ONDC
Open Network for Digital Commerce

Knowledge partner
McKinsey & Company

Democratising digital commerce in India

An open network for inclusive, competitive marketplaces

Sub-Report on Logistics

May 2023

This booklet is an excerpt from the Logistics section of the report 'Democratising Digital Commerce in India' and is based on joint research conducted by ONDC and McKinsey & Company. The complete report covers 11 sectors. To access the full report, please use the QR code provided below.

Logistics

Providing a livelihood for 22 million Indians, logistics is a critical contributor to the economy, worth $190 billion to $200 billion. Pushed up by infrastructure limitations, logistics costs in India are higher than several other economies. For example, the average logistics cost by GDP is 11 percent among BRICS countries, while in India it is 14 percent.[1] With only 2 percent of the industry digitalised, an open network such as ONDC could make a difference to logistics costs in India.

[1] Indian Foundation of Transport Research and Training (IFTRT), https://timesofindia.indiatimes.com/business/india-business/indias-logistic-costs-higher-than-bric-nations/articleshow/14151707.cms

The landscape

India's logistics sector, while a critical contributor to the economy, is constrained by infrastructural challenges such as inadequate road and rail connectivity, complex customs, limited visibility across demand and supply, and subscale fleet opportunities.

Logistics providers for ecommerce companies struggle with significant gaps – they are not able to aggregate or batch delivery services as they are either captive providers (captive logistics accounts for about 55 to 60 percent) or are third-party logistics providers (3PLs) whose arrangement with their client curtails them from aggregating deliveries.

While digital interventions could minimise such challenges and slash costs, the industry is only at around 2 percent digitalisation. It lacks the technology infrastructure to benefit all stakeholders. For example, one major gap is a common technology infrastructure for GPS data exchange to seamlessly integrate across different systems, regardless of the device used. This section focuses on road transportation in logistics—a large subsector ($115 billion to $120 billion), highly fragmented and lacking price discoverability (Exhibit 1).

Exhibit 1

India's logistics industry is large, presenting significant opportunities for digital disruption and innovation.

Segment	Market size FY22, $ bn	Number of service providers (level of fragmentation)	Need for price discoverability (by users)	Attractiveness for ONDC
Road (e.g., FTL, LTL, Express[1])	115-120			
Warehousing, VAS	35-40			
Railways	25-30			
Ports	4-5			
Water-ways	0.5-1			
Freight forwarding	2-3			
Total	190-200			

[1] Includes air transport.

An open network such as ONDC that provides interoperable adapters could be key to enhancing digital adoption in the sector, increasing visibility, utilisation, and efficiency across the logistics value chain.

Barriers to digital adoption

Stakeholders across the road transport value chain are hesitant to adopt digital solutions for several reasons:

- **Shippers** tend to place greater trust in local, familiar connections than in online channels. They develop these networks over decades of steady business relationships, creating a strong sense of loyalty and reluctance to switch away from existing partners. Consequently, many shippers hesitate to switch to digital platforms and work with new fleet operators.
- **Brokers and 3PL contractors** could be wary of digital platforms trying to disrupt the current ecosystem. These players work in an arbitrage-based business model, and the entry of a digital commerce platform could negatively impact their margins.
- **Fleet owners and truck drivers** generally have limited digital literacy and are often unfamiliar with the digital platforms' processes. This leads to a mistrust of digital marketplaces, and they typically prefer to interact with shippers in person, such as during post-service follow-ups.

