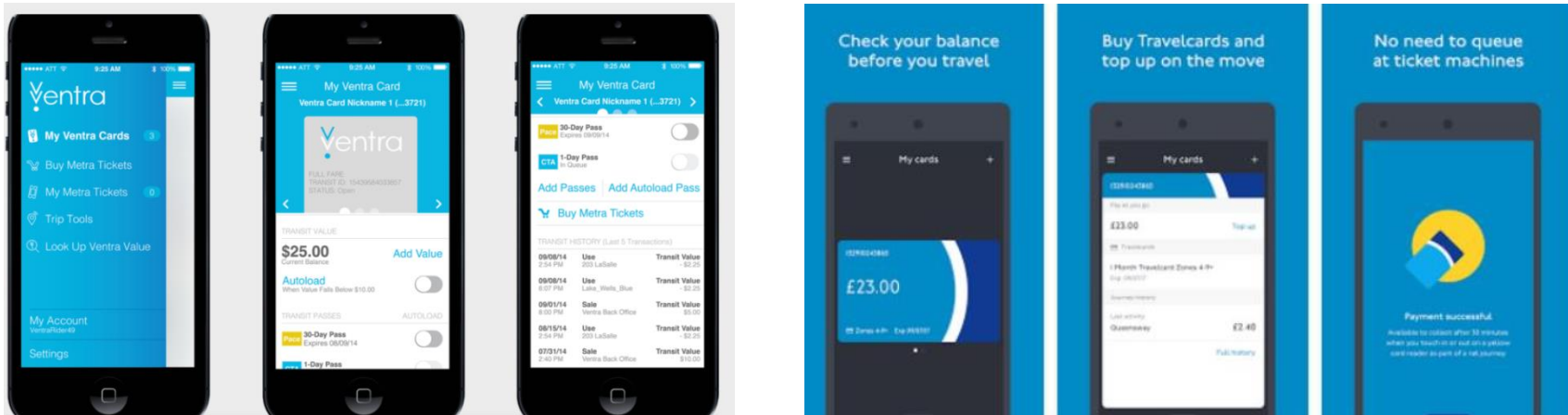
Public Transit...



This is Our Friction



Ventra/TfL Mobile



Almost looks like we support virtual cards, but...

Oyster App Store Reviews

Vasil Vasilev

★★★★★ February 14, 2018



Well, when I first installed this in was going to be able to use it instead of my actual oyster. Alas this is not possible. You would expect more considering how many **contactless/NFC** options one had those days. Only thing this app is good for is to check check when your travel card expires and what ...

Chris

★★★★★ February 21, 2018



Still waiting for **NFC payments** through your app. I know you said below that "we have bank cards for phone payments" but that doesn't help us with monthly or annual travel cards. I want to be able to use my phone or my oyster card to travel but all being linked to one oyster account. If I forget my o...

