



# World's 1st Last Mile Logistics Portal, MESH KOREA

Mesh Korea Co., Ltd.

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# PART 1. Company Introduction

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**Mesh Korea**

## Corporation History

Launched in 2012, Mesh has secured a cumulative investment of 15 million dollar to date. We are currently providing logistics services to CJ Korea Express, Shinsegae Dept store, CU Convenience Store, McDonald, Burger Kings and more.

### January 2012

- Individual Business Registration and Business Commencement (January 2012)
- The 4<sup>th</sup> generation of the Young Foundation Businessman 2030 Project of Seoul City
- Award from the competition of Foundation by Small and Medium Business Administration For Pre-technicians / Won the grand prize by National Technology Industrialization in competitive exhibition

### 2013

- Mesh Korea conversion to corporation / investment : seed round maximum 1 million dollars and 30 thousand dollars (most money in this seed round)
- KSVC grand prize winner Korea venture business competitive exhibition in Korea
- Selected finalist for world venture competitive exhibition / Stanford E-boot camp member of national team

### 2014

- 2014 KOTRA Global Finalist Selected, Google PLAY Pitch App Selected
- Series A organization investment invite (Shinhan capital, Seoul investment partners, Daum Kakao : Total 2 ½ million dollar investment)

### 1<sup>st</sup> Half of 2015

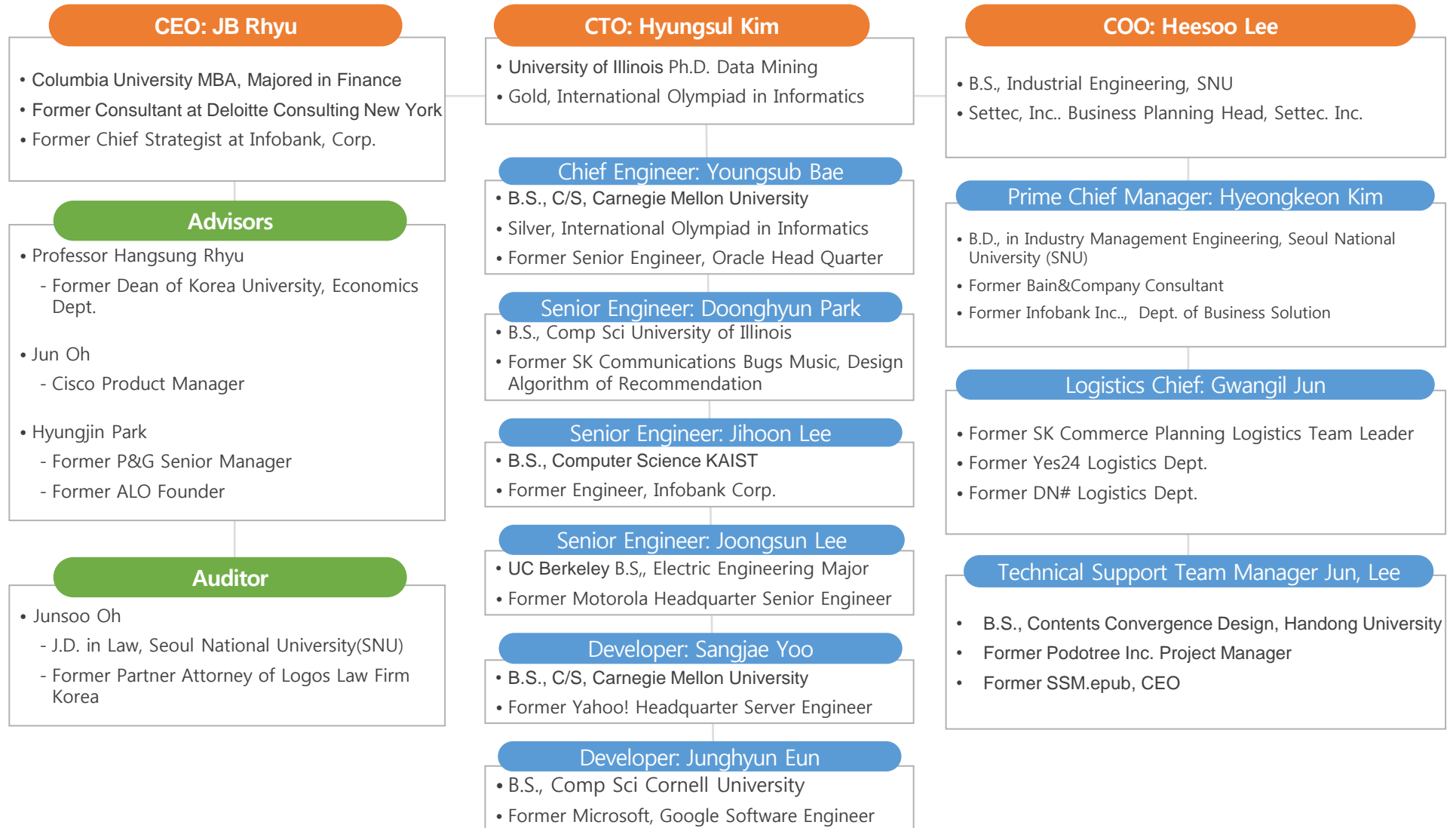
- Company open for those serving in special service army
- Korea information and communication co. (KICC) POS system, 365 Delivery app Do me a favor! Delivery System collaboration
- Born2Global Global Consulting Supporting Business : Selected company for grand prize
- BGF Retail (CU Convenience Store) Delivery System exclusive corporation partnership with Delivery Hero – Yogiyo & Do Me a Favor! delivery link collaboration and contract

### 2<sup>nd</sup> Half of 2015~Present

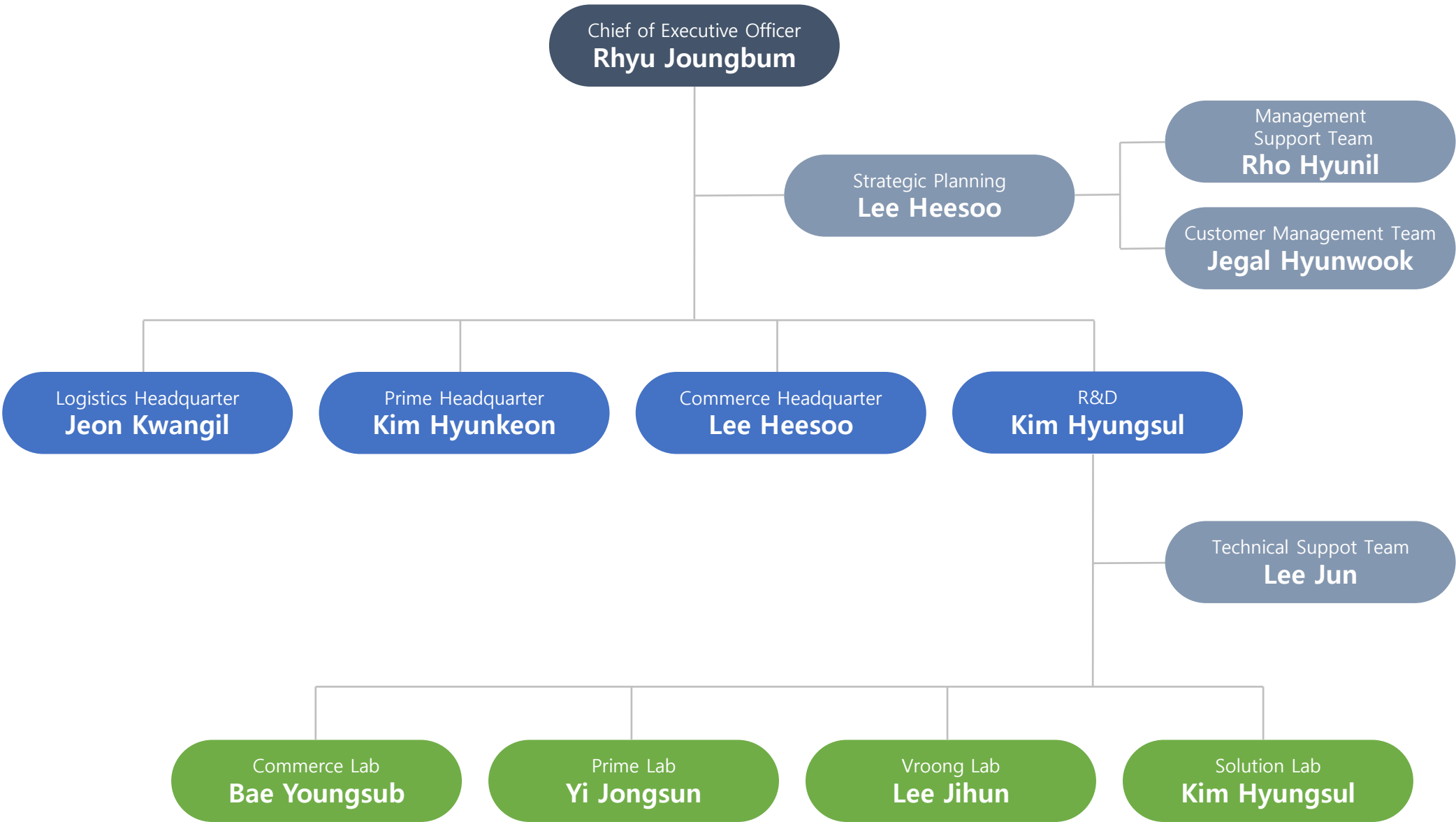
- MOU Contract with TMON delivery businessmen pick up system
- Collaboration with Yogiyo Delivery System
- Series B investment invitation (SanOn Capital, SBI Invesment, Total 4 million dollars)
- MOU Contract with CJ Korea Express about last mile logistics service
- Contract with Shinsegae Dept. and E Mart that Mesh is offering real time logistics system
- contract with Shinsegae TMS solution research and developemnt for delivery fleet
- 2 million dollar extra investment invitation (Humax Holdings)
- Contract with McDonald and Burger King Delivery
- 4 million dollars investment invitation (international medicine industry and humax holding)

## Key Members and Staff

Mesh has just over 100 staff, with 40 engineers and 11 key experts in IT/Logistics. Together we provide R&D solutions as well as general consultation on logistics.



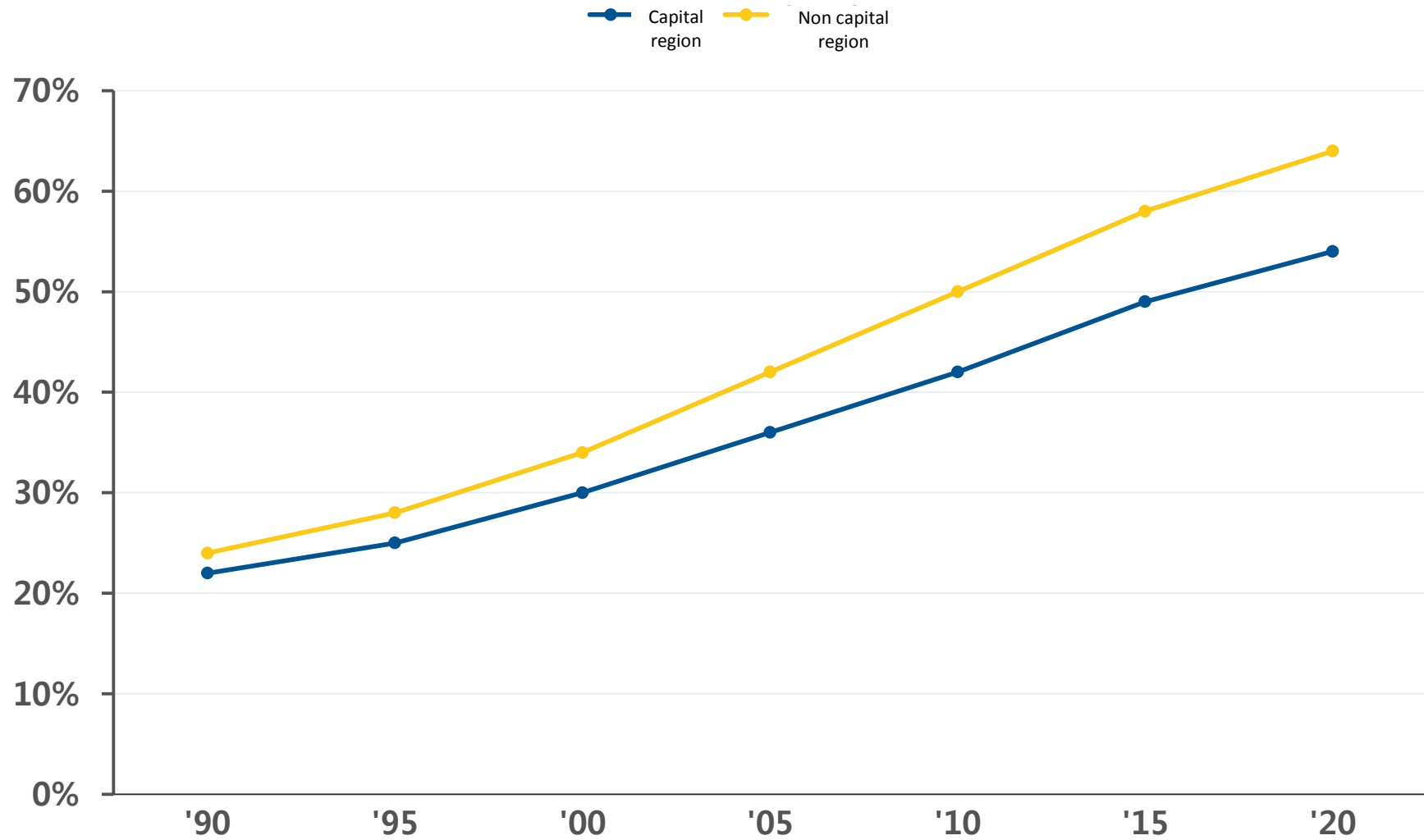
Organization Chart



# PART 2. Business Background

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## Continuous increase in 1 persons household both in capital region and non capital region



As the number of one person household increases gradually, the needs to purchase “on demand” from nearby stores is increasing tremendously

