Expanding Payments by Tapping & Zapping: Mobile Payments and Mass Transit

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Today’s Discussion

• Benefits of mobile payments for transit customers and operators
• Current transit mobile payment implementations
  – Mobile ticketing
  – NFC mobile payments
• Opportunities to increase adoption
Most commuters travel with smartphones

- Commuters already use smartphones for mobile commerce
- Commuters want more convenient and efficient ways to pay for transit:
  - Avoid waiting in lines to buy or add money to fare card
  - Avoid need to carry cash or exact change

How often, if at all, do you use your mobile phone while doing the following (leisure activities)? (top five for those that do at least “hardly ever”)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>While out shopping</td>
<td>92%</td>
</tr>
<tr>
<td>Spending leisure time</td>
<td>89%</td>
</tr>
<tr>
<td>Talking to family/friends</td>
<td>87%</td>
</tr>
<tr>
<td>Watching TV</td>
<td>87%</td>
</tr>
<tr>
<td>While eating at a restaurant</td>
<td>81%</td>
</tr>
<tr>
<td>Using public transportation</td>
<td>54%</td>
</tr>
</tbody>
</table>

Base: Smartphone owners: 1,458
More transit agencies leveraging mobile

Mobile payment benefits for transit operators:

- Create more convenience and payment options
- Reduce fare collection costs
- Create additional value with travel-related services
- Increase customer engagement and data
- Improve operational efficiency
Transit mobile ticketing

- Remote mobile payment transaction using credit/debit card
- Common for open entry – no turnstile/fare gate (e.g., commuter rail, ferry)
- Alternative to paper tickets/passes; use visual or QR code validation
- Easy deployment; limited hardware upgrades and integration required

Source: Payment Strategies, Federal Reserve Bank of Boston, 2016
NFC contactless mobile payments

- Similar to mobile in-store POS purchase with credit/debit card
- Fare systems that accept contactless bank cards and NFC mobile wallets (e.g., Apple Pay, Android Pay, and Samsung Pay)
- Suitable for large, high-volume systems with turnstiles/fare gates (e.g., New York, Chicago, London); faster read-speed (< 500 milliseconds) than QR codes

Source: Payment Strategies, Federal Reserve Bank of Boston, 2016
Transit mobile payments can increase consumer adoption

- Integrated transit mobile apps
  - Trip planning, real-time bus/train tracker, parking, multi-modal
- Bundled ticketing
  - Admission to public events and attractions
- Location-based offers and loyalty rewards
- Mobile marketing in transit venues
  - QR code and NFC signage
Lessons learned

- Consumer education is essential
- Recognizing product characteristics is important
- Intuitive app design is a must
- Habitual transit mobile payment can influence consumer behavior
- Mobile provides value for transit agencies and customers
Questions?

Thank you

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Full report available at: