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COVID-19: actions to prevent an ecological second wave in the Supply Chain

Learnings from the COVID-19 crisis on logistics and urban logistics

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Several supply chains patterns in place for the last decades have been and still are strongly questioned by the COVID-19 crisis. In the last few months, we are living an unprecedented and very fast transformation and transition of our society and economy to new paradigms. Will they stay, for how long and to what extent?

The aim of this ALICE working document is have an ongoing discussion with our members and beyond on how COVID-19 crisis will influence short-medium and long lasting trends impacting urban freight and logistics, and asses to what extent ALICE roadmaps and vison will be reinforced or minimised in the development scenarios and which aspects need to be revisited.

Here some initial thoughts. You may share yours with us at info@etp-alice.eu

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Supply chain regionalization

As a first consequence of this crisis, companies are likely to question certain dogmas like ultra-specialized factories, complex and long supply chains, etc. Companies may probably review their zero stock policies to be less exposed to transportation constraints. Another probable consequence will be the slowdown of inter-continental flows, and partially of global consumption due to economic consequences of the crisis or the awareness raising on responsible consumptions. As a result, companies will look for more region-based supply and probably restructure part of their global supply chain accordingly.

The increase in international transportation flows may slightly curve as an effect of the "re-shoring" trend, whereas national/regional flows will probably increase.

This is not the end of a global supply chains for many structural reasons, among them: the raw material localisation; the weight of labour activities and the fact that big logistic and transport companies demonstrated their ability to deliver and keep goods flowing even with high constraints in terms of prevention measures. However, the crisis has changed some consumption patterns and may reinforce a global movement for local consumption and sourcing.

In the food industry, companies will reinforce short circuits, relying on smaller, local producers that will also be favoured by European Commission Farm to Fork Strategy[1].

Other industries relying on critical supplies will also look for the decrease in their dependency on foreign suppliers for manufacturers and look for local ones. In some countries, political influence will support this opportunity to re-localise industries within the country leveraging current capabilities of robotics and automation systems that may rebalance low labour costs overseas. This would likely balance the trend increasing localisation of some industries inside Europe, leading to a general positive impact on job creation and growth.

In this context, transportation powered by cleaner energy may be an easier alternative thanks to shorter distances to cover. On the other hand, the regionalization of supply chain would locally generate more traffic due to more frequent and smaller flows. To develop sustainable solutions, collaboration and/or seamless access to local logistics networks able to consolidate fragmented demand in a cost effective and efficient way will be a must. In this sense, establishing logistics modular shared systems (e.g. standard boxes, trays, etc.) to be used cross sector as envisioned within the Physical Internet concept[2] could support actual consolidation and sharing of assets across verticals. Additionally, this calls for retailers and shippers to embrace openness of supply chains.

1. European Commission (2020). Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system. https://ec.europa.eu/food/sites/food/files/safety/docs/f2f_action-plan_2020_strategy-info_en.pdf

2. See ALICE video on Physical Internet for sustainable city logistics and beyond (https://youtu.be/O-8OQZYqNi4)

E-commerce and home delivery[3] booming: logistics solutions for local e-commerce services are needed

Lock down situation has made e-commerce to increase (e.g. +55% of Food & Grocery e-commerce B2C in Italy; + 32% Food Ecommerce compared to March and between 10-20% on non-food e commerce especially home products, health in France[4]). This has encouraged restaurants and small retailers to open e-commerce channels, or to setup home delivery services, to serve their regular local consumers in an alternative way. Local initiatives (e.g. "Io sto con I ristoratori – I stay with restaurateurs and Deliverart[5] Italian platforms "[6] or local platforms aggregating local stores offering such as Zerca[7]) are setting collaboration platforms to get access to e-commerce capabilities and get goods delivered locally; nevertheless these initiatives are still fragmented and optimization of flows not largely achieved.

Moreover, the new omni-channel approach is bringing to a variety of new « logistic circuits » (e.g. click & collect, home delivery, …) making deliveries more and more dynamic, fragmented and segmented based on different user needs (e.g. same day delivery, weekend or late evening delivery, on-demand delivery).

It is not easy to predict how urban freight flows will evolve but it seems there will be some long-lasting effects as e-commerce is booming deliveries and fragmentation of flows.

This will probably bring to the creation of new logistics open networks that can provide holistic solutions to small and medium e-retailers and manufacturers in local and global markets[8]. Again, these developments will be supported by Physical Internet like concepts and solutions.

To tackle this challenge, public and private actors need to revaluate the consumption needs and probably propose relevant omnichannel solutions with shared and/or multi fulfilment delivery solutions.