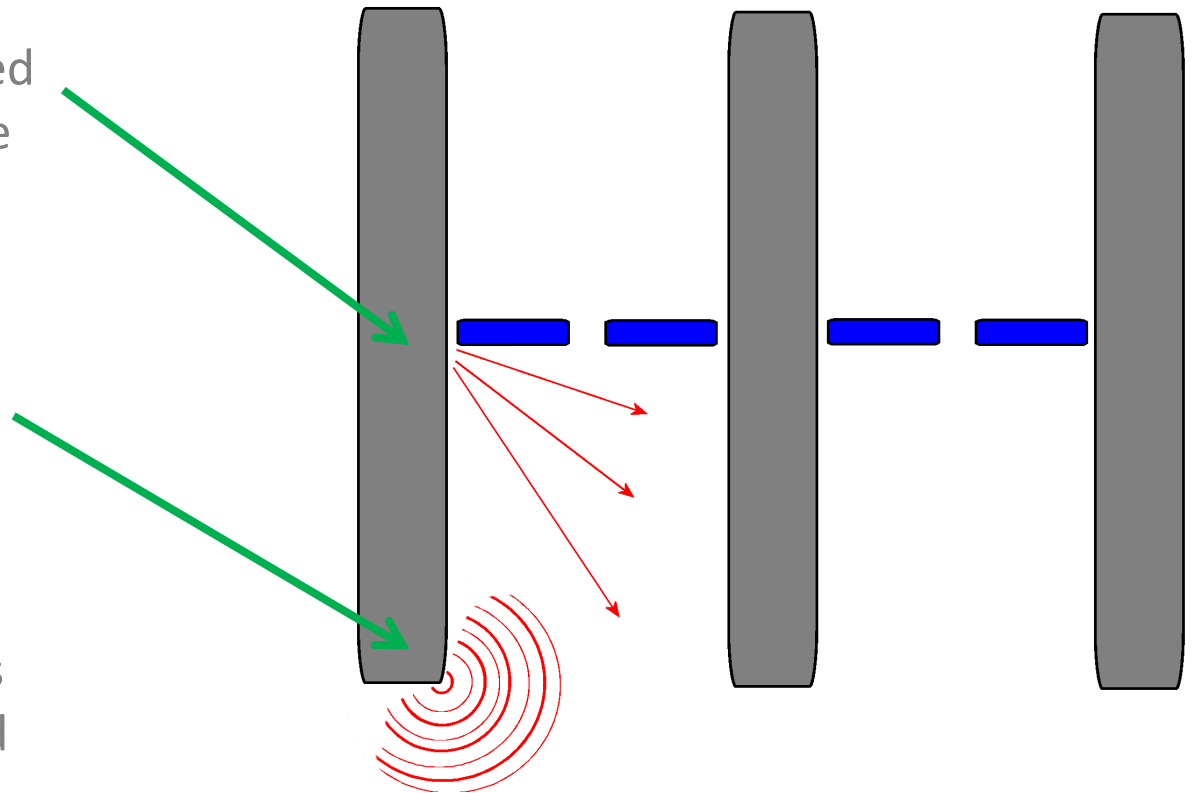
Going Cardless

Cardless is about eliminating a point of friction. For airlines that's the paper ticket, for taxi's that's hailing a cab. Public transit opportunity is the physical ticket may that be paper, mag stripe or smart card

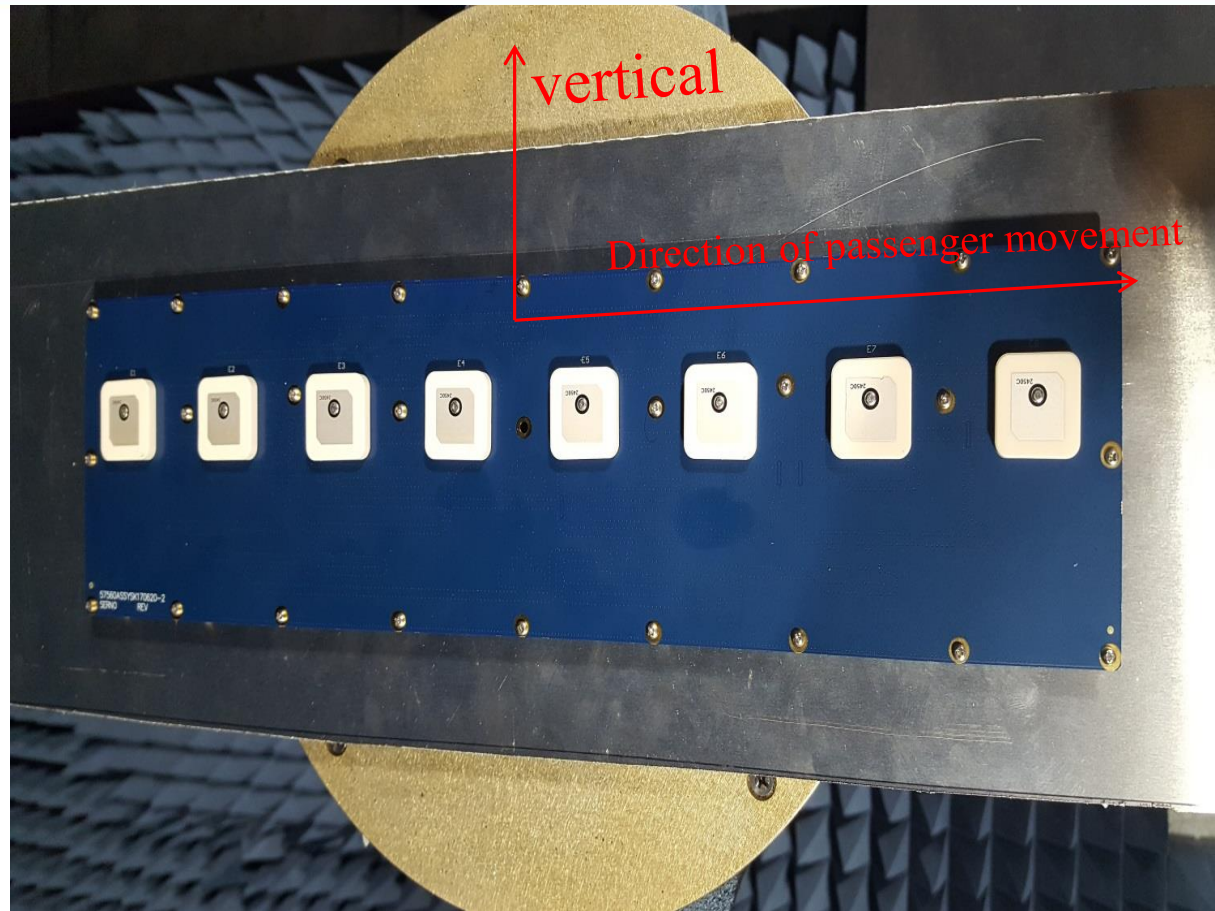
- Barcodes/QR codes
- NFC
- BLE

Directional BLE Antennas

- Multiple directional BLE receiver beams are placed close to the center of the aisle
- A wider beam BLE transceiver antenna is mounted on the front of the gate
- When traveler enters beams gate detects mobile device and opens gate as if traveler tapped NFC reader



BLE beacon Array



Key Presentation Takeaways

- Mobile apps and mobile ticketing is a requirement for any transit system
- Transit apps need to support mobile payments and tickets
- Cardless is about eliminating points of friction
- Visual today, NFC tomorrow, BLE future