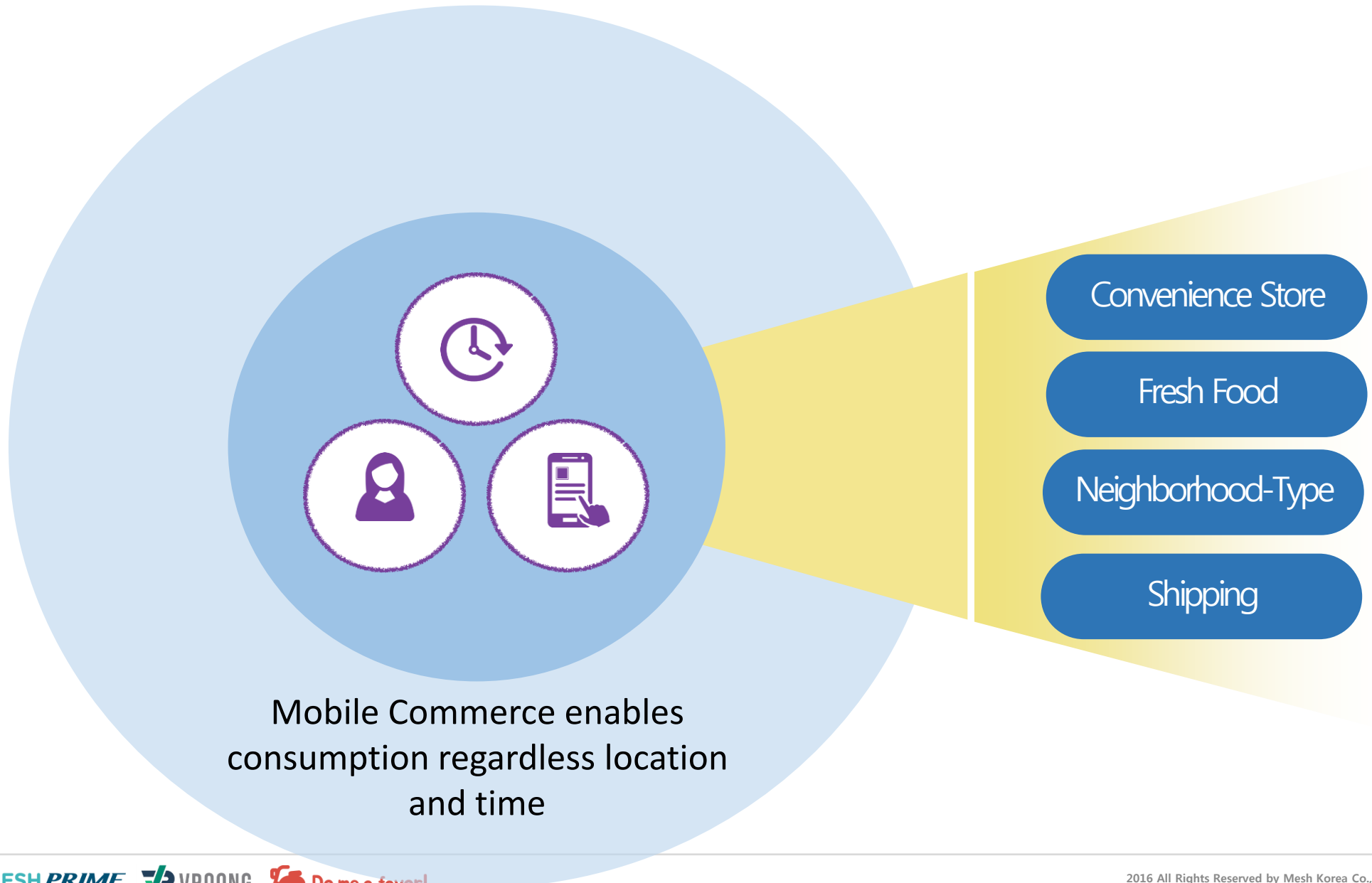


- Visit market less frequently
- Buy in big quantity at once

- More frequent visit to smaller stores
- Buy in small quantity



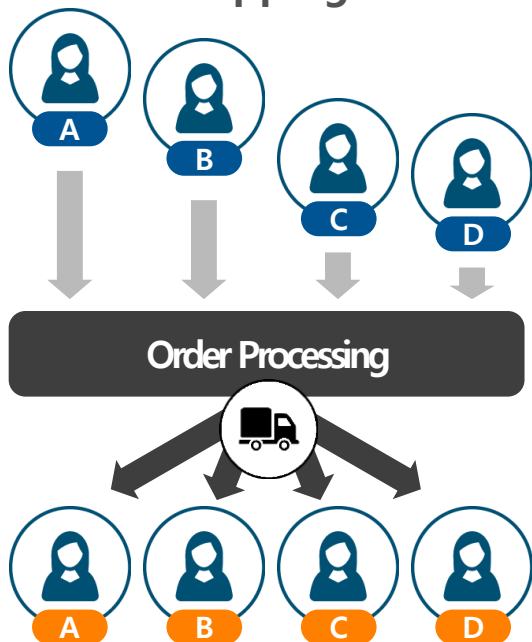
Mobile Commerce is enabling consumers to reach out for variety of items regardless of time and location – increase in on-demand commerce needs (changing consumption pattern)



In order to meet the increasing need of changing consumption pattern, an alternative logistics model is necessary

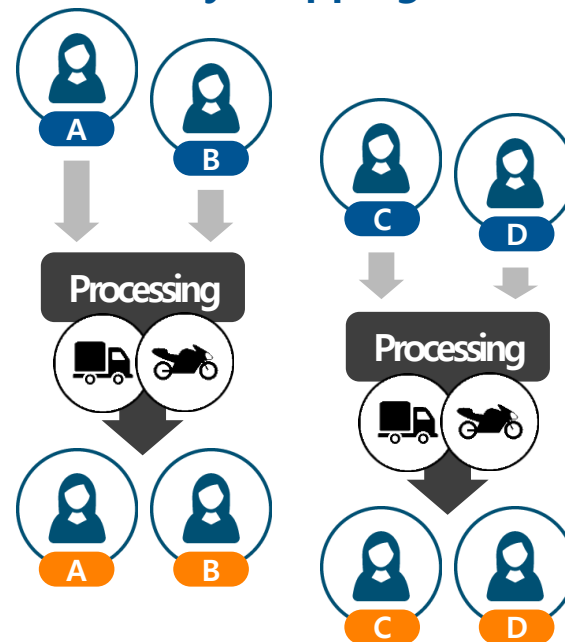
## EXISTING LOGISTICS MODEL

“Gathering Multiple Order ~ N day Shipping”



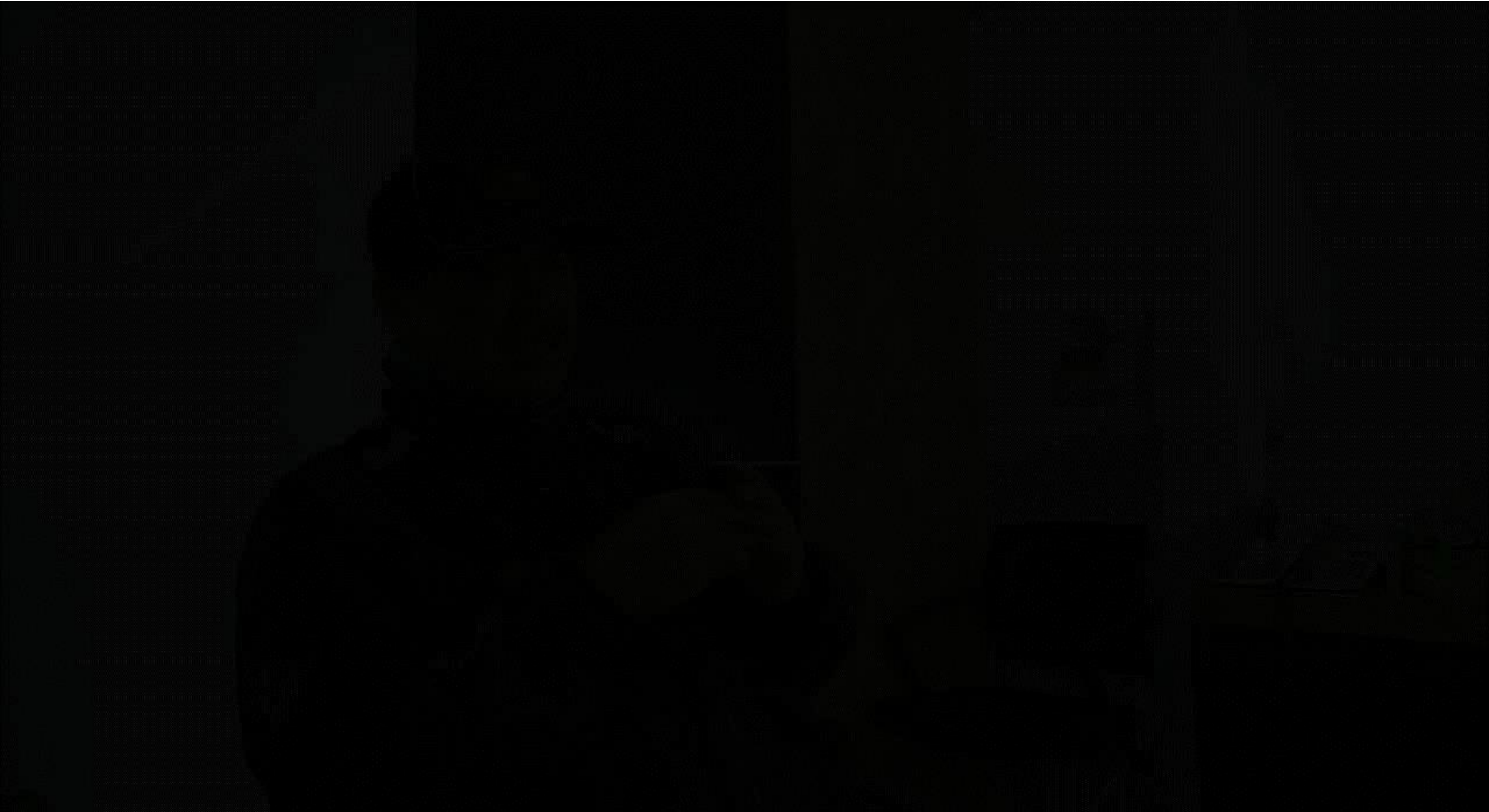
## NEEDED LOGISTICS MODEL

“Respond to real-time order ~ Same Day Shipping”



Traditionally, logistics related employees especially delivery carriers are suffering from these 3 types of asymmetric information in the industry.

