



“Futuristic last mile delivery for food and beverage”

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Last mile F&B delivery, the present situation

F&B is a vast industry and last mile delivery mainly concerns:

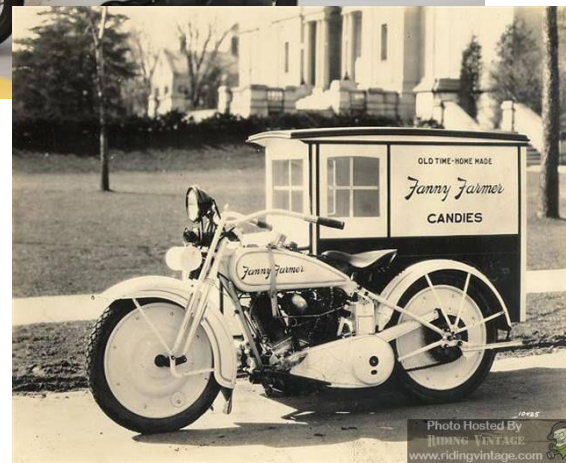
- Groceries
- Meals

With a high number and types of companies...



Last mile F&B delivery, the present situation

F&B last mile delivery methods today haven't changed much



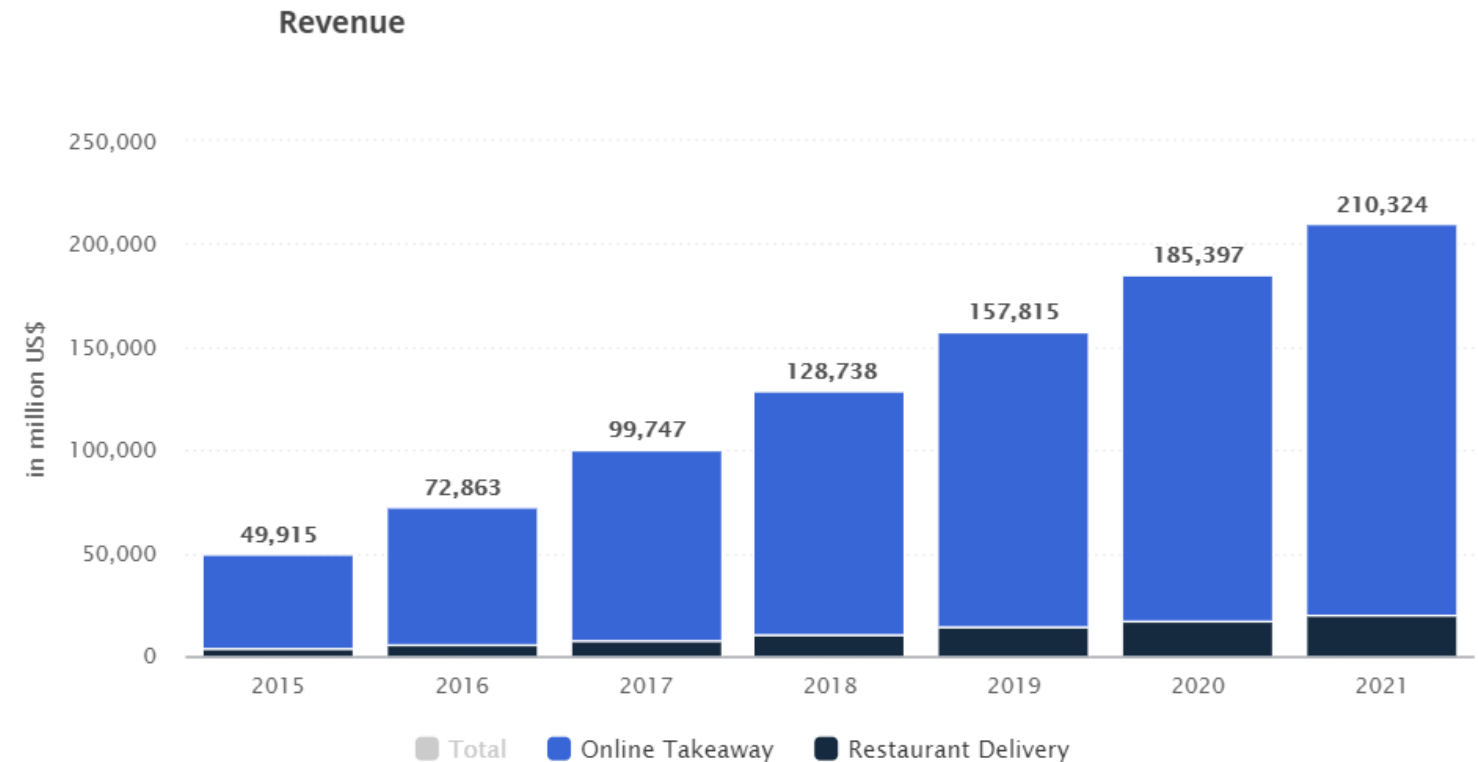
George "Longbranch" Buehler

Stanley "Hoot" Hold

Last mile F&B delivery, the present situation