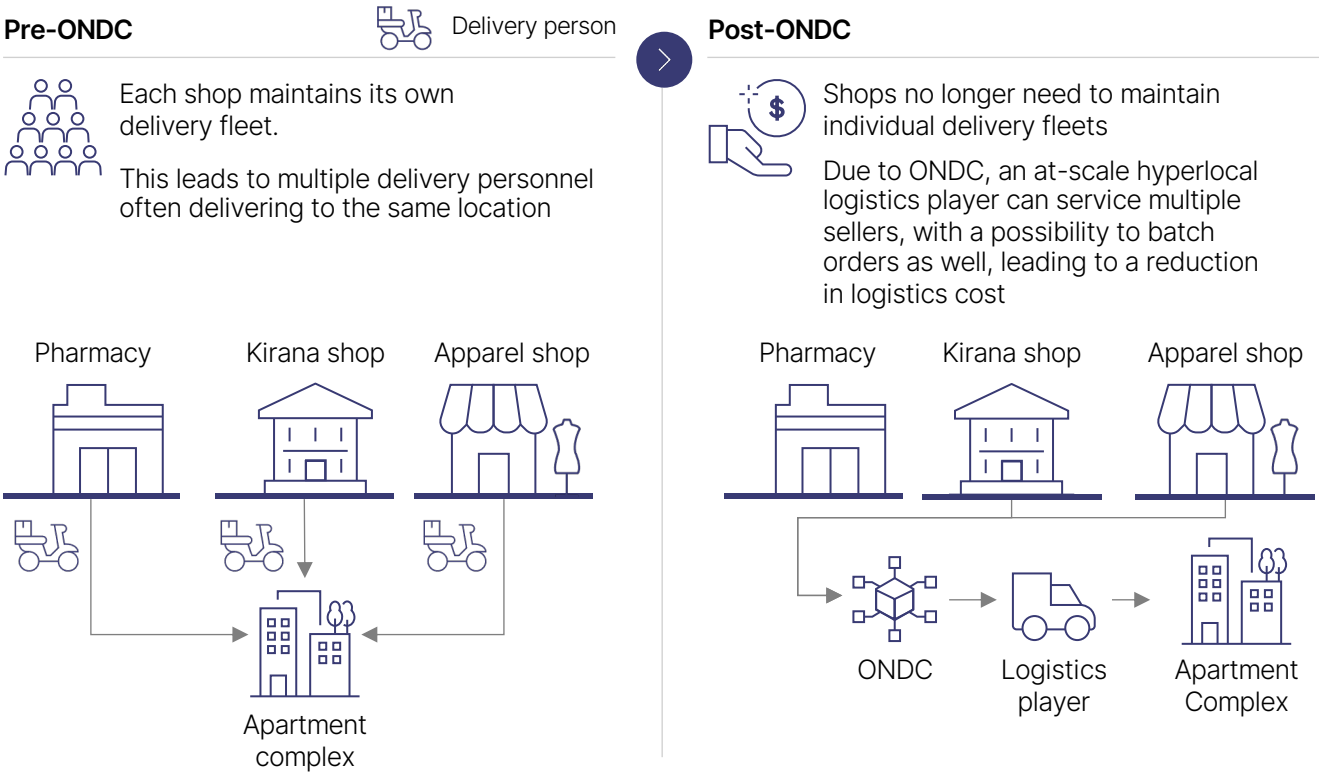
How ONDC can unlock value

ONDC could potentially help logistics stakeholders unlock five use cases:

- **A higher scale of operations bringing down logistics costs.** ONDC could spur growth in the e-commerce sector, boosting last- and first-mile delivery volumes. This would enable logistics players to benefit from economies of scale, ultimately reducing costs. It could also create opportunities for new players in untapped markets including rural or underserved areas and bring in more self-employed workers, unlocking India's informal economy.
- **Improved price visibility and transparency across the value chain.** The free flow of information, especially price, is crucial for a well-functioning market. ONDC could help facilitate this by improving price visibility and discovery for shippers as well as fleet operators, empowering them to make informed decisions. It could also improve visibility of location, asset use, and loading status for trucks, which in turn could reduce downtime, improve asset utilisation, and provide better financing options to fleets. Finally, ONDC can help improve trust within the system via a robust rating mechanism and a high volume of ratings.
- **Improved demand aggregation.** ONDC can help identify logistics demand, enabling delivery personnel to work across sectors and increasing their earning potential. For instance, during a temporary slump in food orders, delivery personnel could assist in fulfilling last-mile and e-commerce deliveries. This flexibility could improve operational efficiency and reduce costs for delivery personnel while also ensuring timely delivery for customers. ONDC could also enable the batching of delivery orders across multiple sellers, leading to cost reductions (Exhibit 2).
- **Backward integration of logistics apps to become retail seller apps.** ONDC creates avenues for value-added-service (VAS) players to expand their services. VAS players could use their shipper databases to create a seller app in the open network that offers services to a broader customer base—for example, a player could integrate backward to become a seller app. By doing so, these players differentiate themselves in the market and boost their revenue streams.

Exhibit 2

Demand aggregation of hyperlocal deliveries could help cut last-mile logistics costs.



