

Cloud-based, multi-tenant, on-demand storage is the way forward for warehousing



Abstract

On-demand warehousing is in high demand as short-term warehouse space buyers are looking for quicker deals while trying to avoid the agony of having to go through the long-drawn-out and arduous process of signing long-term agreements.

On-demand warehousing not only addresses the short- to medium-term storage and distribution requirements of shippers and logistics service providers (LSPs), but also helps space sellers, the warehouse service providers, earn incremental revenue by selling idle curated spaces that are otherwise considered as sunk cost.

Exponentially growing markets and global upheavals like container shortages and COVID have created a demand and supply imbalance of assets, inventory and warehouse spaces, giving rise to the need for on-demand storages. It has become essential to map unused spaces to short-term storage requirements in a near-real-time environment, using simple tools, processes, and methods to ease logistics pain points and make supply chains more flexible. A collaborative solution such as a warehousing marketplace platform like Uber or Airbnb can be a win-win solution for all stakeholders.

Global developments to drive on-demand warehousing services

On-demand warehousing matches a buyer's requirements—ranging from size and location to duration—to available space offered by the sellers. Buyers with short-term and spot-buying needs prefer to access such space instead of having to sign long-term agreements.



Buyers - Stakeholders from different industries, such as CPG, retail, manufacturing, pharmaceuticals, and who are looking for spaces to store semi-finished and finished goods. Buyers are often referred as shippers.

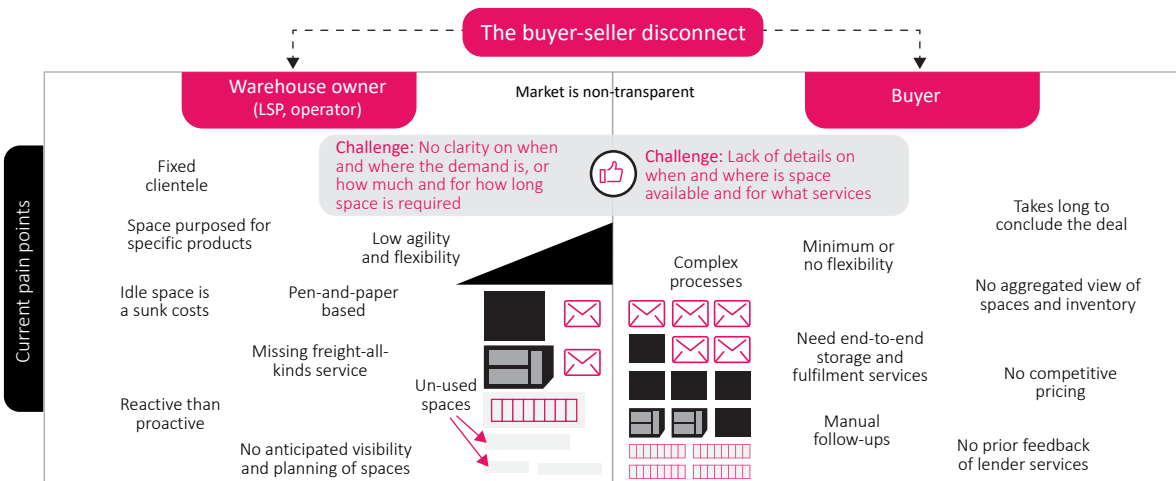
Sellers - Stakeholders with warehousing facilities offering curated warehouse spaces.

Logistics service providers (LSP) can sometimes act as a buyer needing extra spaces and sometimes as a seller offering excess spaces.

Global developments such as exponential ecommerce growth, rapid urbanization and COVID have further fueled the demand for on-demand warehousing services.