But the market is growing

- Food Delivery: US\$99B in 2017
- Online takeaway: 91 Billions
- 20.5% growth each year 2017-2021
- China: 39B, USA: 18B (2017)



Source: Statista, December 2016; Selected region only includes countries listed in the Digital Market Outlook

Last mile F&B delivery, the present situation

But the demand for last mile delivery is increasing



Last mile F&B delivery, the present situation

Consumers are asking for a faster service



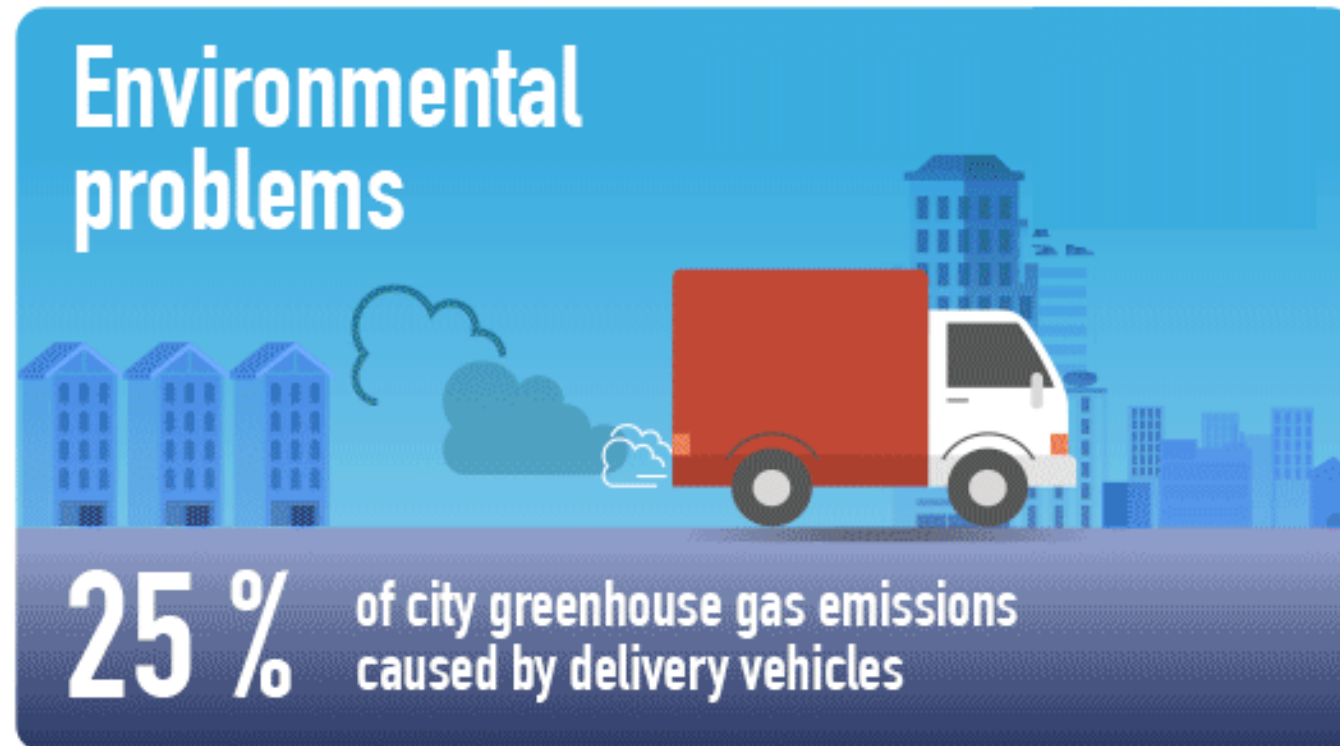
Last mile F&B delivery, the present situation