— **Digitalisation of transaction history.** This could benefit players across the road transport value chain, e.g., digital proof of delivery could shorten payment cycles, ensuring faster and more efficient payment processes. In addition, access to transaction history could enable companies to develop innovative credit mechanisms, such as the digital disbursement of bank-backed trip loans. These could facilitate working-capital financing for express players, less-than-container-load (LCL) consolidators, and freight forwarders. SMEs could also benefit from these processes by gaining easy access to credit for logistics.

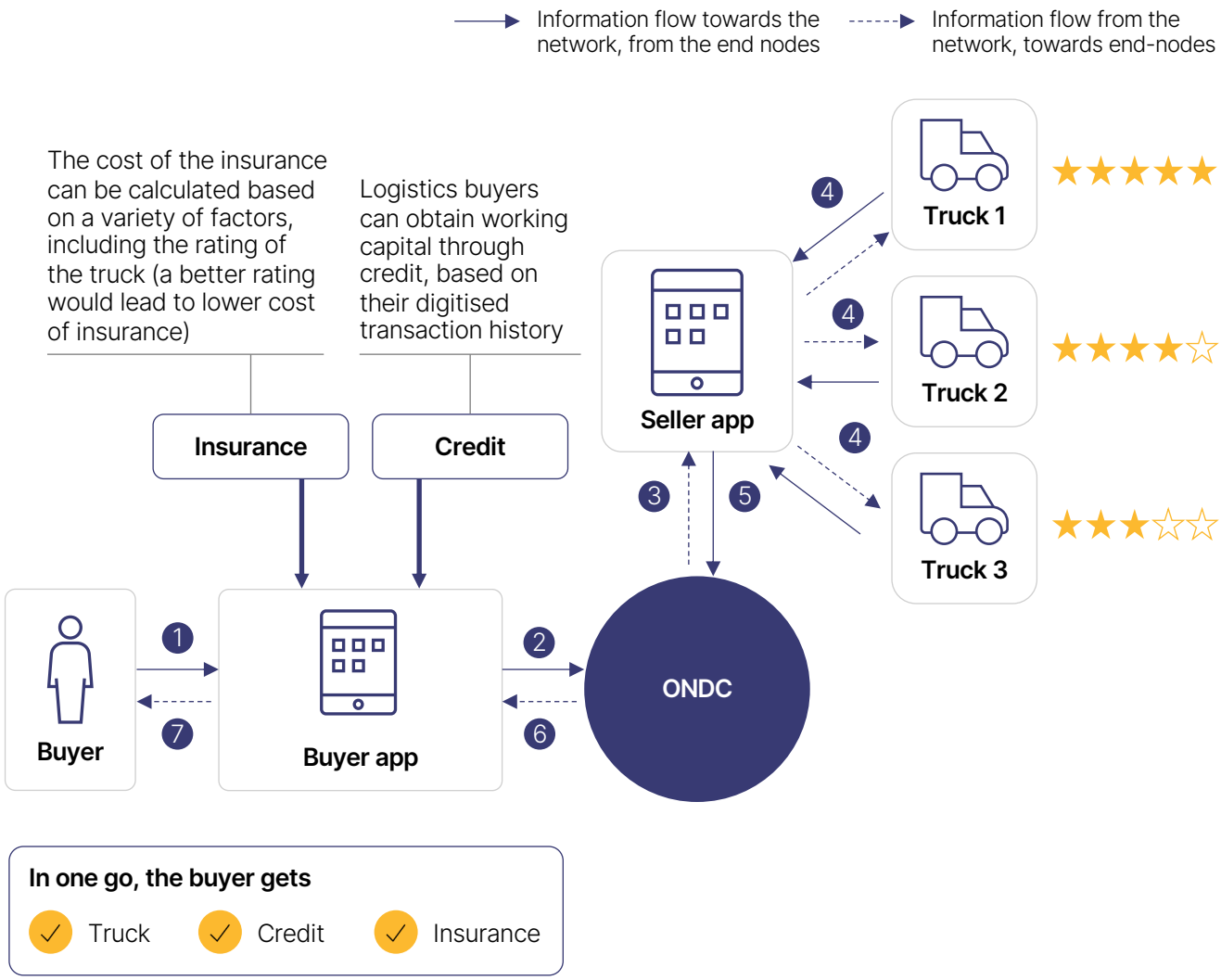
Over time, it could become simpler to embed insurance and credit in buyer apps (Exhibit 3), thus streamlining the purchasing process and increasing protection against road accidents. The free flow of information across ONDC could also allow insurers to factor additional data such as truck ratings into their models for accurate and efficient pricing.