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## [Business Background] Problem in domestic quick delivery market (1): Low profitability

The current quick delivery market in Korea suffers from vicious cycle of low profitability with call centers and program companies intercepting margins in the middle

### Quick Delivery



Call Center: 4,000  
Avg. 6,000 – 7,000 KRW



Program Company: 20  
2,000 KRW



Compared to the total amount  
40% Sales, 20% Profit

### DAMAS



Call Center: 1,000  
Avg. 6,000 – 7,000 KRW



Program Company: 10  
2,000 KRW



Compared to the total amount  
40% Sales, 20% Profit

### Delivery Agency



When 30,000 KRW  
order comes in



Delivery possible Shops  
Avg. 26,000 – 28,000 KRW



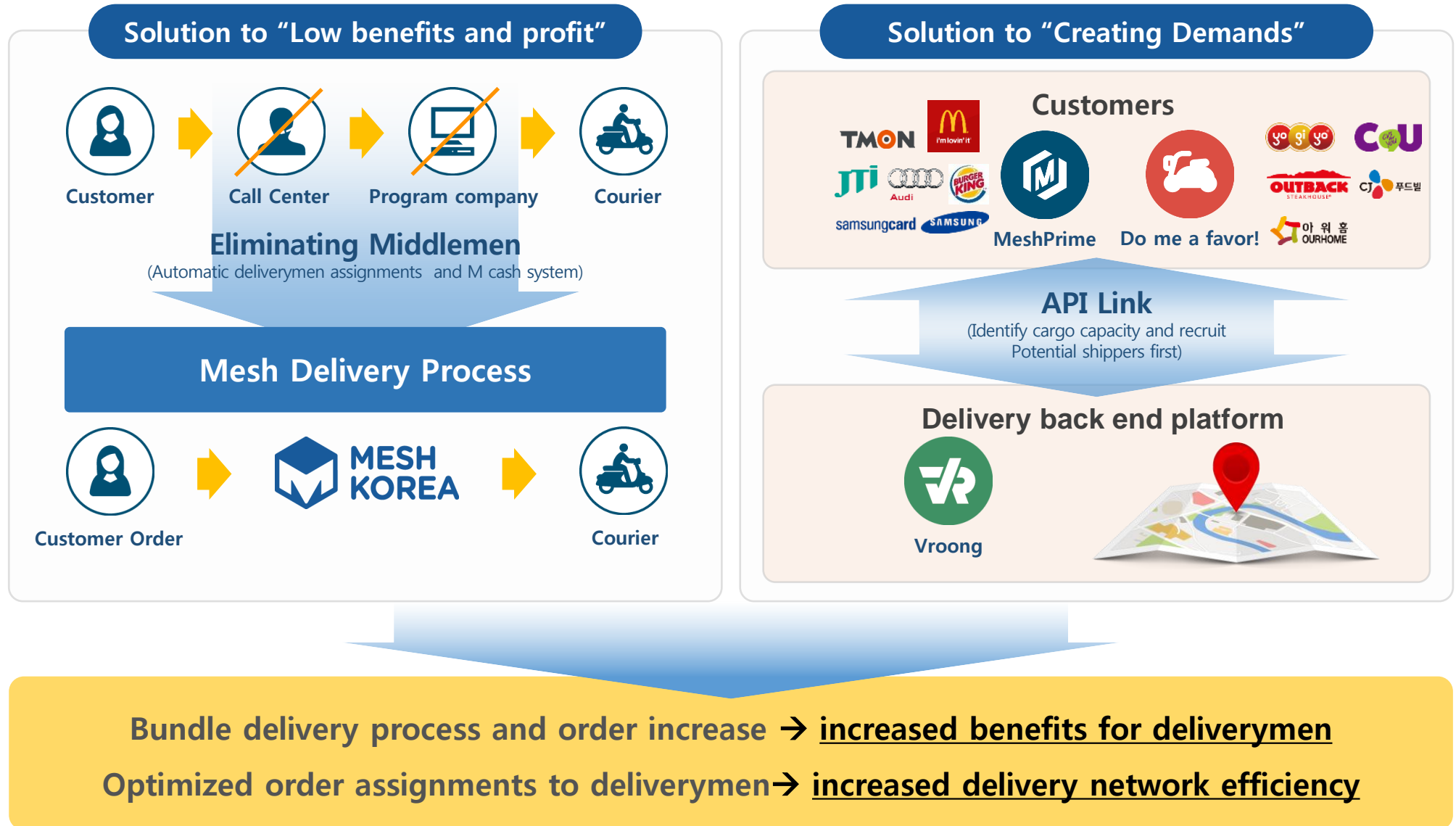
Program Company: 10  
300 KRW



Compared to the total amount  
30% Sales, 20% Profit

## [Business Background] Mesh's solution: Symbiosis with deliverymen

Using our data based IT system, we have deployed optimized vehicle assignment algorithm that eliminates call centers and program companies in the middle





Do me a favor!







Mesh Korea, starting off with 2 wheeled vehicle, aims to create efficient and systematic logistics infrastructure, using all of our logistics infrastructure information and related IT system

Do me a favor!



- Delivery system that enables delivery for every store
- An online order and payment e-commerce platform
- Possible to track delivery in real-time

MeshPrime



- All-in-one integrated logistics order solution
- Distribution structure that handles required supply in real time
- Receive and deliver high volume of supply order, using API

Register order and transfer  
delivery information

Vroong



- IT based delivery management total solution for delivery agencies
- More efficient and intuitive UX for couriers
- Performs from store/courier management to automatic payment



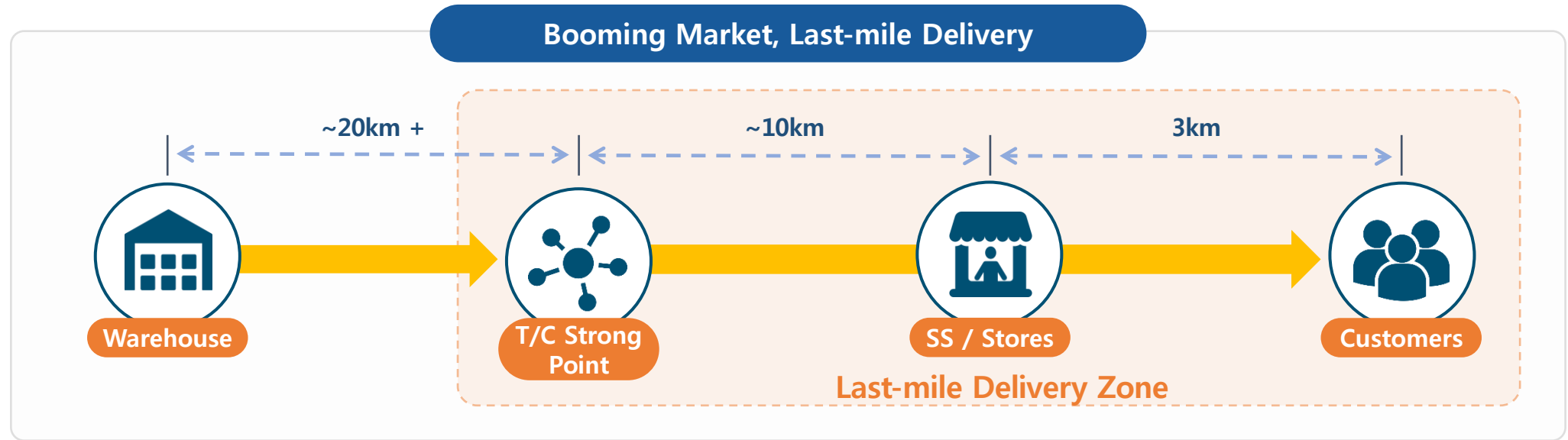
## PART 3.

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# **Mesh Korea Business Model and Competitiveness**

## [Business Model] What is Last-mile Delivery?

Last-mile delivery is a type of logistics defined as delivery of goods from distribution hub to the final consumers



### Background of Last-Mile Market Growth

- Exponential growth in supply caused by higher online consumption rate, which encourages buying pattern of higher frequency but in smaller quantity
- Perceived as another type of customer service sector, last mile market has become a new growth engine in the industry
- Last-miles only take 30% of total supply chain but it takes 80% of time required
- Last area left for innovation. R&D spending on delivery cost reduction, more efficient delivery, real-time tracking etc...

