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62-63

rivista di architettura delle infrastrutture nel paesaggio



**LOGISTICA E PAESAGGI
DEL COMMERCIO ONLINE**

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Logistics and landscapes of e-commerce

by Laura Facchinelli

Our lifestyle is changing rapidly and radically: this is an actual subversion that seems to affect every field of our thoughts and actions. Some technologies at this point seem to be so ingrained in our everyday lives as to erase any memory of "before". Even the fundamental act of buying products today appears to be completely different from the "naïve" exchange between seller and customer that was traditional in markets, then in increasingly specialised boutiques, until after the 1950s when they gave way to concentrations of increasingly large vendors: shopping centres. In recent years (with a strong increase over the past two or three, driven by the limitations imposed by the pandemic) the phenomenon of online shopping has literally exploded.

The online commerce platforms are familiar even to those who are more resistant to technology: they may think it convenient, perhaps with the help of a "digital native", to be able to find any product at all: revealed, analysed and chosen on the basis of an exclusively visual contact without the contribution of any other senses (no touch to feel the texture of a fabric, no test of smell, or of the noise produced by the object when using it). Usually, the wait is just a few hours and the box containing the object you have ordered is delivered directly to the home. Security is provided by the return policy that allows any object that does not fully satisfy expectations to be returned (to a nearby collection centre, no charge), and too bad if it gets thrown away (vendors usually find no benefit in recycling): it will be replaced by another product, or money back. It doesn't get any better.

The buyer feels satisfied: She has saved herself the bother of going from store to store, and can boast that she is technological, "evolved". She will probably have little concern for the employees charged with handling and delivering the packages (is their salary regulated by contract and commensurate with the commitment? Is the work-tempo "humane"?). Rarely will she wonder if the circulation of vehicles for rapid delivery contributes to traffic congestion or pollution. More rarely yet will the buyer (any of us, in fact) notice the somewhat alienating proliferation of the warehouses in which the goods for online shopping are concentrated and distributed: yet they are warehouses that (irreversibly) blight our landscape and spawn a ramification of new roadways. At most she will notice that stores are closing in our city centres, along our streets, in our town squares that have traditionally been friendly and vivacious. But one might observe that the decline was already underway, caused by the proliferation of giant shopping centres and outlets in the city outskirts, which attract vehicles and actual tours organized for discount shopping. E-commerce platforms therefore enjoy a relatively good reputation, which they build up with astute advertising campaigns on television.

These are just some of the themes discussed in this issue of our magazine, in the hopes of offering some insights to reflect upon critically. Beyond a simple "everyone does it". Beyond the apparent, playful ease characteristic of a phenomenon that underpins a colossal business. We present comparisons with other geographical areas and some cultural interpretations, looking at history and the memory of representations on film.

In the "Culture" section, there are three articles dedicated to Milan: to the Centrale train station (with an adventure novel and an account of the projects developed to renovate the Magazzini Raccordati) and the Navigli (which could partly recover their original function as connecting waterways).

Logistica e paesaggi del commercio online

di Laura Facchinelli

Il nostro modo di vivere sta cambiando, da alcuni anni, in modo veloce e radicale: si tratta di un vero e proprio sovvertimento che sembra investire ogni campo del nostro pensare e del nostro agire. Alcune tecnologie (pensiamo al cellulare, nella sua evoluzione, entusiasmante, da telefono a strumento di collegamento totalizzante) sembrano ormai talmente connaturate alla nostra dimensione quotidiana da cancellare persino il ricordo del "prima". Anche la fondamentale azione dell'acquisto di prodotti appare, oggi, tutt'altra cosa dall'"ingenuo" incontro tra venditore e cliente che era proprio dei mercati sulle pubbliche piazze, poi delle botteghe sempre più organizzate, che dagli anni '50 del Novecento hanno lasciato il posto a concentrazioni di punti vendita sempre più grandi: i centri commerciali. Negli anni recenti (con un forte impulso negli ultimi due o tre, complice le limitazioni imposte dalla pandemia) è letteralmente esploso il fenomeno degli acquisti online.

Le piattaforme delle vendite online sono note anche alle persone più refrattarie alle tecnologie, che trovano comodo, magari con l'aiuto di uno "smanettatore", procurarsi un qualsivoglia prodotto scovato, analizzato, scelto sulla base di un contatto solo visivo, senza l'apporto degli altri sensi (niente tatto per la consistenza di un tessuto, nessuna prova sull'odore o il rumore prodotto dall'oggetto d'uso). L'acquisto è digitale. L'attesa, di solito, ridotta a poche ore e (cosa molto divertente!) la scatola contenente il prodotto acquistato arriva direttamente a casa. La sicurezza è data dalla possibilità di restituire l'oggetto che eventualmente non soddisfi le attese (punto raccolta vicino, nessun costo): un altro prodotto è in arrivo, oppure i soldi verranno restituiti. Meglio di così!

