LEAD FACTS

ON-DEMAND LAST-MILE LOGISTICS

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Last-mile delivery systems are facing many challenges associated with the dawn of on-demand logistics,

struggling to accommodate citizen's expectations for responsive logistics systems, that deliver products at low or even zero cost.

But creative and innovative solutions are popping up everywhere...

CREDITS: SONAE MC

Did you know that with the implementation of parcel lockers a courier could deliver ten times more parcels per day?

A study undertaken by the University of Science and Technology in Krakow concluded that couriers servicing parcel lockers are able to deliver 600 parcels in just one day covering 70 km in comparison to 60 parcels and 150 km with the traditional delivery system. Fewer couriers' kilometres covered mean less traffic congestion and less economic loss, with a significant reduction of CO2 emissions.

Source: (Lemke, Iwan & Korczak, 2016)

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Did you know that about 80% of delivery goods are delivered at home?

Customers have a tremendous preference for home delivery but, from a logistic point of view, a lot of issues are related to this type of service in terms of cost and organisation. The issue involves two actors: the customer and the e-retailer. The main problem relates to the customers not being at home to receive the delivery and, according to that, the courier must deliver the good a second time. This complication means a loss of time and additional costs for the delivery company.

Source: (De Maere, 2017)

Did you know that, in Germany, 77% of shoppers online have made a return?

In Germany, the high number of returns is explained by the fact that the cost of them tend to be free, especially in the fashion segment. A study conducted by Transportation Research Procedia showed that more than a third of German distributors have an average return rate of 20%. The percentage increases up to 40% if we take into consideration fashion articles.

Source: (Morganti et al. 2014)

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In France, delivery networks provide access to a pick-up point in under 10 minutes by car or on foot to 90% of the French population

The French system of points was created by four PP middle-sized operators – Mondial Relay, Relais Colis, Kiala and Pickup services – and it relies primarily on small independent local shops, such as florist or tobaccos shops. Each operator provides online shoppers with an average of 5.000 pickup points across the country. In 2010, around 60 million parcels were delivered in France via the PP network.

Source: LEAD

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Did you know that thanks to parcel lockers implementation, emissions could be reduced by 70% with cost reductions of 35% in more densely populated cities?

Studies highlighted that parcel locker implementation is advantageous compared to the traditional home delivery mode. First of all, parcel locker reduces last-mile delivery because it concentrates deliveries in one place. For this reason, it has a positive impact on the environment because CO2 emissions are reduced and companies will benefit from parcel lockers implementation since transport costs will decrease.

Source: LEAD

Qilin's prance Filmmaker/ Shutterstock

Do you know what a door to car delivery is?

To avoid missed deliveries, this pilot project consists of delivering the products directly to a costumers' car. Through a smartphone app the courier receives the location of the car and the password with which he can open it and leave the parcel inside. The project aims at preventing customer absences, but the main issue is that car owners would have to allow couriers access to their cars.

Source: LEAD

70% OF THE POPULATION WILL BE LIVING IN CITIES BY 2050

They represent a great opportunity for those who want to gain personal and work experiences. Cities are facing a rapid increase of e-commerce activities, due to the growth of the population living in urban areas. This situation leads to an ever-increasing demand for goods and, consequently, to a greater organisation in the area of good logistics

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In Manhattan, 31.8% of the population claims to use a food app at least once a week

Instant deliveries apps, such as AmazonPrimeNow or Amazon Flex, are becoming widely used, particularly for the foodservice industry. Nowadays, Delivery, UberEats or Glovo are some of the companies that deliver food instantly by connecting restaurants, bars and grocery shops directly to consumers at home. In many cases, some restaurants are created specifically to serve online customers. From a sustainable perspective, there will be advantages if riders use sustainable transportation to deliver food.

Source: LEAD

Off-hour deliveries combined with the use of Parcel Lockers and electric vehicles could lead to a 70% reduction of kilometres covered in densely populated cities and a 40% reduction in logistic cost

Delivering goods during busy hours could be economically and environmentally unproductive, especially in crowded cities: i.e. more traffic jams and fewer deliveries with a higher cost for distribution companies. One way to avoid these problems is to deliver in off-hours in parcel lockers stations to increase the speed of deliveries and reduce the mileage of the couriers.

Source: LEAD


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Did you know that 65% of riders in Paris use the bike to deliver goods?

Using bicycles to deliver goods could be one of the solutions to decrease negative impacts on the environment. In Paris, 65% of riders use a sustainable vehicle to deliver food, which means less probability of traffic jams and less pollution.
Source: LEAD

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In Barcelona, two large night delivery trucks equipped with devices to reduce sound can replace 7-day trucks going at three times the speed of a standard time

This shows that working at night is much more efficient than working in rush hours. This is because during the night there is much less traffic and consequently the risk of creating traffic jams is drastically reduced. In addition, transportation companies would save a lot of money as the work of two trucks in 7 days would be done in one night. The problem of truck noise is solved by devices used to reduce the sound.