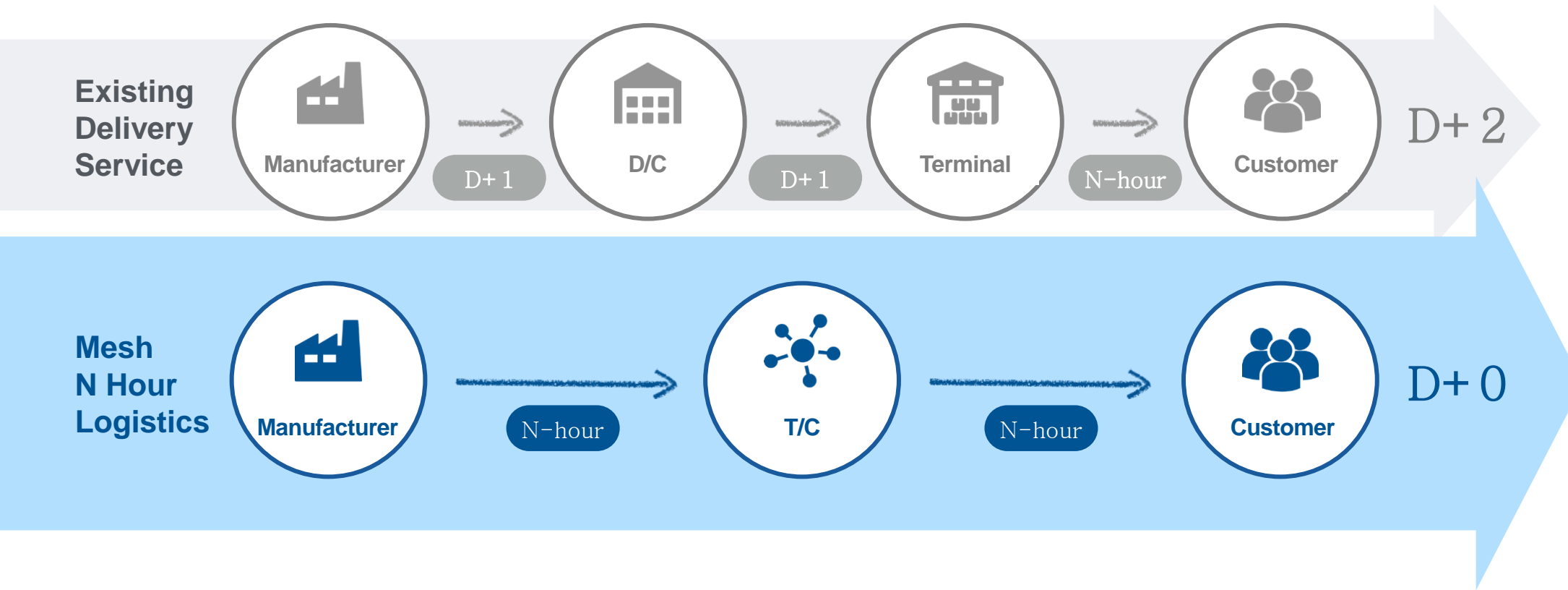
### Characteristics of Last-mile Market

- 80% of workers in last-mile market are in their 20s and 30s
- A monthly wage for courier: 3,800,000(KRW) – Profitable market
- Job satisfaction measurement: 4 out of 5 – High satisfaction level
- A number of quick delivery service employee:  
Approx. 4,000 agencies throughout the nation, approx. 170,000 employees

Source: <http://www.klnews.co.kr/news/articleView.html?dxno=113049>

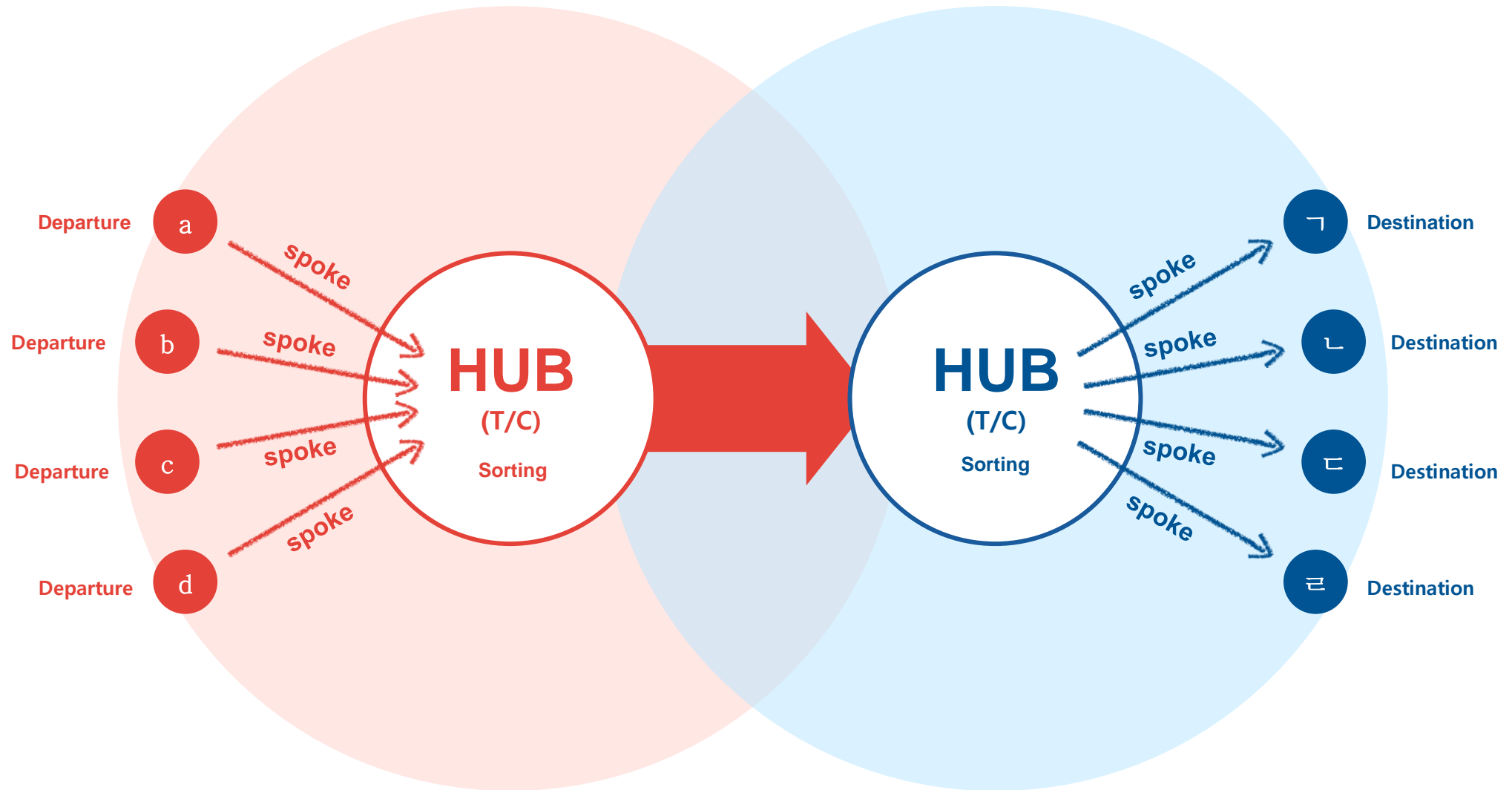
## [Business Model] Differentiation from existing delivery/logistics service

It takes normally 2 – 3 days for existing delivery services, whereas for Mesh it takes around 3-5 hours on the same to for order to arrive (N – Hour)

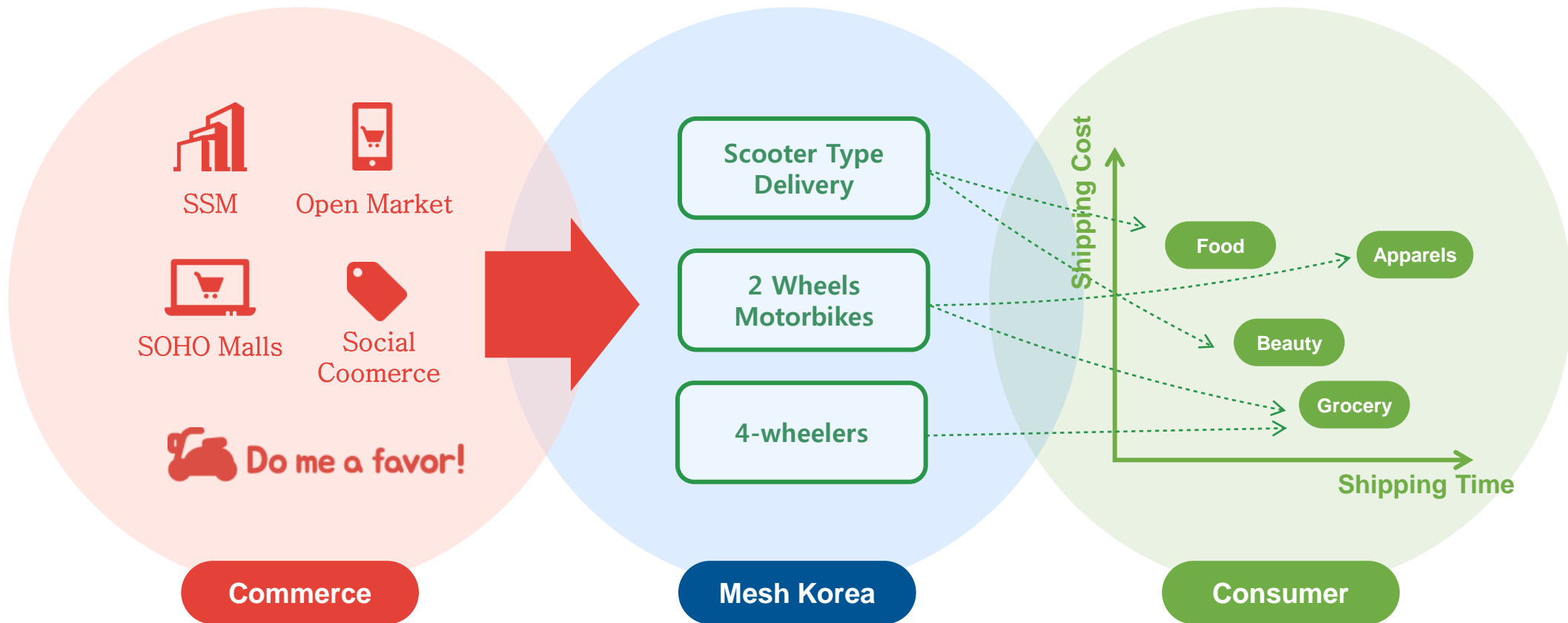


## [Appendix] What is Hub & Spoke?

“Hub & Spoke” is a way to centralize all goods into the hub where goods are sorted then shipped to the destination for maximum efficiency.