	Ecommerce boom	Rapid urbanization	Seasonal variations	COVID	Costs
Trends	<ul style="list-style-type: none"> Annual online retail sales — \$735 billion by 2023¹ 1.2 million sqft of warehouse space needed for every \$1 billion online sale² Large to small retailers needing small-size orders, faster deliveries Positioning of inventory closer to end consumers Amidst rising demand, number of distribution centers rose to 150K in 2020³ 	<ul style="list-style-type: none"> About 1.5 million people added to the global urban population every week⁴ 50% (4 out of 7 billion) population living in cities. By 2050, 70% of people will be living in cities⁵ As standards of living rise, customers demand timely delivery of shipments Value-added services, such as the need to store household items, stores operating out of warehouses 	<ul style="list-style-type: none"> Short-term demand to store multi-industry seasonal products such as woollens and agricultural produce At any time, warehouses typically carry more than 25% of vacant space beyond maximum operational efficiency requirements⁶ Rising rents: Lessors are willing to share space in a facility rather than hire a dedicated facility 	<ul style="list-style-type: none"> Supply chain imbalances, uncertainties and delays, accelerated online sales Pandemic-induced demand for warehousing needs. Need for big box distribution centers Last-mile delivery centers near urban populace. Faster and quicker movement of emergency items Need for temporary storage for excessive inventory in transit due to port congestions and other delays. Temporary storage space container on trailer is in demand 	<ul style="list-style-type: none"> Lot of vacant space means low rent for owners/lending/ service providers Increasing real estate costs and COVID make it harder for developers/LSPs to build new facilities now

There is a niche market for short-term on-demand warehousing needs. However, there is an apparent disconnect between identifying and predicting warehouse space availability and providing space visibility to current and prospective buyers in near real-time. Also, the complexities of the traditional methods for searching, engaging, and serving—lack of trust between buyers and sellers; communications only over phone and emails; manual, intensive contract paperwork and the lengthy process—only impede the entire process of buying and selling space.



Besides, the current business model is based on the pop-up-shop approach, a onetime transaction. Moreover, buyers think that orders and inventory visibility from sellers could help them plan their resources accordingly. Technology is now filling the gap and matching buyers' requirements with what sellers have to offer.

[1] <https://fortunly.com/statistics/e-commerce-statistics/#gref>
 [2] <https://www.cbre.us/real-estate-services/real-estate-industries/omnichannel/the-definitive-guide-to-omnichannel-real-estate/real-estate-impact/how-has-e-commerce-shaped-industrial-real-estate-demand>
 [3] <https://www.dcvLOCITY.com/articles/49870-worlds-stock-of-warehouses-to-rise-from-150-000-to-180-000-in-five-years>
 [4] <https://www.pwc.co.uk/issues/megatrends/rapid-urbanisation.html>
 [5] <https://www.worldbank.org/en/topic/urbandevelopment/overview>
 [6] <https://360.here.com/spacefill-warehouse-storage>

Digitalization will help eliminate challenges

Advancements in technology have aided the development of efficient solutions that provide dynamic and near-real-time collaboration, monitoring, and visibility throughout to simplify the process of buying and selling of on-demand short-term warehousing. This helps both the sellers and buyers to:

- Address the unused space problem and reduce fixed costs by Selling curated space with others
- Find and accommodate short-term storage demand and benefit from incremental revenue
- Look for options, such as buying space for a shorter duration instead of building new facilities or entering into long-term contracts, to reduce cost
- Adapt as per changing demand, omnichannel fulfilment requirements, demographics and needs of urban populace
- Enable positioning of inventory in last-mile locations for quicker delivery and save on distribution costs

With short-term on-demand warehousing continuing to grow, there is a need for the logistics community to adopt digital tools and channels of engagement to eliminate the challenges of the traditional methods. New technologies, processes—artificial intelligence-machine learning to predict availability; cloud—individual virtual warehouse instances; uberization of space; dynamic pricing—and ways of doing business will be the distinguishing factors for logistics service companies to drive growth and customer satisfaction.

In on-demand warehousing as a service, it would be worthwhile to relook at how:

