## Home access delivery

evaluating the newly evolving options for last mile delivery





# Embark on the journey towards an efficient Last mile delivery

The retail business landscape is shifting fast, with a steady growth in online sales having become the new normal. In Europe, online retail sales revenues rose by 15 percent to €530 billion from 2015 to 2016 and we expect the growth to continue.

Online consumers clearly value a convenient and tailored ordering experience and service, while also expecting fast parcel fulfillments. We see the customer expectations changing with the shift towards more online sales, creating two main drivers that will impact the delivery sector, especially last mile delivery:

Online shopping, has emerged as a strong sales channel that is increasingly becoming the preferred option of more and more consumers. With online shopping, consumers can buy products from any retailer, compare prices and choose any customized product around the clock.

Showrooms are physical locations but unlike traditional retail stores not designed to push product, but instead tempt and entice consumers with all the options available and show what is possible (e.g. IKEA city-kitchen). With products ordered in store or online, and shipped directly to the customer's home from an offsite warehouse or store.





"Increase in online shopping and showrooms will have a positive spillover into the delivery sector, especially on last mile delivery"

"A clear understanding of the customer requirements and preferences is key to develop the most suitable delivery solution for an online business"

"In this point-of-view [...] we see home access deliveries (i.e. deliveries made all the way into the customer's home) highly likely becoming the new norm in a few years"

# Last mile delivery solutions may be categorized into four different concepts

In this point-of-view we are exploring the different quickly evolving solutions for last mile delivery.

Today there are several different last mile solution concepts available on the market. With consumers increasingly demanding more convenient deliveries, we see home access deliveries (i.e. deliveries made all the way into the customer's home) highly likely becoming the new norm in a few years.

The existing concepts span from traditional over-the-counter delivery or collection box delivery to highly digitalized systems which are integrated with the consumer's door-locks.

While in different stages of maturity, both from a legal as well as technological aspect, the concepts have very different customer touchpoints. Though a single concept will have the same customer touchpoint, it may include different modes of transport.

The concepts also differ regarding two highly important aspects from the customer point-of-view:

- 1. **Flexibility:** the requirements placed on a customer to be present at a specific location during a predetermined delivery window.
- 2. **Effort:** the trouble required in order to ensure possession of the delivery (e.g. pick it up from a specific location).

#### The four concept types:

Furthest away

Product delivery end point's proximity to end customer

Closest



# Collection Points Delivery over the counter or third party reception box – access given at delivery

Collection points for delivery might be a reception box to which the customer is given temporary access or a traditional over the counter delivery (post office or similar).

Strong points: Complexity for delivery company is reduced in terms of routing and delivery windows. System also holds a strength concerning returns of parcels

Drawbacks: While being convenient for small packages and if located strategically for the recipient it has limitations in terms of parcel sizes and that packages must be transported the "very last mile" by the recipient.

Sample cases:

#### Bring, UPS etc.

Collection points and parcel hubs

#### Amazor

Amazon Locker for deliveries and returns



# Reception Box Systems Delivery sent to storage owned by the person receiving the delivery

Reception box systems is enabled by the configuration of a locked storage space in proximity to the customers home.

Strong points: Convenience for the recipient and ease of delivery for the retailer are two strong points. Integrity issues may be perceived as smaller (compared to home access delivery) and regulatory issues are less influential.

Drawbacks: On the negative, installation costs are likely to be high, especially if equipped with cooling/ heating etc. and a high level of security. Large objects or objects in need of specific storage might not be feasible for delivery through a reception box.

Sample cases:

#### **Bringme**

Delivery to private "Bringeme"-boxes

#### Siedle

Safe reception of packages to Siedle delivery box, with video image



## **Drop-off/Delivery Service**Someone/something delivers package to specific location

The category includes all types of attended delivery to a specified location. It follows that doorbell deliveries, such as groceries and electronics, as well as technology enabled services, such as Uber Eats, are included.

Strong points: The presence of the recipient might give a sense of control and security.

Drawbacks: The recipient is required to be present at delivery, which poses the inconvenience of waiting for the delivery. From the distributors perspective customers primarily desires deliveries during evenings resulting in a higher delivery density during these hours.

Sample cases:

#### Uber eats

Food delivery by driver

#### Yelp Eat24

Test of robot delivery in San Francisco



#### Home Access Delivery Solutions allowing controlled access to recipient's home, fridge, car etc.

Technology enabled solutions allowing delivery personnel access to a private or restricted storage location, usually home or car, is defined as home access delivery.

Strong points: While being convenient for the recipient, the retailer may benefit from more extensive delivery slots enabling easier delivery scheduling while meeting customers' requirements. The unattended delivery eliminates the cost of redelivery if recipient is not at home.

Drawbacks: Issues concerning legal and regulatory aspects as well as integrity are judged to be the main concerns associated with the delivery concept.

Sample cases:

#### Amazon Key

In house delivery using smart door locks

#### Volvo

In car delivery achieved by electronically delegating one-time access to an authorised delivery company

Delivery solutions overview

### A comparison model

PwC has developed a model to assess and compare the different last mile delivery concepts. The model evaluates the main trade-off between customer preference and cost to serve as well as the hygiene factors – the basic characteristics of the service - associated with the delivery concept. The hygiene factors are not by themselves enough to satisfy the customer, but they can cause dissatisfaction if not fulfilled or perceived as on par with or better than the alternatives.

It should be noted that the complete last mile delivery offering for a company most probably comprise several of or all of the different concepts, depending on the feasibility of the type of goods. The selection of concepts, as a basis for a last mile delivery solution, must be aligned with customer's preferences and

expectations associated with that specific type of goods.

