Crowdsourcing delivery: New interconnected business models to reinvent delivery

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Keywords: Crowdsourcing, crowdsourced delivery, social delivery, business model, typology, Physical Internet, Mobility Web.

Executive Summary
Crowdsourced delivery is an answer to the growing expectations of customers for faster, more personalized and cost efficient delivery service. It exploits technological potential (geolocalization, mobile apps) and the social trend of sharing and collaboration (Rifkin, 2014). The process is as follows: one customer describes a delivery to be made; a task is created on the platform of the crowdsourced delivery company; sender and courier are matched; a price is fixed; task is managed by the courier; recipient and sender rate the courier. For two years, crowdsourced delivery has been bursting. Several start-ups have been launched and some have attracted millions in investment.

Methodology
- A total of 26 businesses were identified on the online press. Eight (8) were eliminated: 7 were no longer operating and one business serviced only Russian speaking clients.
- Final sample of 18 businesses: Barnacle, Bistip, Deliv, Easybring, Friendshippr, Instacart, Kanga, mmMule, Muber, Parcelgogo, PiggyBee, Postmates, Rideship, Shuttl, Stuff2Send, TaskRabbit, WunWun, Zipments.
- Data collection: Extensive public document review.

Discussion
The crowdsourced delivery business model, as it is now, has two main limitations:

(1) It only supports point-to-point deliveries.
   - This creates a less flexible delivery network, in particular for inter-urban delivery. Indeed, crowdsourced delivery is only possible if a courier passes by the starting point and the address of destination.

(2) Processing the parcels individually limits the overall positive impact.
<table>
<thead>
<tr>
<th>Name</th>
<th>Clients</th>
<th>Offer</th>
<th>Character</th>
<th>Couriers</th>
<th>Revenue model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courier</td>
<td>B2C</td>
<td>Deliver an order from a shop, a restaurant, a pharmacy, etc. Intra-urban</td>
<td>Business Efficiency Control</td>
<td>Professional or non-professional dedicated couriers</td>
<td>Fixed prices</td>
</tr>
<tr>
<td>Intendant</td>
<td>B2C</td>
<td>An order is placed on the cie’s website. It is the courier who purchases the article from a shop and delivers the article to the customer Intra-urban</td>
<td>Business Efficiency Control</td>
<td>Professional or non-professional dedicated couriers</td>
<td>Fixed prices</td>
</tr>
<tr>
<td>Intra-urban</td>
<td>P2P or B2B</td>
<td>Deliver a parcel Intra-urban</td>
<td>Business Efficiency Control</td>
<td>Professional or non-professional dedicated couriers Commuters</td>
<td>Fixed prices</td>
</tr>
<tr>
<td>National</td>
<td>P2P or B2B</td>
<td>Deliver a parcel Inter-urban / National</td>
<td>Business Human Trust</td>
<td>Travelers</td>
<td>Negotiated prices</td>
</tr>
<tr>
<td>Social delivery</td>
<td>P2P or B2B network</td>
<td>An order is placed on the business website. The courier proceeds to purchase, then to delivery. National / International</td>
<td>Community Human Trust</td>
<td>Travelers</td>
<td>Reward Barter Financial fees</td>
</tr>
</tbody>
</table>

We propose a paradigm change toward interconnected crowdsourced delivery. Based on the Physical Internet concept, (1) we suggest to stop considering each crowdsourced route to be dedicated to a single parcel from its source to its destination, but rather an openly consolidated segment for sets of parcels heading to the same next hub in their relayed way to their final destination; and (2) we also suggest to stop considering the crowdsourced delivery as an isolated industry that answer to specific needs, but rather as one alternative solution to build the Mobility Web.

We propose four avenues for future research. First, further qualitative and quantitative studies are required to better understand the industry. Second, simulation experimentation is needed to better assess the potential of interconnected crowdsourced delivery and to find ways to optimize the whole ecosystem. Third, instrumental research is needed to create a new generation of algorithms, protocols, vehicles, containers and platforms enabling interconnected crowdsourced delivery. Fourth, there should be field based pilot studies validating the feasibility, efficiency and sustainability of the proposed interconnected crowdsourced delivery innovations.