Fuel payments & in-vehicle commerce

European case study – Mastercard and Ryd Pay

May 5, 2021
To be addressed today

1. In-vehicle commerce - some basic beliefs
2. Mastercard & Ryd Pay in Europe
3. Conclusions & some questions
Mastercard anticipates the need for embedded digital payments from the vehicle

Manufacturers
- Safe, unified, integrated digital experience
- Instant OTA fulfilment of enhancements

Third-party providers & traffic authorities
- Order-ahead integration
- Background payments
- M2M future requirements
- Two-way flows of value

<table>
<thead>
<tr>
<th>Year</th>
<th>Commercial payments</th>
<th>Consumer payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Juniper Research "In-Vehicle Payments 2020-25" published October 2020
Bringing a portfolio of capabilities to the development of in-vehicle digital commerce

Core payments
- Card tokenization
- Card transaction processing
- Loyalty & rewards solutions
- Account-to-account transfer processing
- Open Banking

Associated services
- Device authentication
- Identity validation
- Product design & optimization
- Cybersecurity assessments
- Digital receipts

Operating a global digital payments ecosystem of 2.8bn cardholders and >20,000 institutions
Ryd Pay – a digital platform for app-based fuel payments

Multi-merchant & multi-channel

Existing innovation relationship with premium German automotive OEM

900 participating locations in Germany

Entering seven new markets

Minority investment

Transaction processing (PSP) solution at European scale
Ryd Pay – an open platform

Cashier system interactions

Multiple fuel merchants allowing Ryd Pay to re-sell fuel

Location-driven e-commerce transactions

Multiple map-based apps offering Ryd Pay

PSP

Re-seller

Multiple map-based apps offering Ryd Pay

HERE WeGo navigation app

LIDL supermarket app

AXA Suisse auto insurance app

Mercedes Benz fuel price discovery app

Direct-to-consumer Ryd app

©2021 Mastercard. Proprietary and Confidential
How the Ryd Pay team think about it – a multi-party platform business

Handling complexity is our daily business
Launch of Mercedes Benz Fuel & Pay – March 2021

In-vehicle payment through MBUX interface
- Triggered by navigation system geo-fence
- Prompts driver to pick pump & fuel
- Normal Ryd Pay platform transactions with payment in background
- Mercedes Pay integration to handle access to driver profile and payment credentials

In-app payment through Mercedes me apps
- Replicates functionality in Ryd & Bertha apps using the Mercedes Pay integration

Released OTA to 400,000 Mercedes Benz cars
Ryd Pay ambition 2022-2023 – an open platform for European car commerce

NEW MARKETS

NEW PARTNERS

- New fuel merchants in current markets
- More digital partners for in-app integrations
- More OEM partners for in-vehicle integrations

Manufacturers – feel free to contact me if you would like to look into integrating Ryd Pay to your European digital platform

NEW SECTORS

- Tolling
- Parking
- QSR
- Valet
- Charging
Conclusions & some questions

1. Open platform – has been successful in attracting multiple competitors
   • Will it succeed in attracting one or more of the larger players?

2. Specialized platform – delivers complex integrations that OEMs haven’t prioritized
   • Is this a replicable model in other relevant sub-sectors – do we need specialized platform aggregators in tolling and parking as well?

3. “Not an app store, a map store” – geo-location drives the experience
   • Should we move away from the ‘app store’ layout in organizing information about merchants?

4. Built upon connected car data – no proximity interaction with merchant
   • Do we need proximity interfaces any more? What value can they add compared with geo-fencing?