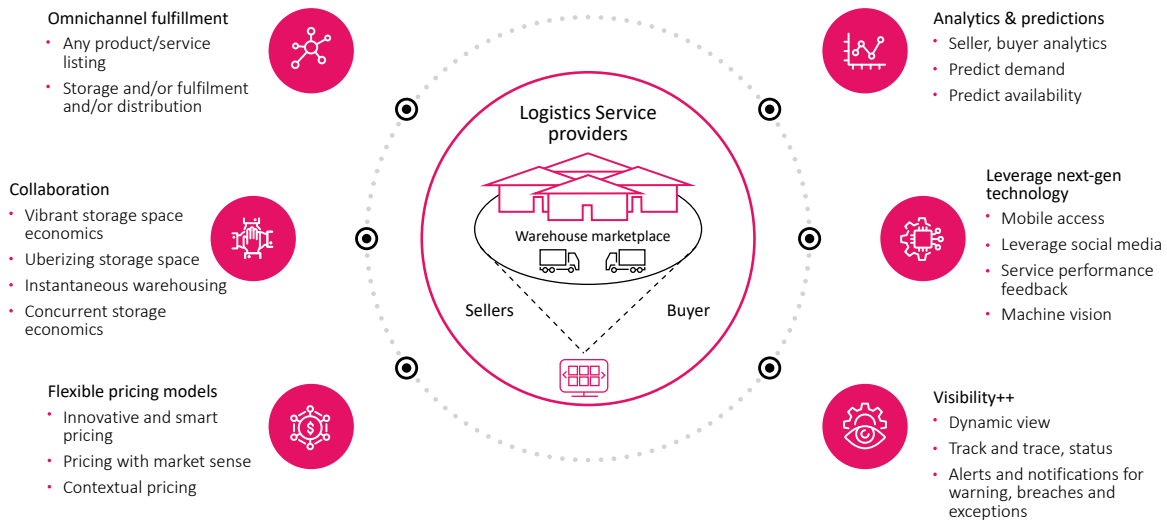
- The seller propositions to offer a curated space through multiple interactive channels to multiple buyers
- New evolving business and revenue models cater to different customer segments for short-term space requirements
- Customer engagement and experience is provided through immersive and interactive communications
- Modern tools, technology and process can be deployed to provide visibility, awareness, and seamless interactions
- Customers can be influenced to choose the best sellers and their offers
- Customized and personalized services can be provided to the customer

A one-stop solution

A one-stop shop online marketplace can facilitate short-term on-demand warehousing. It can be a simplified portal that allows multiple sellers to list space and upsell bundled services while letting buyers to browse and procure curated space for their needs.

Both sellers and buyers have vested common interests—Exploiting curated spaces for a reasonable time and money. Warehouses are moving into an ecosystem, a co-habitat, of diverse stakeholders, and away from offering specialized product-centric services to multi-industry, multi-product storage and handling capabilities. Apart from storage, fulfilment and distribution capabilities, warehouses have now started to host differentiated needs—they serve as demo stores, shops, retail stores with limited functions such as pickup points, takeaway facilities, operating as catalogue stores or catering to storage needs of an urban individual for a certain duration. Warehouse owners want to make the most of the available curated space as they incur fixed cost on building, acquiring, and retaining the space.

Create a new partner ecosystem through cross-collaboration



The interests of warehouse buyers and sellers can be served by leveraging the benefits of a collaborative economy, which has demonstrated tremendous capabilities and delivered value to stakeholders. Successful crowdsourcing business models like AirBnB.com, Ola, and Uber have radically changed the way assets are managed and utilized effectively. A similar model for warehousing needs could be quite effective.