ONDC has the potential to unlock additional value and business-building opportunities for road transport players. The open network could facilitate seamless, multimodal deliveries through several logistics providers, offering buyers a wider range of delivery options. For example, logistics buyers can now access and leverage multiple modes of transport—such as full-truck-load (FTL) and railways—for each leg of the journey, via the same network, leading to easier coordination, lower overheads, and maximum efficiency (Exhibit 4).

Exhibit 3

New possibilities: ONDC can enable embedded insurance and credit for logistics service buyers, protecting them from mishaps.

Illustrative



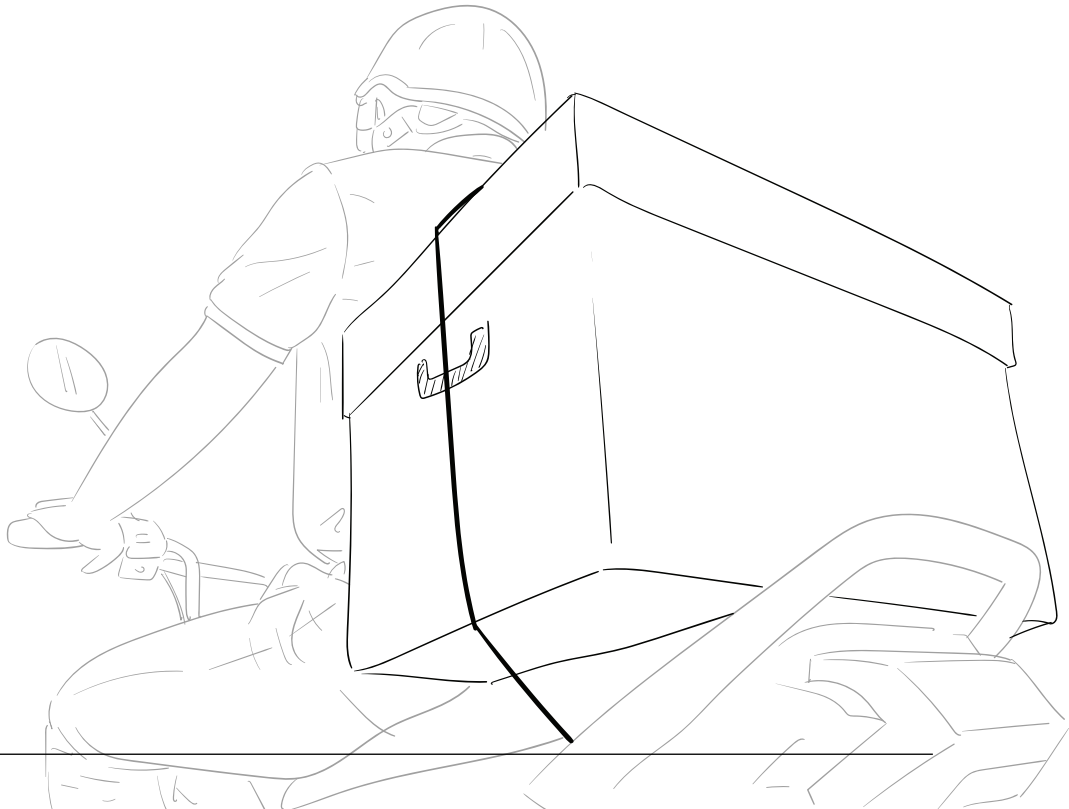
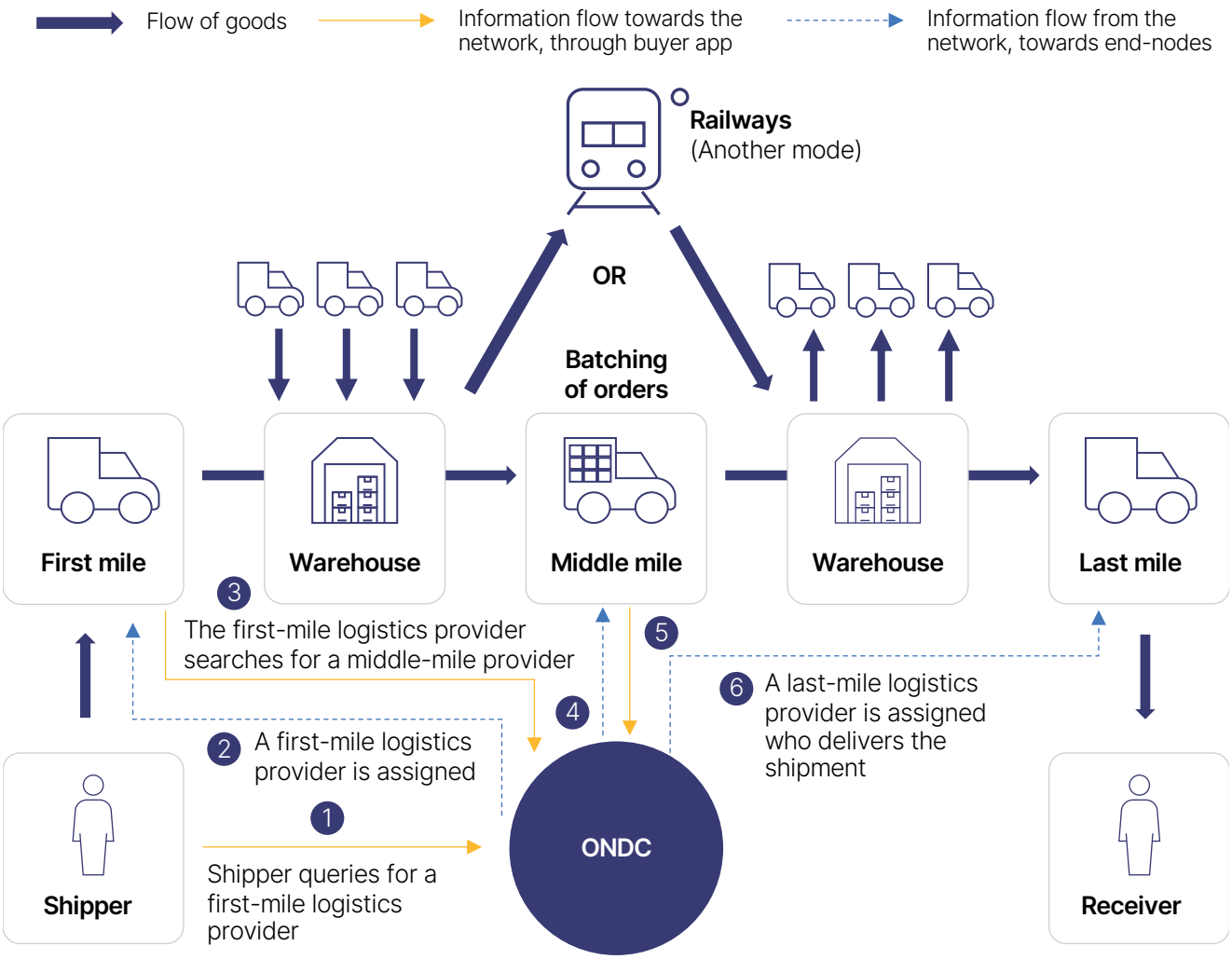