Mesh Korea uses all of its logistics infrastructure information to match each order to the optimized logistics method in terms of cost and speed.



Mesh Korea provides efficient solutions based on its infrastructure in the Last-mile segment unparalleled to competitors.

### N-time logistics

#### DC / TC

##### DC (Distribution Center)

- SOHO shopping mall / Offline retailers rent warehouses when burdened by inventories
- Inventory, storing, and releasing management through WMS

##### TC (Transfer Center)

- Hub terminal for 2-wheeled and 4-wheeled vehicles
- Able to stock inventories in the form of TDC (Transfer Distribution Center) depending on the consignor's needs
- Core locations in Seoul
- Quick inventory movements via vehicles circulating around TCs



#### SS (Service Station)

##### SS (Service Station)

- Standby/Departure point for 2-wheeled vehicles
- Control tower / pick-up center for the region
- Venue to educate drivers in Vroong Academy
- Leveraging more influence towards shipping enterprises

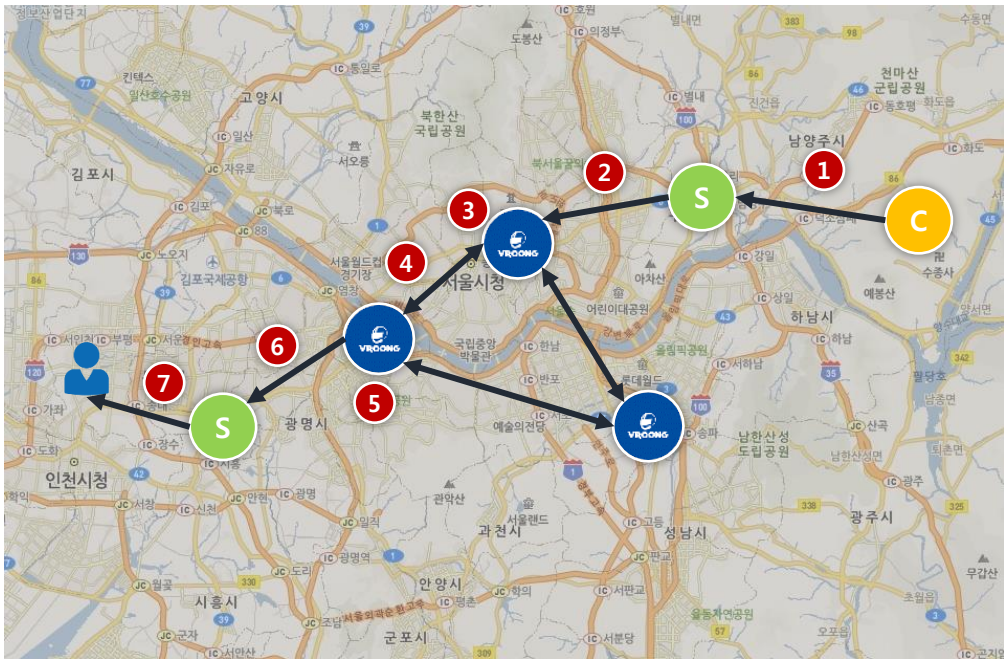




Mesh Korea provides N-time delivery service via hubs in the city area, which can be as quick as 2-wheeled vehicles but at a much lower cost.

N-time logistics

Summary of N-time delivery process



- P2P orders in the city area: Requires all steps from 1 to 7
- Mass orders from a single consignor: Involves only steps from 3 to 7 - a room for cost reductions

Process in detail

No.	Item	Infra	Contents
1	Pick up	2-wheeled	Courier transports goods to SS
2	SS transportation	Damas/Truck	Vehicle picks up goods from SS and moves them to TC
3	TC transportation	HR	TC personnel allocates goods to appropriate locations
4	Artery line	Damas/Truck	From TC to other TCs
5	TC shipping	HR	TC personnel allocates goods to SS locations
6	SS shipping	Damas	From TC to SS
7	Last-mile delivery	-	From SS to customers



## Based on in-city infrastructure, Mesh Korea offers a differentiated logistics service difference from traditional same-day delivery service

### N-time logistics

#### Traditional same-day delivery



#### Cut off time



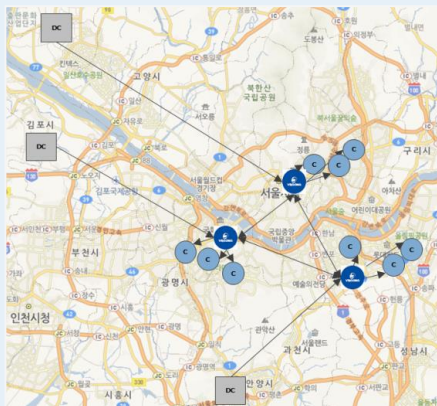
- Every truck visits multiple customers + traffic jam lead to delayed shipping speed
- Meaningless 'same-day delivery' as the order cut-off time is during early in the day

#### Shipping Capability

- If order decreases in certain region
  - Low vehicle storage space utility rate
  - Fixed cost > Revenue
- If order increases in certain region
  - Vehicles must be urgently added
  - Last-minute fee adds to higher fixed cost

**Fixed cost > Revenue = Loss**

#### N-time delivery



- On-time delivery as every 2-wheelers visit small number of customers
- Customers can order as late as 16:00 and received by 20:00 as multiple cut-offs become possible

#### [Service Station]

- Order decrease: Real-time logistics provide stable source of quantity
- Order increase: Adding vehicles is easier as 2-wheelers operate as variable costs

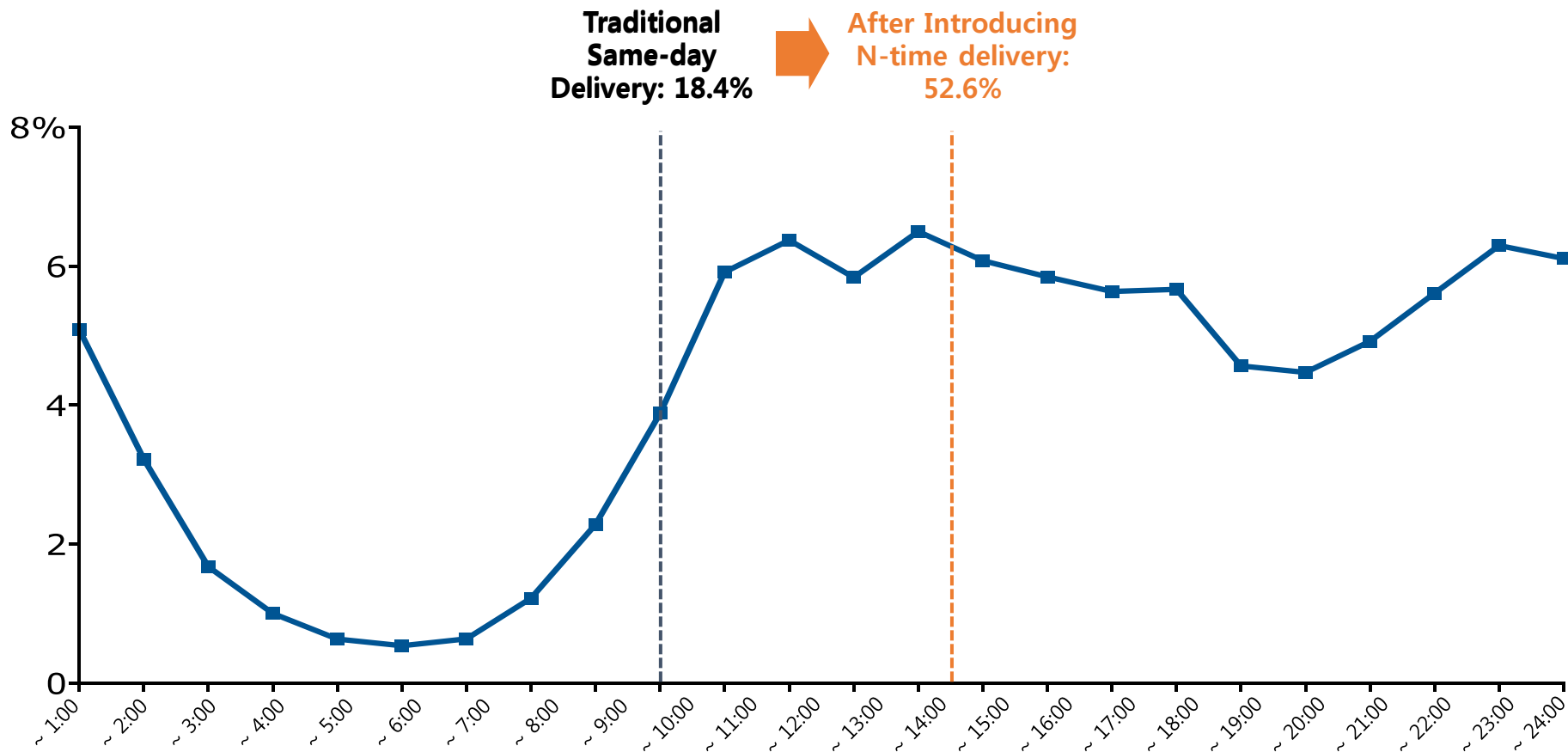
#### [TC / Artery Line]