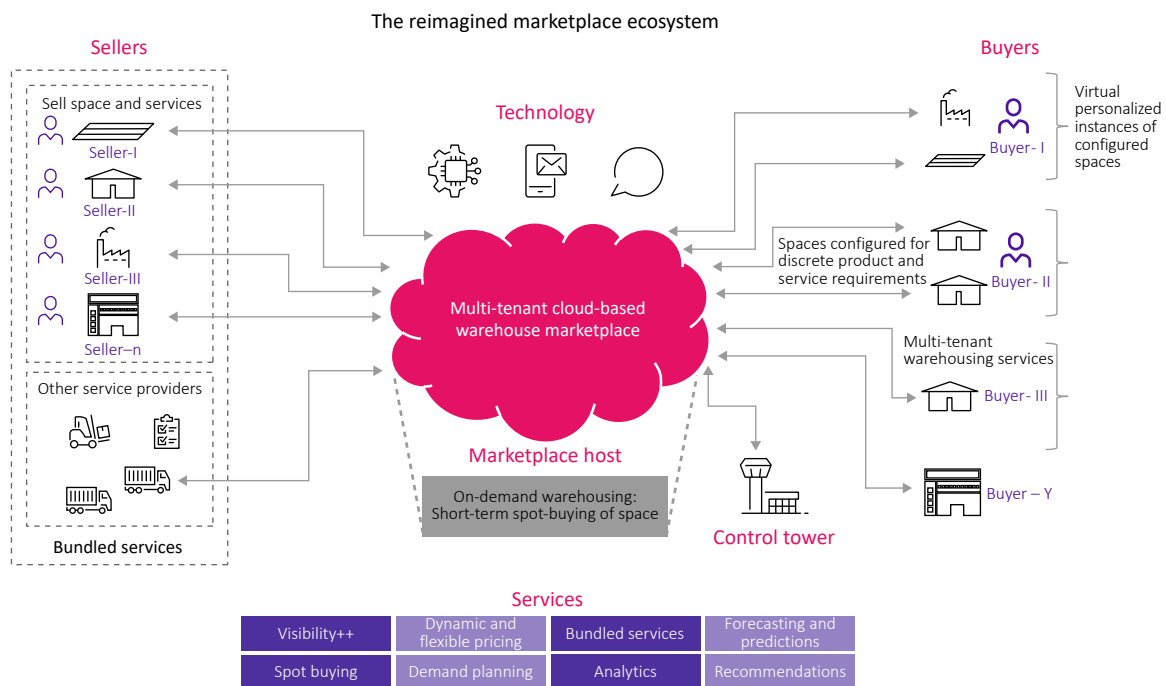
A warehouse marketplace will not result in space uberization—rather, it will promote space curation or space personalization. It will help sellers put their curated space on sale whenever it is available or is expected to be available.

Vendors, LSPs, third-party handlers, warehouse owners, buyers, marketplace owners, and transporters can be seamlessly onboarded to the collaborative relationship to complete the value chain. More than matching buyers and sellers, marketplaces having access to transporters (through APIs and transporter product offerings on the marketplace) can connect them to buyers and sellers to offer a valuable proposal of bundled services and make the model enticing to all stakeholders.

Co-habitat: Enabling shared economy through multi-tenant offering

A warehouse marketplace will be a freight-all-kinds portal for curated spaces and not product-centric like the current solutions. In a large physical warehouse, multiple customers can coexist as tenants—akin to people renting a paying guest house or a hostel facility.

A marketplace should be able to guide a buyer on the type of service needed for a certain product. Multi-tenant occupancy reduces the time to market and space procurement price when compared with a single-use warehouse.



The one-stop-shop online marketplace for short-term warehousing needs is a multi-tenant collaborative platform built on the tenets of trust, collaboration, simplicity, and agility. It offers the following benefits to sellers and buyers:

- **Enabling predictions and projections:** Space availability, space demand and service requirements, revenue areas
- **Building efficiency:** Quick inventory turnover transactions which commands premium pricing from customers and thus increased revenues
- **Value-added services beyond storage:** Upselling, such as bundled services, can bring in additional revenues to the sellers of space
- **Leveraging next-gen technologies:** Leveraging the basic guiding principles of Business 4.0—cloud first, exponential growth and mass offerings—unleashes great potential and provides immense capabilities to configure, personalize, scale, and optimize the warehouse instance.
- **A visibility++ solution:** Goods enter and leave warehouse with alerts, exceptions and notifications of location, status, and health conditions.
- **Warehouse marketplace business model:** Business agility is now benchmarked with spot pricing; click-and-go service-based offerings
- **Document digitalization:** Marketplaces can help facilitate uploading and storing documents such as invoices, bills of lading, airway bills, inventory records, and challans, increasing anywhere document availability and reducing paperwork.

Conclusion

The success of a business is dependent upon agility and responsiveness. At a time when optimized supply chain is key for business survival, many businesses look at warehouse marketplace to increase agility, improve their market position, and transform the characteristics and economics of demand and supply chain network.

An innovative approach like a warehouse marketplace can help overcome market inefficiencies associated with the traditional processes and methods of warehousing. Logistics service providers see warehouse marketplace as an emerging need and a means to gird off supply chain nuances. It will also encourage many to invest in infrastructure and capabilities to develop and host a multi-vendor and multi-tenant collaboration model to increase their stronghold and presence in the market.

About the authors

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Awards and accolades



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