Exhibit 4

New possibilities: ONDC can enable multi-modal deliveries leveraging different players in each leg with seamless information flow.

Illustrative



4 A middle mile provider is assigned; the same truck can also be assigned to multiple other first mile trucks, leading to the possibility of batching

5 The middle mile provider searches for a suitable last mile logistics provider

Four considerations to shape digital commerce in the logistics sector

01

Ensure a robust supply network

As ONDC facilitates greater digital adoption, the demand for first- and last-mile delivery services could increase significantly. To be able to scale their operations and truly benefit from this growth, logistics players will need to build a robust supply network and create an ecosystem that is equipped to manage this surge in demand.

02

Create an unbiased reputation economy

Although ONDC can enhance price visibility and transparency in the market, buyers need to still be able to shortlist logistics providers based on performance and scale to make informed choices. ONDC could establish a robust reputation economy by partnering with third-party providers to showcase unbiased and accurate ratings of logistics players.

03

Upskill delivery personnel to handle different goods

Even with ONDC allowing demand aggregation and better use of delivery personnel, logistics players must take responsibility for ensuring their delivery personnel are properly trained to handle a variety of goods and services seamlessly. This means implementing effective training methodologies and processes to ensure that all delivery personnel can meet the standards required to maintain quality and reliability across the logistics value chain.

04

Set up technology infrastructure to implement digitised proof of delivery

While digitalised proof of delivery (PoD) has the potential to significantly shorten payment cycles by reducing paperwork, its effective implementation requires appropriate tech infrastructure investment by shippers and logistics players. Furthermore, seamless transactions depend on widespread acceptance of digital PoDs among truck drivers, fleet owners, and shippers without disputes or delays.

> With digitalisation unlocking utilisation, visibility, and efficiency across the logistics value chain, ONDC could help India to bring down its higher-than-average logistics costs, benefitting all stakeholders.

Scope for all players to benefit from an open network

Each sector has a set of considerations to drive digital commerce, with the onus resting on specific stakeholders. However, the opportunity does not end with them. The unbundling of discrete services on the open network could create infinite opportunities for incumbent companies and new entrants to carve out niches for themselves.

ONDC could provide additional opportunities for both incumbents and new entrants to participate.

Leading consumer tech companies (e.g., fintech, telecom orgs.)

- Diversify and **enhance business offering to adjacent categories** (e.g., grocery, mobility) as a buyer app
- Achieve **profitable unit economics** by driving cost synergies with existing capabilities (e.g., in manpower)
- Boost **consumer engagement** on their platform, driving **cross-sell and upsell**

Logistics players

- Create an **additional revenue stream** by investing ahead of the demand in hyperlocal logistics
- Achieve cost efficiencies to **increase profitability** due to more and concentrated hyperlocal demand
- **Access rich data** to improve the **demand-supply matching engine** and further reduce costs

SaaS players

- **Expand their business** by designing low-cost and **scalable tech solutions for sellers** (e.g., scoring, CRM, tax management, pricing, cataloguing, tech support) **and seller apps** (e.g., chatbots, cataloguing)

Brands/OEMs

- Niche/ **new brands could boost their D2C play** by registering as a seller or seller app on the network
- **Harness consumer data** on purchase behavior across buyer apps **to inform future strategies**

Sellers

- **Access host of services** from tech providers (e.g., tax and inventory management) and brands (e.g., incentives, marketing support etc.) **to go and run business online with ease**
- **Achieve improved unit economics** owing to less platform commission and potential reduction in delivery charges (e.g., by building low-cost capability to cater to a concentrated demand in the neighborhood)

POS players

- Leverage current business strength i.e., partnership with GT[1], restaurants etc. to **become a seller app on the network**
- Create **additional revenue stream** at a low cost by digitising sellers