3. home delivery differs from e-commerce because it is not based on a marketplace platform but relies on more traditional selling modalities (e-mail, phone calls, direct purchase and delivery organized by the retailers)
4. In terms of purchase value, 2020 vs.2019 (Source: Osservatorio eCommerce B2C, Politecnico of Milan). For the french scope, source FEVAD
5. The platform allows restaurants to merge and manage all their delivery orders on a single device, and avoid any headaches associated with multiple devices.
6. Foodtech startup Dishcovery has joined forces with another 40 companies and restaurant tech start-ups to launch the platform "Io Sto Con I Ristoratori" (I Stay With Restaurateurs). The platform aims to provide a wide range of products and services for free, or at a promotional price, to all Italian restaurateurs. The primary goals of such initiative are to guide restaurants through digital transformation; prove restaurants the digital tools they need to promote their products in compliance with Covid-19 restrictions; reduce the economic impact of innovation in foodservice.
7. https://www.zerca.com/
8. See for example OGOShip (www.ogoship.com)

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Resilient, agile, adaptable supply networks: regaining supply chain sovereignty

After such complicated months, companies (shippers and/or big retailers) will probably revaluate the importance of supply chain management and select their suppliers by focusing on their capability to be resilient, agile and adaptable, rather than on cost factors driving mostly current procurement practices. Regaining and building stronger supply chain sovereignty[9] (e.g. managing flows in an agile way dealing with fluctuations and/or temporary modifications by diversifying supplier base to hedge against disruptions) is a must.

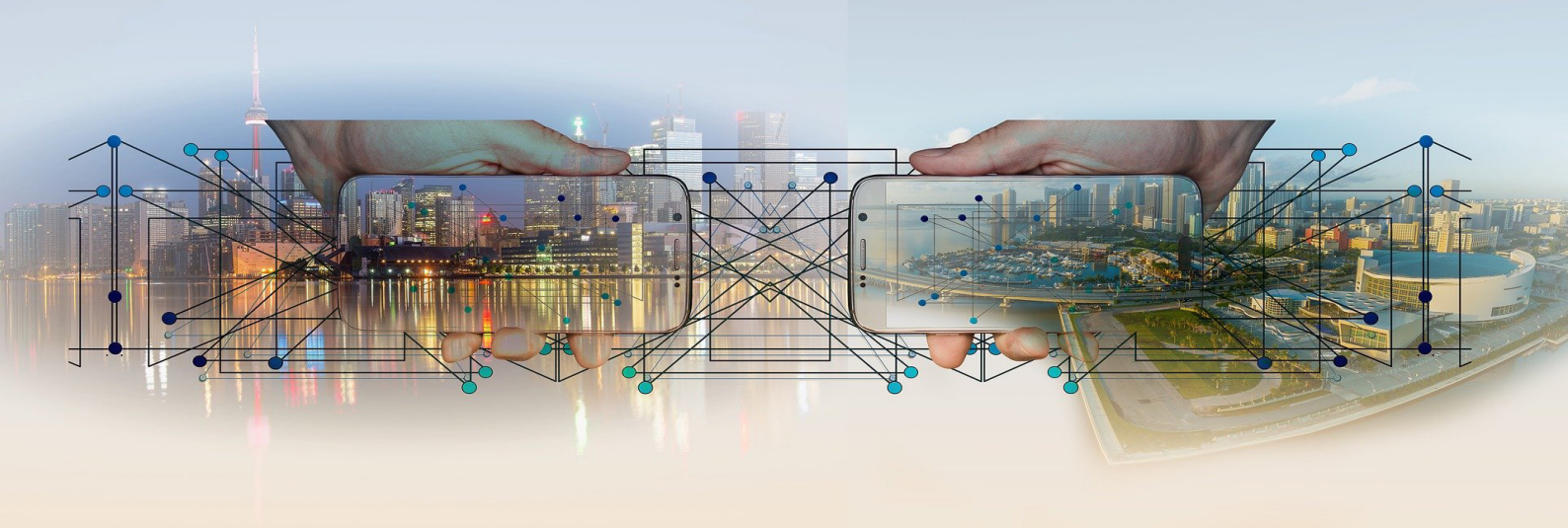
This may probably favour bigger operators which were able to guarantee business continuity of customer activities during the crisis. Big logistics operators will be willing to reduce their exposure to specific sectors and sectorial legacy systems that can lock their ability to reassign resources and capabilities across supply chains and networks to be cost-effective in a highly dynamic paradigm.

Logistics operators were facing supply chains with a high increase in demand while others were close to zero and with very limited technical and operational capacity to reassign resources to fulfil the fluctuations in demand seamlessly and agile.

Accelerated digitalization

Another key learning is the importance and the acceleration of processes digitalization. Difficulties to work with paper-based processes (e.g. physical signing of documents such as consignment or delivery notes) have accelerated the switch or are calling towards more digitized processes in the transport sector even for small carriers,

that should be supported by public acceleration of regulation in the pipeline (e.g. eFTI[10]) and the European Data Strategy[11] that should address logistics data spaces as the glue between manufacturing value chains, linked to consumers and addressing the green deal related data spaces.