L'acquirente si sente soddisfatto: si è risparmiato il giro per negozi e può fregiarsi del titolo di persona tecnologica, evoluta. Probabilmente non penserà al personale addetto alla manipolazione e consegna dei pacchi (la retribuzione è contrattualmente regolata e adeguata all'impegno? I tempi sono "umani"?). Poco importa se il prodotto respinto verrà gettato via (al venditore non conviene il riciclo). Raramente l'acquirente si chiederà se la circolazione dei veicoli per la consegna veloce provoca congestione delle strade o inquinamento. Ancor meno il soggetto acquirente (che poi siamo tutti noi) noterà l'estensione un po' alienante dei magazzini dove le merci del commercio online vengono concentrate e smistate: non sono altro che "capannoni" come ce ne sono tanti che deturpano (ahimè, in modo irreversibile) le nostre pianure e provocano una ramificazione di nuove arterie stradali. Tutt'al più verrà da pensare che spariscono i negozi nei nostri centri urbani, nelle nostre strade, nelle piazze che per tradizione sono sempre state accoglienti e vivaci. Comunque il declino era già in atto, per via della proliferazione frenetica dei vari centri commerciali e outlet fuori porta, attrattori di veicoli e di veri e propri tour organizzati per l'acquisto-conveniente. Pertanto le piattaforme per l'acquisto digitale godono, tutto sommato, di una buona fama che sanno alimentare con astute campagne pubblicitarie in tivù.

Questi sono alcuni degli argomenti sviluppati o suggeriti in questo numero della rivista con la consueta nostra esortazione ad esercitare il senso critico. Al di là del "così fan tutti". Al di là dell'apparente facilità, quasi giocosa, di un fenomeno che muove un giro d'affari colossale. Interessanti sono, ancora una volta, i confronti con altre realtà geografiche, con le soluzioni diverse rispetto ai non-progetti di casa nostra.

Nella sezione "Cultura", tre contributi sono dedicati a Milano: alla stazione centrale (con un romanzo-thriller e un resoconto dei progetti per il recupero dei Magazzini Raccordati) e ai Navigli (che potrebbero riprendere almeno in parte l'originaria funzione di vie acquee di collegamento).



When the warehouse move into the city

By Domingo Abrusci

The expansion of the e-commerce with the huge increase of it during the pandemic, saw a proliferation of many different warehouse closer to the cities, than before, to have a day or even an hour delivery. If until 2012 the growing of warehouse was going very slow, within the change of the supply chain and with a new business model like prime, we saw a speed up with warehouse growing all over the states.

The new model business means warehouses need to be close to affluent neighborhoods with the greatest concentrations of high frequency costumer's households.

Amazon in New York: lack of space and social complexities

The rapid growth of e-commerce has had widespread effects, especially on transportation networks and land use. These impacts include increased traffic and emissions from delivery vehicles, greater competition for curb space during deliveries, and greater demand for land for warehouse and distribution centers.

What is the impact of this operation? In which way the part of the city chosen had been impacted by this warehouse?

First, we should ask where this warehouse is been located, most of the time the location needs to be closest possible to the city, normally it's been chosen a marginal part of the city, or with very peculiar characterization of the neighborhood and close to the expressway.

Consumers expect to receive the goods they purchase within a few days (or hours), and retailers like Amazon, Walmart, and Target are competing to tighten fulfillment times even more. Pressure to maintain dependable, rapid delivery has resulted in networks of last-mile delivery centers close to suburban and urban neighborhoods. Amazon, which controls approximately 40 percent of