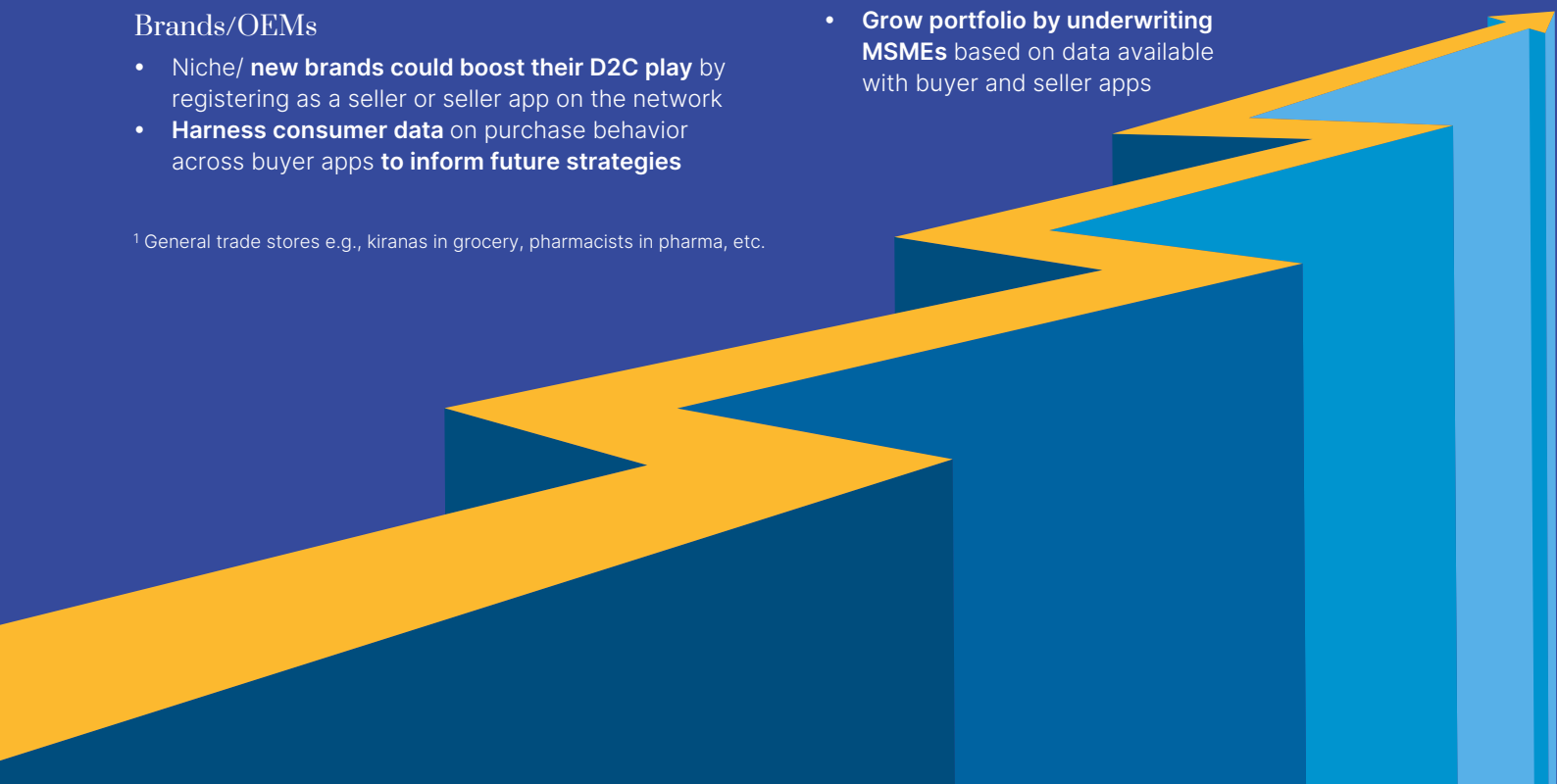
Resellers and influencers

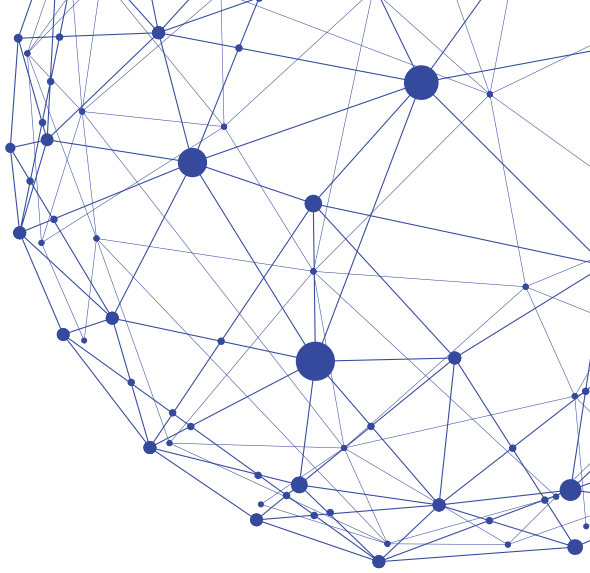
- **Build/ expand their online business** by leveraging varied support available on the network (e.g., pricing and certification agencies could collaborate with electronics resellers, fashion influencers could partner with brands)

Banks and NBFCs

- **Grow portfolio by underwriting MSMEs** based on data available with buyer and seller apps

[1] General trade stores e.g., kiranas in grocery, pharmacists in pharma, etc.





Getting on board with ONDC

ONDC holds the potential to create open, inclusive, and competitive marketplaces in the virtual world. It will be important for companies to carefully evaluate the options available to them as they consider entering this space. This could help them to identify plays that maximise benefits from the immense opportunities unlocked by the open network.