Leading to city roads overcrowding



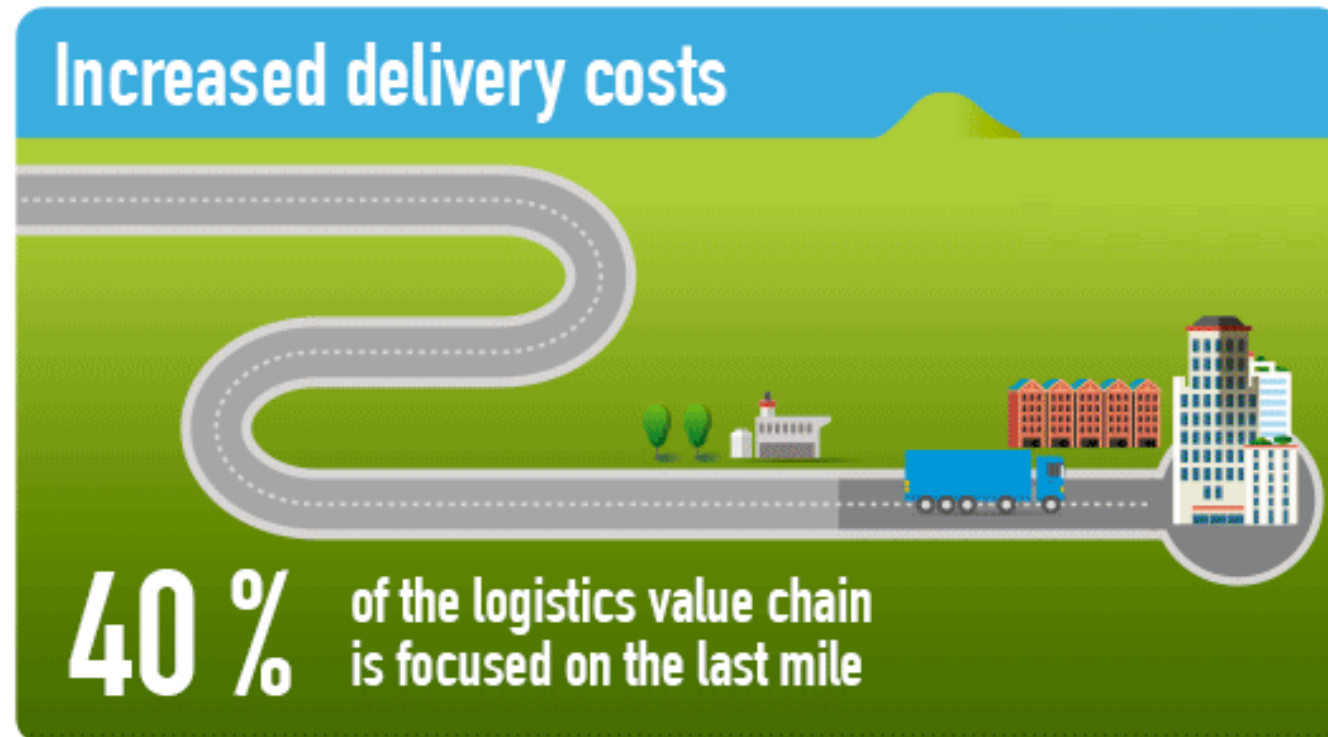
Last mile F&B delivery, the present situation