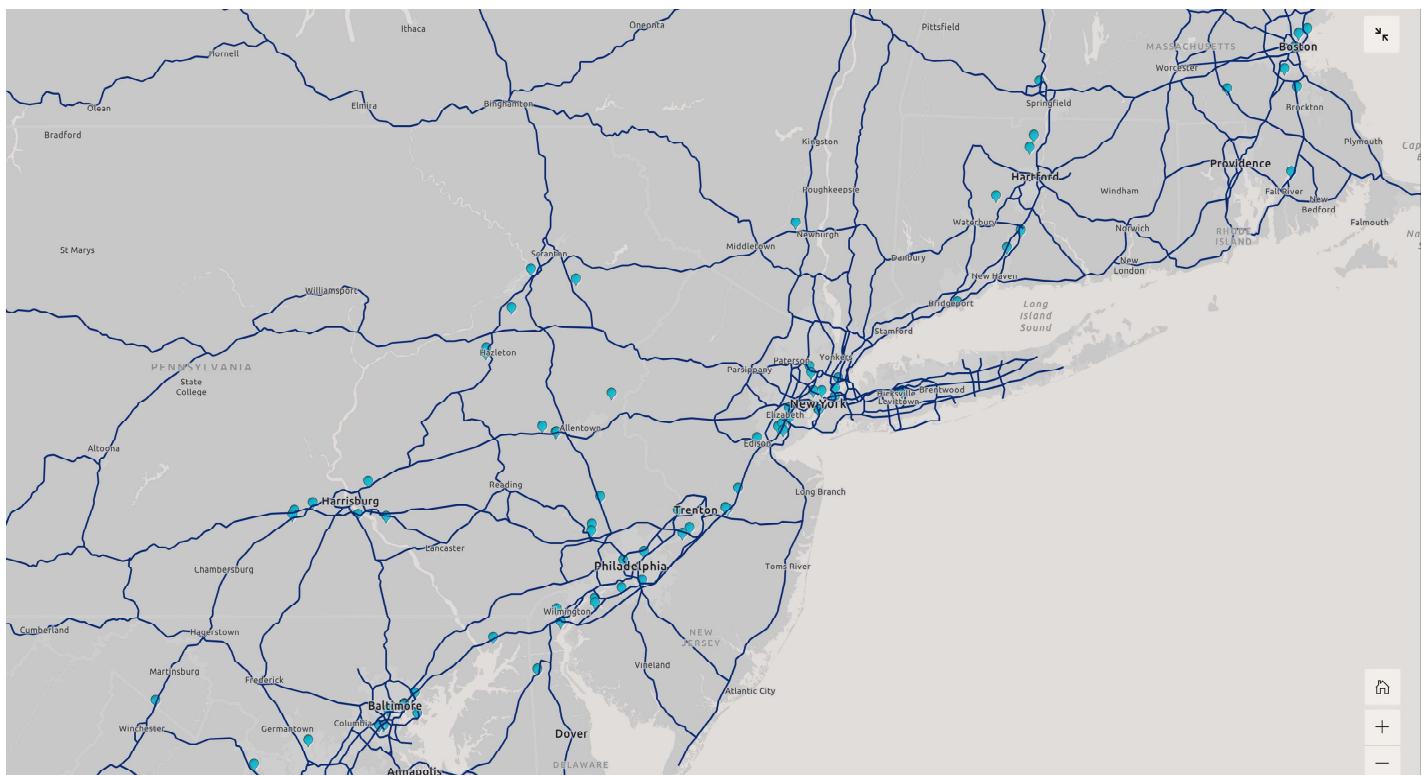
Quando il magazzino si sposta in città

di Domingo Abrusci

L'espansione dell'e-commerce con l'aumento significativo dei suoi flussi nel corso della pandemia, ha visto la proliferazione di diverse tipologie di magazzini di prossimità, sorte per rispondere alla domanda di consegne giornaliere o addirittura orarie. Se fino al 2012 lo sviluppo dei magazzini (cosiddetti warehouses) negli Stati Uniti è stata lenta, con la trasformazione delle catene di approvvigionamento, e con i nuovi modelli di business come Prime, si è assistito ad una improvvisa accelerazione nei processi di sviluppo urbano. Il nuovo modello di business prevede che i magazzini sorgano nei pressi dei quartieri dove risiedono le maggiori concentrazioni di famiglie di consumatori, per poter soddisfare in tempi rapidi quanti più ordini possibile. L'improvvisa fortuna del commercio elettronico ha avuto effetti diffusi, soprattutto sulle reti di trasporto e sull'uso del territorio, con aumento del traffico e delle emissioni da parte dei veicoli usati per le consegne.

Qual è l'impatto di tali fenomeni? Nel sobborgo di Red Hook, a Brooklyn, sono in corso processi destinati a trasformare l'area – tradizionalmente povera e depressa – in un baluardo della logistica. Amazon trasferirà infatti, nell'area, altri due magazzini, tra cui una avveniristica struttura a tre piani sul lungomare, approfittando dei prezzi contenuti dei terreni e della vicinanza a un grande centro come New York. Questa nuova era di magazzini non può essere esaminata solo dal punto di vista commerciale ma anche per l'impatto che avrà sulle comunità – spesso vulnerabili e poco servite – i cui quartieri sono al centro di un nuovo e intenso sviluppo urbano.