- Stable operation given that all regions have similar quantity of orders

While ~18% of all order can be delivered with same-day delivery, it can be extended through 50% when N-time logistics system is implemented

N-time logistics

The Benefits of Introducing N-Time Delivery



Note: e-Commerce Company Average

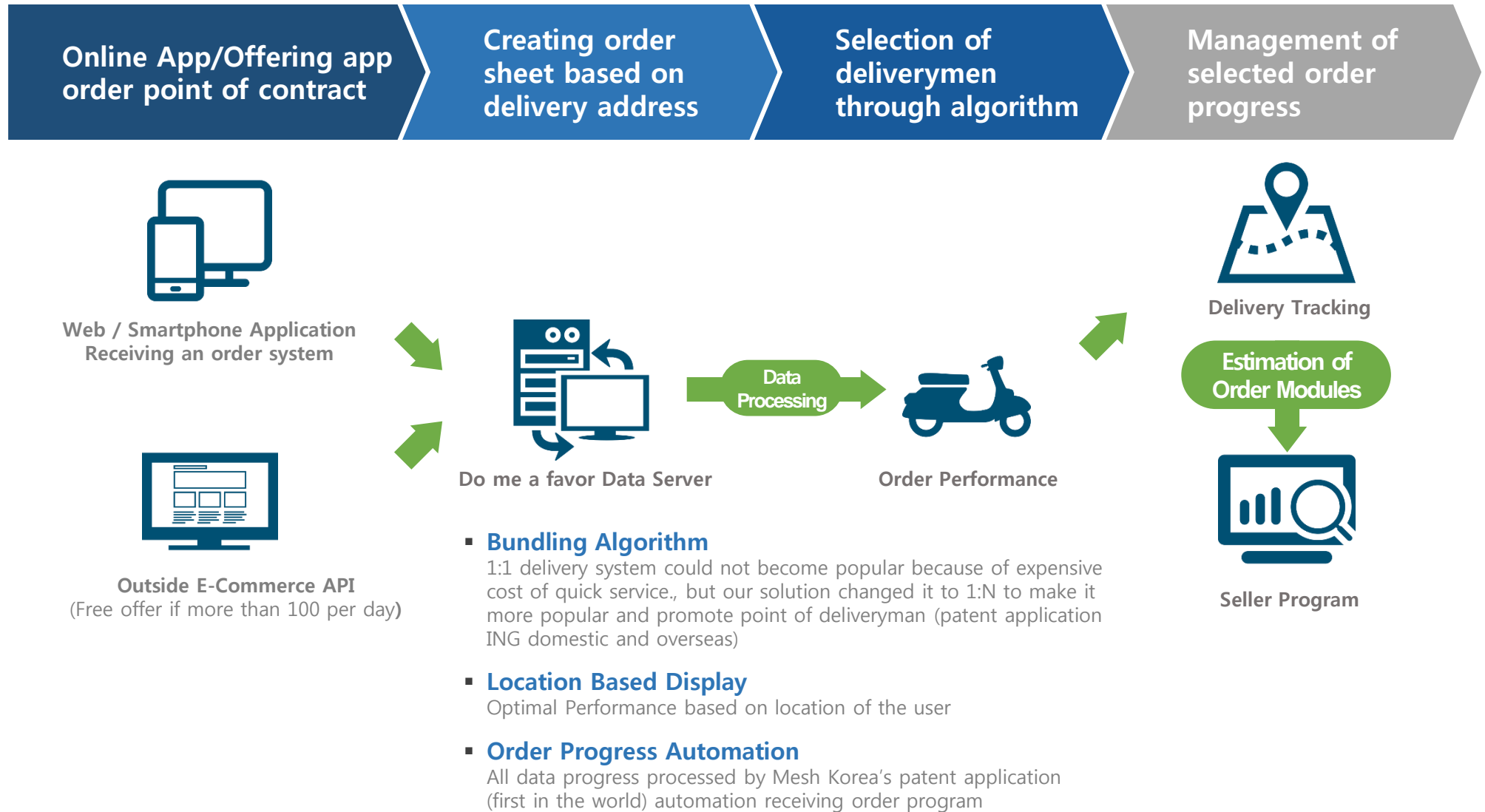
PART 3.

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## **Mesh Korea's IT system**

## Infrastructure and service quality improvements

Mesh Korea offers an intuitive API and patented automated receiving order system, enabling diversification of stores, convenience of e-commerce, and new delivery paradigm.



Consistent research activities resulted in 7 complete patents and 2 in progress. There are 2 PCT patents pending, considering the importance of regions.

No.	Patent Name	Patent No.	Status
1	Order Information and Handling Device	1014041870000	Complete
2	How to Handle Order Information System	1014587230000	Complete
3	Methods for Electronic Documents and Electronic Devices	1014141710000	Complete
4	Methods of Renting Group of Vehicles	1020150050054	In Progress
5	Vertical Distribution of Rental Rates and Systems	1020150050055	In Progress
6	Variable System of Transport Vehicle Segments Path	1020150050057	In Progress
7	Variable Forecasts and Selection of the Path of Traffic System	1020150050059	In Progress
8	How to Handle Shipping Information System	-	PCT Pending
9	Identification of Work System Driver	-	PCT Pending

“Do me a favor!” a quick delivery platform partners with Korea’s number 1 leading convenience store brand, CU convenient store, to provide new order and delivery experience for customers.

The advertisement features a light pink background. At the top left, the text '부탁해! X CU 편의점 즉시 배송' is displayed in red and purple. At the top right, the '부탁해!' logo is shown. The main headline, '편의점도 배달된다' (Convenience stores also deliver), is in large purple font, followed by '배송비 무조건 100원!' (Delivery fee is definitely 100 won!) in large red font. Below this, smaller text reads '100원에 편의점이 집으로 옵니다. 부탁해! 앱만 다운로드 받으면 지금 바로!' (A convenience store comes to your house for 100 won. Download the Do me a favor! app now!). At the bottom left, there are two buttons: 'GET IT ON Google play' and 'Available on the App Store'. On the right side, there is a photograph of a CU convenience store with a green and white striped awning and the CU logo on the roof.



## [Introduction] Mesh Prime x McDonald/BurgerKing

Moreover, McDonald and Burger King, franchises that already have their own delivery service, have signed contract with Mesh to outsource our solution for more efficient logistics and delivery process



McDonald utilizing Mesh's solution for delivery outsourcing



Burger King utilizing Mesh's solution for delivery outsourcing



## Shinsegae department store launched motorcycle quick delivery service to improve customer satisfaction for online customers



### 신세계몰 오토바이 퀵배송 서비스 이용하기



01.  
상품상세에서  
오토바이 퀵배송 상품 확인!



02.  
오후 4시 30분까지  
결제하면  
10시부터 ~ 오후4시30분주문에 한함



03.  
주문 후 최대  
4시간 이내 배송완료!



... and launched the identical service for E Mart Mall customers as well



The infographic is set against a yellow background. At the top left is a cartoon character with spiky hair and glasses, holding their head. To the right is the 'emart mall' logo with 'motorcycle delivery service' underneath. Below this is a title in Korean: '이마트몰 오토바이 퀵배송 서비스 이용하기'. The main content is divided into three numbered steps, each with a circular icon. Step 01 shows a screenshot of the E Mart Mall app with a red box highlighting the '퀵배송' (Quick Delivery) option and its order time '10시~16시30분'. Step 02 features a clock icon showing the time 4:30. Step 03 features a clock icon with a dark red segment and the text '1 hour max'. At the bottom, there is a note about the service fee and a disclaimer.