Source: (Bouton et al. 2017)

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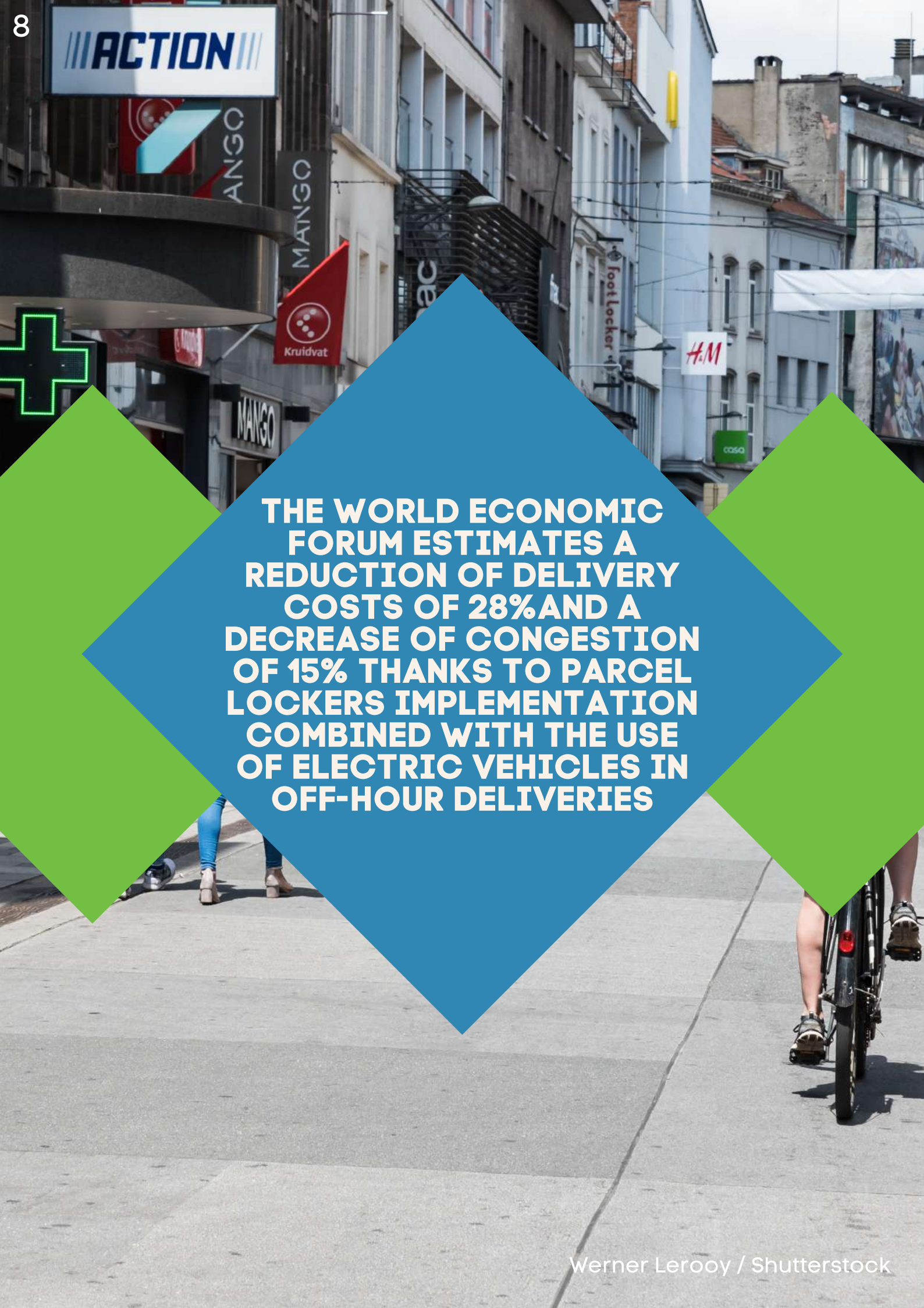
Madrid, one of the LEAD projects living labs, is transforming a Parking Lot into an Urban Consolidation Centre

Madrid is an important logistic hub, crossed by the Atlantic and the Mediterranean TEN-T corridors. Originally, there was an empty parking lot in the centre of Madrid located in Plaza Mayor. The project aimed at turning this parking into an Urban Consolidation Center, that would be useful to store goods and distribute them within a 3km radius through sustainable transports, such as bicycles or electric scooters. By doing so, it was possible to redevelop an unused space to ensure greater efficiency in transport logistics.

Source: LEAD



THE WORLD ECONOMIC FORUM ESTIMATES A REDUCTION OF DELIVERY COSTS OF 28%AND A DECREASE OF CONGESTION OF 15% THANKS TO PARCEL LOCKERS IMPLEMENTATION COMBINED WITH THE USE OF ELECTRIC VEHICLES IN OFF-HOUR DELIVERIES

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DID YOU KNOW THAT OSLO CROWDSHIPPING HAS FOUND A WAY TO MAKE LAST-MILE DELIVERY MORE SUSTAINABLE?

Crowdshipping is a sharing mobility service that uses the crows for the delivery of goods. The purpose is to match parcels which need to be shipped from an origin to a destination with individuals travelling along the same route. In Oslo, crowshipping will be possible only by using public transport, non-motorized and electric vehicles for dedicated trips to encourage citizens to travelsustainably.

Source: (Mckinnon, 2016)

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Did you know that 40% of goods' total transport emissions are made during 'Last-Mile Deliveries'?

Last-mile delivery is the last step of the shipping process that ends whit the package in the customers' hands. Moving goods from hubs to their final destinations is becoming an issue due to the rise of online customers and e-commerce, especially in large cities where pollution and congestions are becoming serious problems. For this reason, several organisations are taking steps to look for more sustainable ways of last-mile delivery, such as crowd shipping or parcel locker systems.

Source: LEAD

The Confluence district in Lyon is facing a massive urban construction with over a million square meters built between 2000 and 2030

La confluence is a district of Lyon limited by the Rhone and Saone rivers. After the late nineties, the neighbourhood has experienced a gentrification process by turning from a slum and working-class district into a nice neighbourhood full of offices and infrastructures. LEAD wants to promote this neighbourhood as a low-motorized zone and allow freight distribution only via small sustainable delivery means such as electric cargo bikes and autonomous delivery robots.

Source: COMHIC

About the Publication

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