On the previous page:
640 Columbia street,
Redhook, Brooklyn First
multistories warehouse.
Sources: DH Property
Holdings website (2
different render).



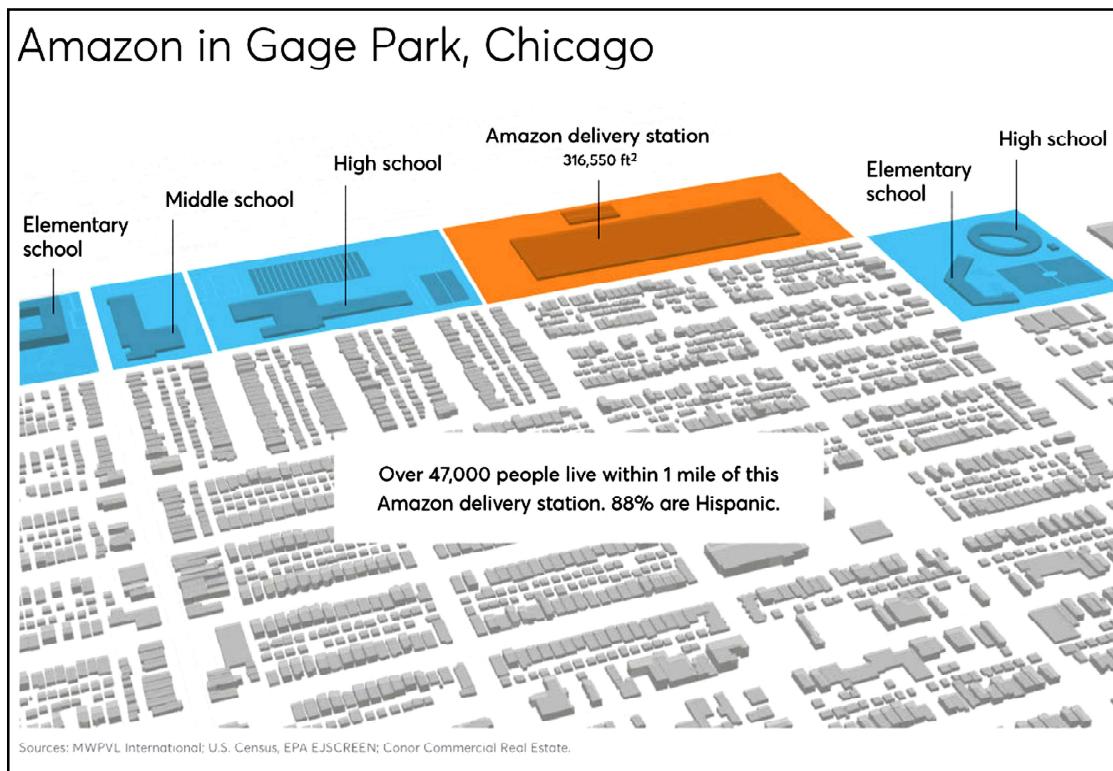
1 - Highways connection, North East. Sources: ESRI, Bureau of transportation statistics.

2 - Redhook map. Source: google maps.

the e-commerce marketplace, is leading the push to build these facilities, which have become integral to the delivery process.

The proximity to the highway infrastructure is crucial for the business, it's the base for where the warehouse need to be placed.

Highways are the veins and arteries of Amazon's rapid-delivery system. The images show that all facilities (in red) are located within minutes of highway ramps. (In yellow) In Red Hook, Brooklyn the neighborhood is in continuous transformation, a tiny nei-



3 Amazon in Gage Park, Chicago. Sources: MWPVL International; U.S. Census, EPA EJSCREEN; Conor Commercial Real Estate.



4 - Most Amazon Warehouses Are in Neighborhoods of Color. Sources: MWPVL International and U.S. Census, EPA EJSCREEN. Differences expressed in percentage points. Excludes warehouses in areas with fewer than 500 people living within 1 mile.

ghborhood with a narrow street that was used for its piers to bring goods through the east river.

Later this year, Amazon will move into two other warehouses in Red Hook, including a three-story facility on the waterfront. In a

city where land is at a premium, the facility is one of at least four multistory warehouses under construction across New York City. Three of the four will be occupied by Amazon. Multilevel warehouses first appeared in dense cities like Tokyo decades ago but only



5 - New Amazon Warehouses. Source: MVPV International.

arrived in the United States in recent years. Since 2008 with the opening of the Ikea, the neighborhood is a strategic target for companies, especially for its proximity to the Gowanus expressway and for not a complete development of the neighborhood that in the '90 was defined by the magazine Life the most dangerous neighborhood. The proliferation of the e-commerce companies building their warehouse impact in terms of pollution, congestion due the traffic of the vans for the delivery but constrain nonindustrial development opportunity, because who's interested live in the neighborhood surrounded by warehouses and with a constant traffic.

