E-commerce Logistics: 2020 Is Just Around the Corner. Are You Ready?

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Jan 1, 2020 is 204 days from today.

https://steamcommunity.com/sharedfiles/filedetails/?id=599030509
E-commerce Era

B2C e-Commerce TOP 5 Ranking in ASEAN

01. TH $24.70
02. MY $19.41
03. VN $8.21
04. SG $4.61
05. PH $1.84

Source: Value of e-Commerce Survey 2561, ETDA
E-commerce Era

SOUTHEAST ASIA’S E-COMMERCE MARKET

Source: Google Temasek study
Unit: US$ billion

THAILAND
Alibaba sets new Singles Day record with more than $30.8 billion in sales in 24 hours

The gross merchandise value (GMV) hit over $30.8 billion in sales.

Sales hit $1 billion in one minute and 25 seconds on 11/11/2018.
Shopee 11.11 BIG SALE

11 Million orders in 1 Day

58,000 goods could be sold in 1 minute

Source: Value of e-Commerce Survey 2561, ETDA
Workers prepare packages for delivery at a sorting center in Lianyungang, Jiangsu province during the Singles Day online shopping festival on November 11, 2016 (STR/AFP/Getty Images)
Cainiao Smart Logistics Network broke its own delivery-speed record for the 11.11 Global Shopping Festival, shaving nearly five hours from the time required to deliver the first 100 million packages in 2017.

It took **2.6 days for the first 100 million parcel deliveries** versus 2.8 days last year, the Alibaba Group-owned Cainiao said, even as the total number of 11.11 delivery orders processed reached 1.04 billion, exceeding 1 billion for the first time and ending well above last year’s 812 million.
Warehouse Management system

**Generation 1**
- Manual record

**Generation 2**
- Batch input system
  - Use of computer logic to:
    - Suggest for location to put away or retrieve material
    - Generate pick list for operators to perform the work
    - Operator confirm completion of their tasks in the system

**Generation 3**
- Real time system
  - Use of computer logic to perform the task as batch input system plus, the radio transmission system to transmit the data to update information as soon as material is moved

**Generation 4**
- AI System
  - The theory and development of computer systems able to perform tasks that normally require human intelligence.

Logistics in the e-commerce era
Human + Utility cart
- Manual material movement
- Various configuration
- Inefficient storage

Guided vehicle
- Automated guided movement
- Pre-planned paths
- Require complicated configuration

Autonomous Mobile Robot
- On-board intelligence
- Flexible work
- Fast to deploy

Logistics in the e-commerce era
Logistics in the e-commerce era
Logistics in the e-commerce era

- **Characteristics**
  
  ![icon](image)
  
  **Delivery lead-time**
  
  Same-day delivery/Short lead times in hour

  ![icon](image)
  
  **Delivery time window**
  
  Narrow time windows

  Orders are delivered independently

- **On-demand transportation** in future E-commerce

  ![icon](image)
  
  **Operation**
  
  Multiple pick-up and drop-off
  
  Single delivery applies drone/Self-driving vehicle

  ![icon](image)
  
  **Operator**
  
  **crowdsourced delivery services:**
  Lineman, Grab, Get, Lala move

• Ride-hailing services transform themselves to delivery market
E-commerce

Online Food Delivery
Challenges rise for delivery robots

UK First: Autonomous Grocery Delivery Trials in Greenwich
Ocado (the world’s largest online-only supermarket) has completed the UK’s first trials of an autonomous CargoPod vehicle.

Source: Oxbotica / Ocado / GATEway Project
https://gateway-project.org.uk/category/news/

Kiwi Campus
The startup recently started delivering food via autonomous mobile robots to University of California, Berkeley, students, as well as customers in the Berkeley, Calif. area.

Source:
"The prototype drone has "shrouds" to act as protection from its propellers, which double up as wings."

Travel 15 miles
carry packages weighing 5lbs (2.3kg) or less.

Urban and sub-urban area
In April 2015, the FAA granted Amazon permission to test drone delivery in the US, with strict flying rules to remain under 400 feet and at speeds that don’t exceed 100 miles per hour.

Future is exciting.
Technology is ready.
Market is ready.

ARE YOU READY?
WHAT’S THE CATCH?

Rapid growth in e-commerce changes the pattern of distributing goods from traditional distribution network to direct B2C delivery.

Goods that traditionally travel in large quantity but low frequency to stores are now being sent in large number of small packages.

Ease and convenience of food delivery service stimulate demands that otherwise would not be there.
TWO SIDES OF THE SAME COIN

• Those increased demands of consumers translate to significant opportunities for growth of logistics service providers.

• But what does these growths mean for
  • The environment?
  • The society?
Early this year, Bangkok was blanketed with particulate matters coming from different sources for several weeks leading to severe health problems.
Robotics boom to lead to economic inequality across Southeast Asia

• “According to a report by the Information Technology and Innovation Foundation, on a wage-adjusted basis, Southeast Asian nations lead the world in robot adoption, occupying six of the top seven positions in the ranking: Korea leads the world with 2.4 times more robots adopted than expected, followed in order by Singapore, Thailand, and China, all who have almost two times more robot adoption than expected.”

SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD
“As you strive to hack the world, please try to heal the world, too,"

MIT President L. Rafael Reif’s charge to the Class of 2019
THANK YOU