And environmental issues



Last mile F&B delivery, the present situation

Last mile delivery is strongly inefficient

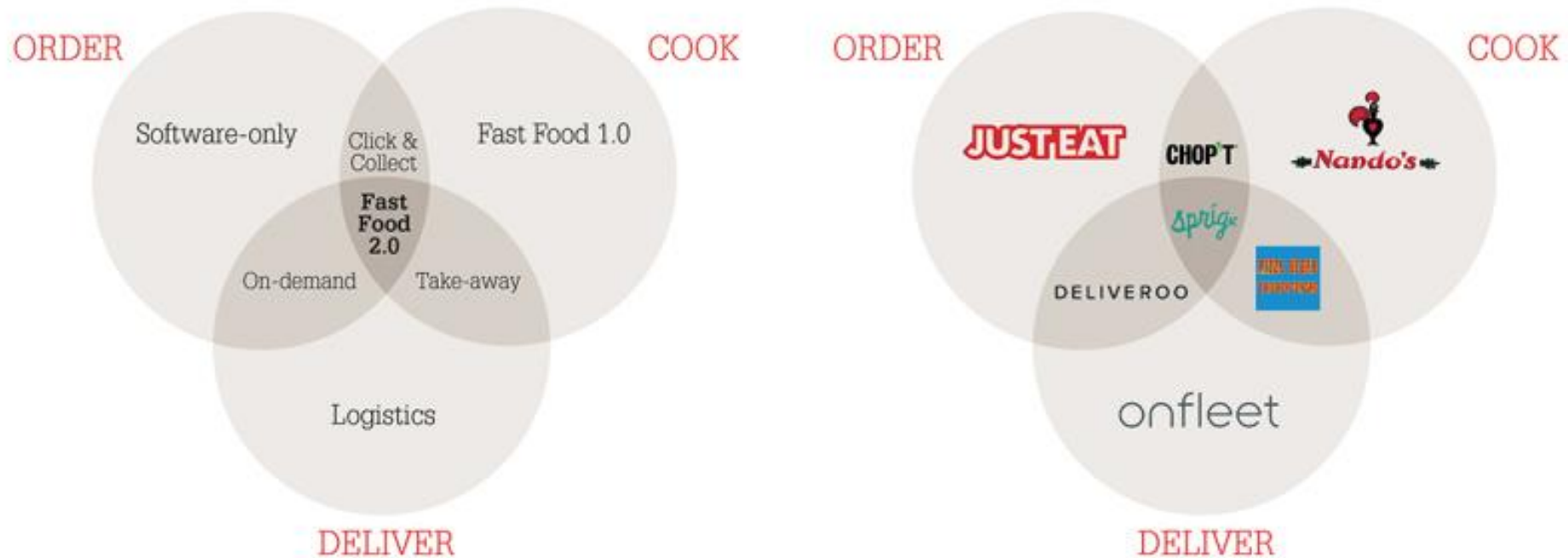


Last mile F&B delivery, the present situation




Last mile F&B delivery, the present situation

Last mile meal delivery solutions have multiplied, centered around the combination of 3 services...



Last mile F&B delivery, the present situation

... *On-Demand* last mile delivery companies have solved issues and taken a serious advantage

	Software-only	Fast Food 1.0	On-demand
 Variety of prices	✗	✗	✓
 Variety of cuisines	✓	✗	✓
 Delivery experience	✗	✓	✓
 Marketing from restaurants	✓	✗	✓
 Branded drivers	✗	✓	✓

Last mile food delivery, the present situation

While grocery delivery is struggling to pick up...

Representing only 1-3% of global sales

- Perishable goods can't wait
- Home delivery
- Trust is key with edible products
- Profit margins in grocery industry are thin



Last mile food delivery, the present situation

... and still value brick and mortar

- Multiplying store locations allows pickup and faster deliveries
- Brick & Mortars labels bring trust and knowledge
- eGroceries are still not thriving

By buying Whole Food in 2017, Amazon gained:

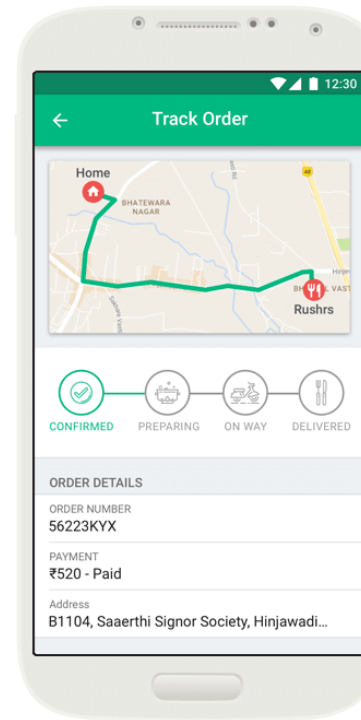
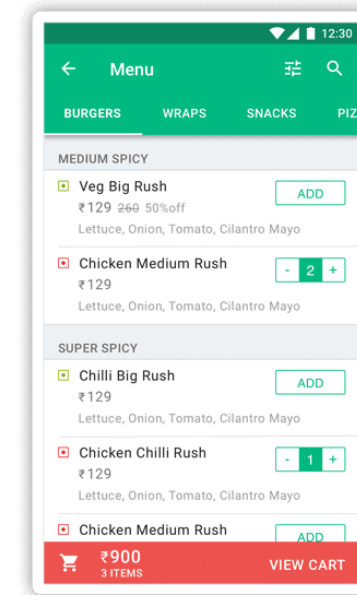
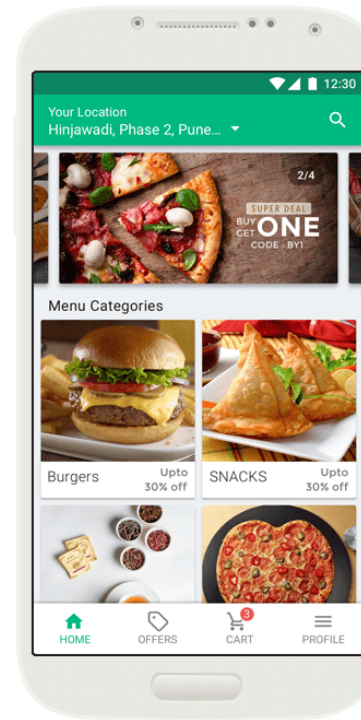
- *431 upper-income, prime-location distribution nodes*
- *high end brand image in the food industry*