Growing need for socially and environmentally responsible solutions

The COVID-19 crisis finally reinforces practices in terms of environmental and health risks assessment, as well as the use of the "EP&L" (Environmental Profit and Loss) approach. Regulations such as laws seeking for due diligence in force in several countries are under study at European level[12] will in the midterm probably be extended to guarantee more transparency and traceability in supply chains worldwide.

Moreover, combination of transparency and traceability together with increased demand for more sustainable transport solutions should boost more strategic and aligned procurement practices to satisfy these needs beyond short term cost decision making. In the short term, we may observe the opposite effect due to the economic recession and the decrease in oil prices, both factors leading to the choice of cheaper and less sustainable road transport solutions in the short term and destroying the current sustainable offer (e.g. intermodal/ rail services) that will not be any more in place when road transport demand surges and prices raise. It is key that this trend is used as an opportunity to align all stakeholders of the supply chain to promote greener transportation solutions and boost the implementation of the European Green Deal[13].

Unusual lack of congestion and easier access to parking but will this last forever?

The unusual lack of congestion and easier access to parking reduced transport time in between deliveries during the lock down and was extended due to the start of the summer period making the transportation process much more efficient. However, this is likely to come to an end when cities fully reopen, children are back to school and workers are back in office. To address this increase in mobility demand we can expect that more private cars than before are on the streets, as an effect of the decrease of supply and demand of public transport to ensure social distancing but also because of the actual reluctance of users to come back to crowded public transport means. Authorities will need to mitigate the impact of these trends on quality of life, congestion and climate in the next 6 to 18 months while companies may need to find solutions to cope with the surge in freight demand in congested cities scenario.

Some cities are even reconsidering the use of urban spaces. In this process ALICE will intensify its dialogue and links with POLIS to make sure the citizens needs to access goods are considered as it has been crucial and will continue to be crucial to ensure access to products and services as experienced in the past months of stay-at-home rules. Although it is possible for all of us to live and stay at home, we needed to ensure goods could access the people in a seamless way as we already included within the ALICE and ERTRAC Urban Logistics Roadmap[14].

9. https://www.govisible.org/

10. Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on electronic freight transport information COM/2018/279 final - 2018/0140 (COD)

11. https://ec.europa.eu/digital-single-market/en/policies/building-european-data-economy

12. https://op.europa.eu/en/publication-detail/-/publication/8ba0a8fd-4c83-11ea-b8b7-01aa75ed71a1/language-en

13. The European Green Deal. Brussels, COM (2019) 640 final. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

14. ALICE & ERTRAC (2014) Urban Logistics Research and Innovation Roadmap :http://euetpl-kirechlik.savviihq.com/wp-content/uploads/2015/08/W56mayo-kopie.pdf

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Toward a paradigm shift: shared an interconnected logistics networks based on low and zero emission transport solutions

In order to drive advanced structural changes beyond managing the pandemics, in view of highly disrupted sectors while other are booming also addressing climate change, we need to avoid a return to "normal" without learning the lessons this crisis has left.

ALICE will continue to push for a stronger collaboration between the actors of supply chain at all levels and develop competitive systems that can be as shareable as possible across supply chains making easy to rebalance and reposition resources in scenarios of surging supply chains while others are declining.

The current global crisis is highlighting the surge for new consumption patterns and the supply chain must be an enabler (and not an obstacle) of responsible consumption. B2C omni channels are booming getting flows more and more fragmented asking for systemic solutions and business practices capable to re-consolidate those fragmented individual companies/value chains flows for lower environmental impact.

The concept of physical internet is the perfect vision of that ambition as already highlighted in ALICE Roadmap Towards Zero Emissions Logistics 2050[15] and further developed in ALICE Roadmap Towards the Physical Internet to be released end of September 2020. It´s also an answer to many of the possible future scenarios that are included in this document.

15. ALICE and LEARN EU project (2019). Roadmap towards Zero Emissions Logistics 2050. https://www.etp-logistics.eu/?p=3152

About ALICE

The European Technology Platform ALICE; Alliance for Logistics Innovation through Collaboration in Europe (www.etp-alice.eu) is set-up to **develop a comprehensive strategy for research, innovation and market deployment of logistics and supply chain management** in Europe. The platform support, assist and advise the European Commission into the implementation of the EU Program for research: Horizon 2020 and future Horizon Europe Programme[16] (in Logistics). ALICE was officially recognized as a European Technology Platform by the European Commission in July 2013.

ALICE is based on the recognition of the **need for an overarching view on logistics and supply chain planning and control**, in which shippers and logistics service providers closely collaborate to reach efficient logistics and supply chain operations. **ALICE vision** is that future logistics will be based on an open global system of systems connecting logistics networks seamlessly and founded on physical, digital, and operational interconnectivity enabling substantial increase in efficiency and sustainability. We call this vision the **Physical Internet (PI)**. In the long run, 2050, we envision a world in which freight transport and logistics is close to **Zero emissions**.

www.etp-alice.eu

16. https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en

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