**01.**  
상품상세에서  
퀵배송상품 확인

**02.**  
오후 4시 30분까지  
결제하면

**03.**  
주문 후 1시간 이내  
배송 출발

※ 오토바이 퀵배송 서비스비 : 6천원  
※ 배송지가 성수점인 고객님의 이용 가능합니다

... Also, from April, 2016 we have signed an exclusive contract with SSG.com to perform same day delivery solution.

오늘, 신세계백화점을 만나세요

**오늘도착D** D-DELIVERY

오늘도착D? 백화점 상품을 구매한 당일 받아볼 수 있는 신세계적 배송 서비스

오늘 백화점을 만나는 두가지 방법

오늘도착D 01		오늘도착D 02	
	<b>퀵배송</b>		<b>당일배송</b>
당일 16시30분 이전 결제 완료시	당일 16시30분 이후~ 23시 59분 결제 완료시	당일 11시30분 이전 결제 완료시	당일 11시30분 이후~ 23시59분 결제 완료시
<b>당일 퀵배송</b>	<b>다음날 퀵배송</b> (단, 다음날이 휴경일인 경우 +2일후 배송)	<b>오늘 배송</b>	<b>다음날 배송</b> (단, 다음날이 휴경일인 경우 +2일후 배송)
배송비 : 10만원 이상 5천원, 10만원 미만 1만원		배송비 : 4천원	

We have signed an MOU with CJ Korea Express, which enabled us to provide same-day shipping service through the collaboration of our networks and CJ's four-wheeled vehicles.

매거진 - CLO Cast

홈 > 매거진 > CLO Cast

### CJ대한통운 메쉬코리아와 제휴, 전국택배 당일배송 시대 열어

임지용 기자 | 2015.11.01



CJ대한통운은 전국 당일배송인 'CJ The 빠른 배송' 서비스를 개시한다고 1일 밝혔다.

CJ대한통운은 특히 긴급한 배송을 원하는 고객들의 수요에 대응하기 위해 '부탁해' 등 오토바이 기반 운송 서비스를 제공하는 물류스타트업 메쉬코리아와 제휴해 주문 후 3시간 이내 배송을 완료하는 특급 배송 서비스를 내년 초 수도권지역부터 제공할 전망이다. 이를 위해 CJ대한통운은 지난 8월 메쉬코리아와 라스트마일 딜리버리와 관련하여 양해각서(MoU)를 체결한 바 있다.

## 한국경제

기사프린트 x 닫기

입력: 2015-11-01 14:44:46 / 수정: 2015-11-01 14:44:46

### '로켓배송' 맞서자···CJ대한통운 '전국당일배송'

오픈마켓과 소셜커머스 업체들의 배송 전쟁에 택배업계가 빠른 배송 서비스를 시작한다.

CJ대한통운은 오전 11시 이전까지 물류센터에 입고된 주문 상품을 전국 대부분 지역에 당일 오후까지 배송하는 'CJ The 빠른 배송' 서비스를 시작한다고 1일 밝혔다.

수도권 등 일부 지역이 아니라 전국을 대상으로 하는 당일배송 서비스는 이번이 처음이라고 CJ대한통운은 설명했다.

CJ대한통운은 앞으로 군포 허브터미널을 당일배송 전담 터미널로 운영하고 기존에 야간에만 가동하던 이 터미널을 주간에도 돌려 설비 효율을 높일 계획이다.

CJ대한통운은 개인 고객의 배송 수요에 대응하고 유통업체들의 배송 투자 부담을 줄여주기 위해 서비스를 시작하게 됐다고 설명했다.

실제로 아마존은 최근 미국에 66개 물류센터를 확보하고 당일배송 서비스를 시작했으며 중국 대형 유통업체인 제이디닷컴은 3만명의 택배기사를 활용해 당일배송을 하고 있다.

국내 홈쇼핑과 인터넷 쇼핑몰도 자체 물류 네트워크 구축에 막대한 투자를 하고 있다.

PART 5.

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# **Mesh Corporate Mission**

Mesh is continuously developing and upgrading our logistic systems phase by phase for proper and efficient distributions.

	01/2013~ 07/2015	07/2015 ~ 06/2016	07/2016
	Phase 1	Phase 2	Phase 3
<b>Mission:</b>	<b>"Shortest Route and Faster Delivery to Customer"</b>	<b>"Implementation of TC/DC"</b>	<b>"On-demand Commerce Development"</b>
<b>Goal building infrastructure</b>	<ul style="list-style-type: none"> <li>Food quick network creation                             <ul style="list-style-type: none"> <li>From road shop in 3km, customer delivery network secured located in 3km from road shop</li> <li>Sensitivity high products such as food delivery stabilization</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>TC/DC and Service Station Build                             <ul style="list-style-type: none"> <li>Warehouse to consumers distribution with shorter distance and order allocation/classification</li> <li>Last-mile and Network Infrastructure</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Quick Food Delivery / TC / Service Station with Stable Operations</li> <li>Do me a favor N Hour Deliver WMS Management</li> </ul>
<b>Main developing strategy initiative:</b>	<ul style="list-style-type: none"> <li>TMS: Vroong Rider</li> <li>OMS: 부탁해!, Mesh Prime</li> <li>Post payment/ real time payment system</li> </ul>	<ul style="list-style-type: none"> <li>TMS: Vroong Driver</li> <li>WMS: Vroong Station</li> <li>Invoice system</li> </ul>	<ul style="list-style-type: none"> <li>Securing contents of products</li> <li>Commerce organization</li> <li>marketing</li> </ul>
<b>Developing item:</b>	<ul style="list-style-type: none"> <li>Real-time logistics                             <ul style="list-style-type: none"> <li>Customer in real time items look for real time the logistic product delivery in 30 minutes like QSR*</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>N Hour logistics                             <ul style="list-style-type: none"> <li>Different than existing logistics that cut off morning. Multiple cut off delivery product</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>부탁해! Acceleration                             <ul style="list-style-type: none"> <li>CU / fresh food / neighborhood / shopping consumer new mobile commerce market make</li> </ul> </li> </ul>
<b>Main customer company:</b>	<ul style="list-style-type: none"> <li>Burger King, McDonalds</li> </ul>	<ul style="list-style-type: none"> <li>Shinsegae, Emart, LotteMart, Lotte Department Store, Pulmuone, CJ Oshopping, etc</li> </ul>	<ul style="list-style-type: none"> <li>CU Convenience Stores, Orga, Mega Mart, McDonalds, BurgerKing, Domino's, MPK</li> </ul>

\*Quick Service Restaurant Pizza/Hamburger Abbreviations



The role of Mesh Korea resembles that of SKT/KT, which establishes and manages network of franchise, vendors and distributors. As a “Networker” we deliver goods with deliverymen in the region



Mesh will continuously strive towards becoming the world's best logistics company in the global market that innovates shipping market to one that emphasizes symbiosis with deliverymen and lead culture of delivery and shipping by concentrating all our logistics expertise into making the best logistics system

### As-is: Customization for Top Players



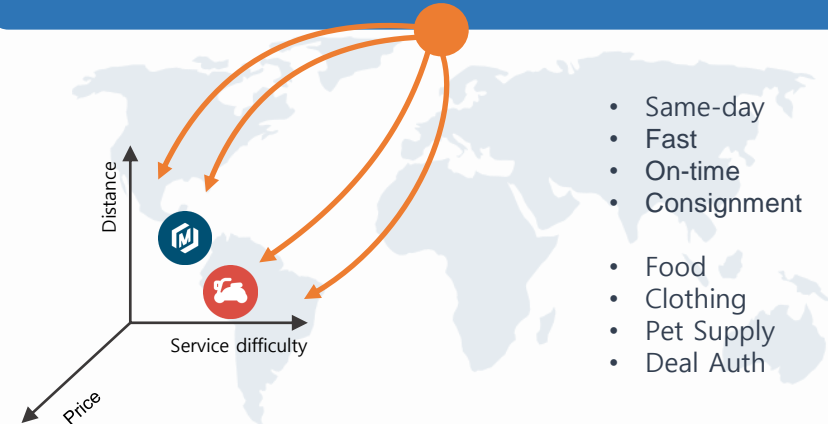
Packages

Foods



- Developed new logistics services that existing players such as Hyundai Delivery, CJ Korea Express, have not been able to offer
- Starting with 2-wheeled vehicle, we plan to expand logistics pool to trucks, warehouse and delivery terminals
- Create logistics structure that enables flexible response to supply change and values the importance of symbiosis in the market

### To-be: Liberation of Many Customers





**End of Document**