The neighborhood is trying to mobilize against this expansion and to attract different investment. In February 2022, Red Hook village's board of trustees have approved eliminating the Highway Business District designation in favor of a slightly larger Gateway Business District. Under the changes, there would also be some properties that will have zoning designations changed from Highway Business to General Business, which will also allow apartments to be constructed in buildings that have commercial uses on the first floor. One of the goals of the revisions is to encourage more housing in an area where mixed retail and residential uses have previously not been allowed.

Normally, when these corporations open their warehouse, the surrounding communities pays the price – and due to historical patterns of segregation, they are much more likely to be low-income communities of color.

Last year, a new Amazon delivery station opened in Chicago's Gage Park neighborhood. The warehouse is located within 1,500 feet of five schools, in a residential area where over 50% of people living within a mile have low-income status, and almost 90% are Hispanic. This neighborhood, like hundreds of others across the U.S., has been part of the recent Amazon commercial expansion operation. Expansion that changes the quality life of the residents and increasing negative environmental impacts in the area: air pollution, traffic and street danger and constant noise. Like Gage Park, most of these neighborhoods nationwide are home to a greater share of residents of color and people with low incomes than the typical neighborhood in the same urban area, according to a Consumer Reports investigation¹.

According to this report, made in partnership with the Guardian, the key findings are:

Amazon opens most of its warehouses in neighborhoods with a disproportionately high number of people of color. Nationally, 69 percent of Amazon warehouses have a greater share of people of color living within a mile radius than the median, or typical, neighborhood in their metro areas. Some of these are communities where other industrial facilities already cause residents to worry about poor air quality, and excessive noise and traffic.

1 <https://www.consumerreports.org/corporate-accountability/when-amazon-expands-these-communities-pay-the-price-a2554249208/>

The neighborhoods tend to be poorer, too. Fifty-seven percent of Amazon warehouses are in neighborhoods with a greater share of low-income residents than typical for the metro area they're in.

It's just the opposite for Whole Foods and other Amazon retail stores. These tend to be located in a city's wealthier, whiter neighborhoods, away from the communities where Amazon runs its warehouses.

Warehouse operators are not generally accountable for air pollution from the trucks and vans they attract, and existing air quality monitoring networks are too spread out to pick up local emissions that can affect neighbors' health.

Community activists are asking local, state, and federal officials to step in to regulate pollution from warehouse-related traffic, and to consider an area's existing environmental hazards before allowing new warehouses to open there".

Even if there are some advantages for communities where warehouse are being constructed – increased job opportunity and property tax revenue to name the most important – in the broader scheme of things they lose out in terms of pollution, noise, and security.

In Gage Park the warehouse is close to schools, where instead of having a park or green-space where they can play, children must be careful because of the increased amount of truck traffic in the neighborhood.

The explosion of e-commerce facilities is projected to continue. According to a recent report from CBRE Group, e-commerce will account for 26% of all retail sales in the U.S. by 2025. To keep pace, an additional 330 million square feet of distribution space will be needed. The growing desire for last-mile delivery means that even more firms will need warehouse space, space that is already sold out. According to the real estate firm JLL only 1.6% of all warehouses in New York City and 1.3% in New Jersey are available for lease.

What is the solution to this lack of space? The leading real estate development DH Property Holdings is already starting to build multistory warehouses because there's no other option - especially in cities like New York with exponential increases in last-mile delivery demand.

The first multi-story warehouse is under construction on the East Coast, located in Red Hook, Brooklyn this three-story, 336,350 square-foot logistic facilities will be the answer of the demand.



Conclusions

This new era of warehouses can't only be examined and addressed from a business perspective, but also from the side of the impact it will have on the – often vulnerable and underserved - communities whose neighborhoods are the site of this new and intensified development. While multistory warehouses provide a business benefit by utilizing less land where it is scarce, they increase negative externalities on the surrounding communities. These companies should commit alongside cities to include neighborhood investment capital or development benefits to offset their impact and increase local livability. Beyond this, it is necessary that local municipalities and planners ensure that neighborhoods are resilient and livable for local communities. This will mean continuing to evolve serious plans of action and regulations that companies respect.

6 - Sunset park, Brooklyn, multistories warehouse.
Sources: DH Property Holdings website

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