As company leaders look to make the most of the opportunities ONDC offers, they could explore the possibilities across two themes. First, they could determine which use cases have potential to scale fast and which would take longer to yield results. And second, they could evaluate where they are best positioned to play—through the lens of the market opportunity, their own capabilities, and the consequent feasibility of investing in specific use cases. This could support them in making the most relevant investments to achieve their company's strategic objectives.

Assessing scalability

As a market maker keen to create and democratise opportunities for all participants, ONDC could catalyse a range of business opportunities in the short, medium and long term (Exhibit 5).

This answer emerged after analysing three indicators of potential to scale:

— Short term: Digitisation of existing hyperlocal goods and services

— Medium term: Scaling up and innovating in D2C businesses

— Long term: Digitising new use cases for ONDC-first business models, especially in B2B

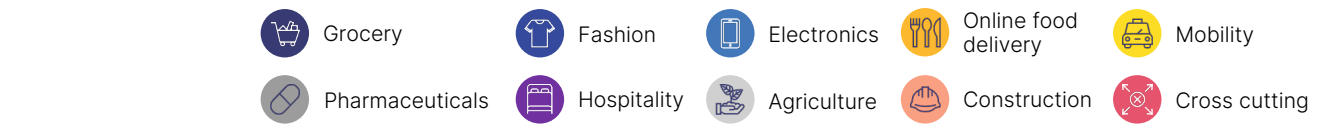
As companies think about use cases they could prioritise, it would make sense to look at their options through three lenses:

1. The use case should solve an unsolved problem.
2. It should have a ready ecosystem (for example, digitalised supply chain, standardised goods and services, or ease of logistics and fulfilment).
3. It should be economically viable.

Exhibit 5

Use cases in the short term could prove the most beneficial for driving early adoption and scale.

Not exhaustive



Short term

- Accelerate digitalisation of rides (cabs and rickshaws)
- Ticketing and integration of public transport
- Access to credit for consumers, manufacturers, and distributors/retailers
- Logistics as a service
- Branded building materials marketplace
- Accelerate digitalisation of restaurants
- Strengthen D2C channel for brand owners and manufacturers

Medium term

- Self-employed services (both blue and white collar)
- Omnichannel commerce in fashion and electronics
- Marketplace for local sellers/artisans
- Scaling offerings beyond credit – insurance and investment products etc.
- Hyperlocal grocery and pharma delivery
- On-boarding P2P home chefs
- Direct-to-farmer sales (input and output)

Long term

- eB2B sourcing for large companies and MSMEs
- Digitalisation of refurbished products
- Evolution of eB2B to enhance linkage between distributors and retailers
- On-boarding P2P homestays
- Digitalisation of hotels in Tier 2+ cities

Identifying the best-fit use case for a company

Companies looking to develop innovative business models that tap the open network can examine the opportunity against two considerations: how to participate immediately in a fast-developing space, and how to reimagine their business for an open network and its possibilities.

Businesses need to zero in on the most relevant use cases that map to their chosen stance as a shaper or a fast follower. They can accordingly identify a pool of investable resources to help them pursue the opportunity.

If the collective investments of companies across industries can support the expansion of ONDC, they could unlock the full potential of digital commerce for buyers, sellers, third-party providers, and India as a whole. Companies and entrepreneurs must carefully consider several strategic questions:

— **Evaluate the opportunity.** How will an open network disrupt the sector? What is the problem that it will solve, and for whom? Which are the most relevant use cases for the business? What are the potential benefits of addressing this problem? What are the potential risks and challenges in implementing these use cases?

— **Identify the capability required.** Which role (e.g., seller, buyer, tech service provider, etc.) is the company best positioned to play? What are the key capabilities needed to execute the use case? What are the resource requirements (for instance, people, time, or money) in building out these use cases? How should governance be managed, including engagement with the ONDC core team and network participants?

— **Evaluate feasibility of the use cases.** When should a company decide to implement or pilot a use case? Should the organisation be a leader or a fast follower? What are the feasibility considerations for executing the use case (for example, market, financial, or legal)? What should be the pilot structure for prioritised use cases including the initial investment and scale-up milestones?

ONDC presents a unique avenue for India to revolutionise its digital commerce landscape and set an example for the world, much as it did with UPI. With vast potential for a robust buyer and seller ecosystem, ONDC represents an opportunity that arises once in a decade. Stakeholders—government, industry players, and consumers—can determine how to seize this 'tech-ade,' putting their best, most innovative selves forward to democratise digital commerce for all.

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