The model is based on eight considerations which have been identified as key for a successful delivery solution:

- 1. Customer preference alignment (trade-off)
- 2. Cost to serve (trade-off)
- 3. Ability to handle delivery peaks (hygiene
- 4. Transportation flexibility (hygiene factor)
- 5. Visibility and proof of delivery (hygiene factor)
- 6. Perceived level of integrity (hygiene factor)
- 7. Level of security (hygiene factor)
- 8. Legal and regulatory easiness (hygiene

#### Comparison model of delivery concept types

#### Customer preference alignment

Last mile delivery concepts must align with customer expectations and current trends. In summary, customer preferences may

- 1. Speed of delivery, in many cases same day
- 2. Reliability in terms of precision, security and transparency

Cost to serve has proved as being important in last mile delivery and hence the cost to serve/customer preference alignment is critical. Areas to consider span; consolidation opportunity, flexibility of delivery slots, duration of delivery, degree of manual labour and handling, redeliveries.

#### Ability to handle delivery peaks

E-commerce as the main driver of last mile delivery exhibits a heavily seasonal pattern with substantial peaks in volume. Attended door deliveries builds up peaks during evening hours. Hence the delivery concept must allow the possibility to steer capacity and enable efficient planning and scheduling.

#### Level of security

In transit as well as at delivery, security is a critical aspect to consider for any delivery solution. Measures to ensure security of goods must be considered.

Although the delivery should be personalized and convenient,

customers demand high level of integrity measures. Any delivery

concept must hence consider the perceived intrusion of personal privacy and the amount and handling of personal data required.

#### Transportation flexibility

The delivery solution's potential to switch between different transportation modes, as well as its potential to leverage new technologies, is crucial in order to optimize delivery and manage the cost to serve.

#### Legal and regulatory easiness

Perceived level of integrity

Several regulatory aspects should be considered, among those:

- Inconvenience of delayed quality check of received goods
- Issues related to ownership of goods and timing of handover
- Issues related to insurance and unclear responsibility

#### Visibility and proof of delivery

Customers require visibility and proof of delivery in any delivery concept. Key aspects in this area is the level of automation in the supply chain and that the delivery processes enables rigid proof of delivery.

# Key insights from the comparison of delivery models

#### Summary of comparison of delivery models

We have made an evaluation of the different delivery concepts against the main trade-off as well as the hygiene factors. There is of course no one-size-fits all, and depending on the specific logistics provider's current operating model and the type of goods, the importance of the different parameters will vary<sup>2</sup>.

	Collection Points	Reception Box Systems	Drop-off/Delivery Services	Home Access Delivery
Customer preference alignment				
Cost to serve				
Ability to handle delivery peaks	••00	•••	••00	•••0
Transportation flexibility	•••	•••	•••	•••
Visibility and proof of delivery	•••	••00	•••	•••0
Perceived level of integrity	••••	•••	••••	•••0
Level of security	•••	••00	•••	•••
Legal and regulatory easiness	••••	•••	••••	••00
Summary (hygiene factors)	= 20	<b>=</b> 17	= 20	<b>=</b> 17

🌘 🌑 🔘 Low 💮 🌑 🜑 High

<sup>&</sup>lt;sup>2</sup>A clear understanding of the customer requirements and preferences is key to develop the most suitable delivery solution for an online business and in PwC's Strategy& point-of-view 'Solving the online logistics dilemma', (https://www.strategyand.pwc.com/media/file/Solving-the-online-logistics-dilemma.pdf) a structured framework for designing a profitable online logistics business is outlined in detail.

### The advantages of home access delivery

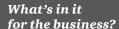
What makes the home access delivery concept so compelling is, it delivers the greatest customer value and does so in the most cost efficient way (i.e. highest customer value per unit of cost to serve). It is also able to benefit all key players along the value chain. With the key benefits presented in the illustration below.

Home access delivery has in a short timeframe moved from the proof-ofconcept stage to broader market entry. It is still a maturing concept which has resulted in it scoring slightly lower on some of the hygiene factors (e.g. perceived level of integrity) compared to the other concepts. However, it has significant potential both for the customer, the business, and the logistic provider.

In summary, home access delivery will present a compelling alternative for many online businesses. It will be key to evaluate the options with rigor and closely monitor market as well as technological and regulatory changes which affect the solutions and their business cases.

#### What's in it for the consumer?

- No need to be at home at the time of delivery (unattended delivery)
- Easy surveillance and traceability of delivery
- Secure and appropriate storage of products at delivery (groceries in the fridge etc.)
- No inconvenience in terms of pick up at collection points or in store
- Increased easiness of returns as the delivery man can pick them up at the consumer's home, and also enable recycling of packaging



- Complexity in delivery scheduling is reduced due to larger delivery slots
- Cost proportion of inventory to volume of delivered goods decreases when flexibility
- Lower complexity and unit cost of delivery since the possibility of unattended delivery eliminates the risk of repeated delivery
- Environmental and cost benefits in recycling of packaging
- Smart returns enabled

#### Significant gains related to home access delivery

- Business that today provide home delivery will be able to widen their delivery windows enabling reduced complexity in delivery scheduling. Groceries, pharmaceuticals, home electro-
- Products that need secure storage at delivery will no longer need to be returned if the recipient is not in place at
- A wide range of add-on services is enabled

Benefits of home access delivery to key players along the value chain

### Want to learn more? Please do not hesitate to contact us



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