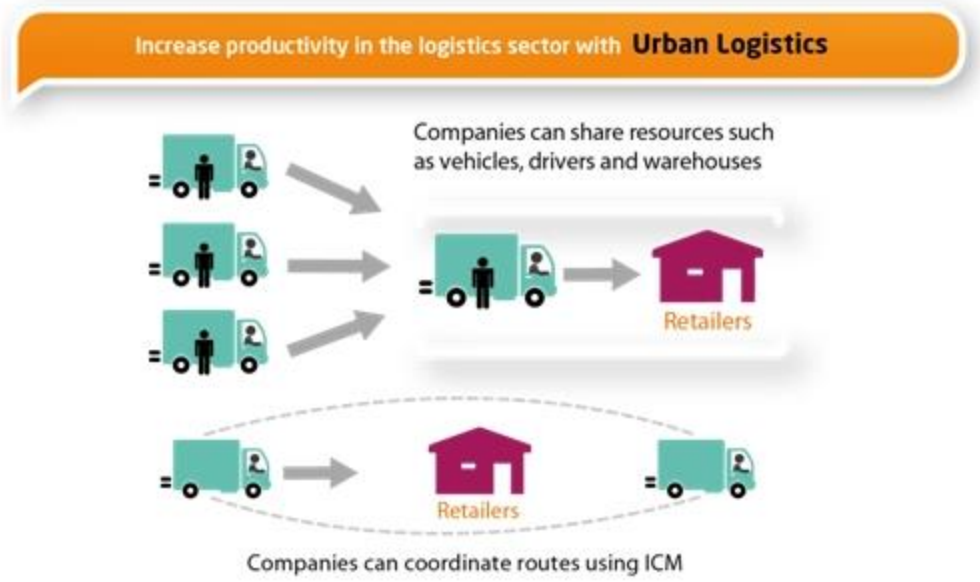
Urban Logistics

By 2050, 70 per cent of the world's population is expected to be living and working in urban areas[1]. With this rapid rate of urbanisation, cities around the world are faced with the strain on urban infrastructure and demands for a better quality of life. Singapore, being a globalised city-state, needs to be prepared for this trend. Our population has grown to about 5.4 million in 2013[2]. To support this increasingly urbanised city landscape, the logistics industry, which enables other industries, needs to be better able to handle deliveries. These capabilities can benefit Singapore and be exported to overseas markets.

There are several ways that we can improve the distribution networks and logistics resources that handle the transportation and delivery of goods within Singapore. One way is by factoring in information such as order fulfilment and traffic conditions at delivery points during the planning stage. In addition, the logistics industry can better handle cost pressures and shortage of drivers by sharing resources at a national level.



Urban Logistics allows different parties in the supply chain to collaborate using ICM. Parties can share resources such as vehicles, drivers and warehouses, and co-ordinate delivery schedules to selected zones. Based on initial computations, the potential annual savings for Singapore's logistics industry may be in the range of $56 million, with a productivity gain of about 4,000 man-years[3]. Urban Logistics is an example of how, with the help of ICM, business models and the nature of work can be transformed to enhance the competitiveness of sectors, and improve residents' quality of life.

Opportunities for the ICM Sectors

Building our Urban Logistics capabilities can catalyse the ICM sectors in the following areas:

Analysing Big Data for Collaborative Distribution

To achieve collaborative distribution, we need to collect and analyse relevant data. The essential data to make deliveries more efficient are: route details, delivery points situation, types of goods and vehicles, as well as delivery schedules.

To get a big picture view of all these, we can combine data collected by companies, government agencies, industry associations and user companies, shared through a data exchange. Analysing such cross-enterprise data can optimise the use of resources in the logistics industry.

Development of Innovative Technology

ICM can make processes smoother and easier. This can happen in the areas of order dispatch, handing and taking over of goods, as well as delivery order receipts. In general, ICM is helpful in minimising delays and maximising the use of roads, vehicles and manpower. In the long run, technologies such as driverless vehicles and auto-order-packing systems may become commercially viable. The industry can then use these systems to reduce manpower and shorten delivery times. This may in turn result in fewer congested roads.

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[1] Source: “World Urbanization Prospects, the 2007 Revision”, United Nations.
[2] Source: Singapore Department of Statistics.
[3] Assuming 15-minute time saving per trip per deliveryman and 30 per cent market penetration.