Last mile food delivery, the present situation

Software, apps and data have been the driving force behind last mile delivery changes

- Enhance customer experience and satisfaction
- Ease and quicken the delivery process
- Allow to gather and enrich data
With Whole Food, Amazon also acquired:
 - *prime customer database*
 - *rich customer behaviors insights*



Last mile food delivery, the present situation

As they grow, on-demand marketplaces will accumulate droves of data

- Delivery routes
- Demand patterns
(correlation with the weather, the day of the week, sports events, distance to/from payday, etc.)
- Food preparation characteristics

Which will allow them to keep on optimizing their service and develop routing algorithms

And pave the way for unmanned vehicles to take over

The future of the last mile food delivery

Autonomous ground vehicles are making their debut...

AGV are seen as the most promising delivery vehicle

- Safe
- Already in service
- Can easily be scaled up, cost effective



The future of the last mile food delivery

... and are fulfilling deliveries



The future of the last mile food delivery

In the long run, drones may be one day dominating the meal delivery service

Drones is the most adapted vehicles for this type of deliveries

- Fast
- Insensitive to traffic and city density
- Can lift average meal delivery payload
- Technology is improving fast



The future of the last mile food delivery

But critical issues need to be solved first:

- Safety
- Perception
- Regulation
- Costs
- Need for global infrastructure changes



The future of the last mile food delivery

Hybrid solutions are the most advanced

Autonomous vehicles will 'follow' the delivery guy. Simultaneous deliveries by men, robots and drones.



The future of the last mile food delivery



The future of the last mile food delivery

Refrigerated lockers are an interesting alternative



The future of the last mile food delivery

Food last mile delivery is likely to be operated by a multitude of operators

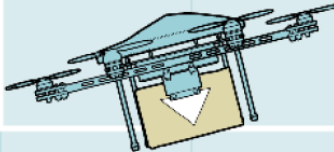
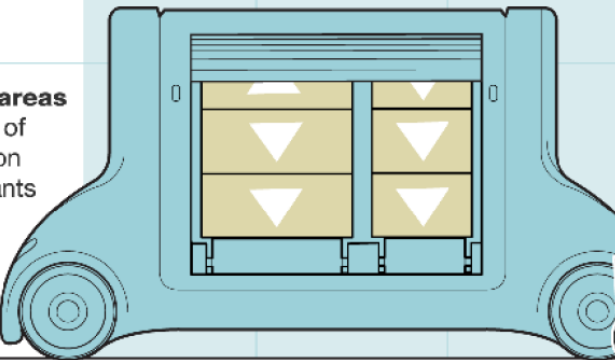
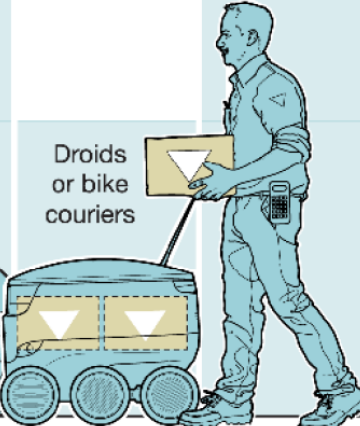
- Autonomous vehicles
- Droids
- Drones
- (Bike) Couriers

Depending on

- Weight
- Areas
- Type of product
- Need for speed
- Frequency of purchase

Several Models Are Likely to Dominate Last-Mile Delivery, Given Available Product Options, Density and Customer Preferences

Available delivery options, by density of locale

	B2C				B2B
	Regular parcel ¹	High reliability	Same day	Instant	
Rural areas Density of <50,000 inhabitants		Drones (same day, if fulfillment times feasible) 		Fulfillment likely not possible at economical cost levels	
Urban areas Density of 50,000–1 million inhabitants	Autonomous ground vehicles with lockers (e-grocery with today's delivery model) 				Today's delivery model
Urban areas Density of >1 million inhabitants					Droids or bike couriers

¹Parcel delivery between one day after drop-off and four days after drop-off.

The future of the last mile food delivery

That will be part of smart city solutions



The future of the last mile food delivery

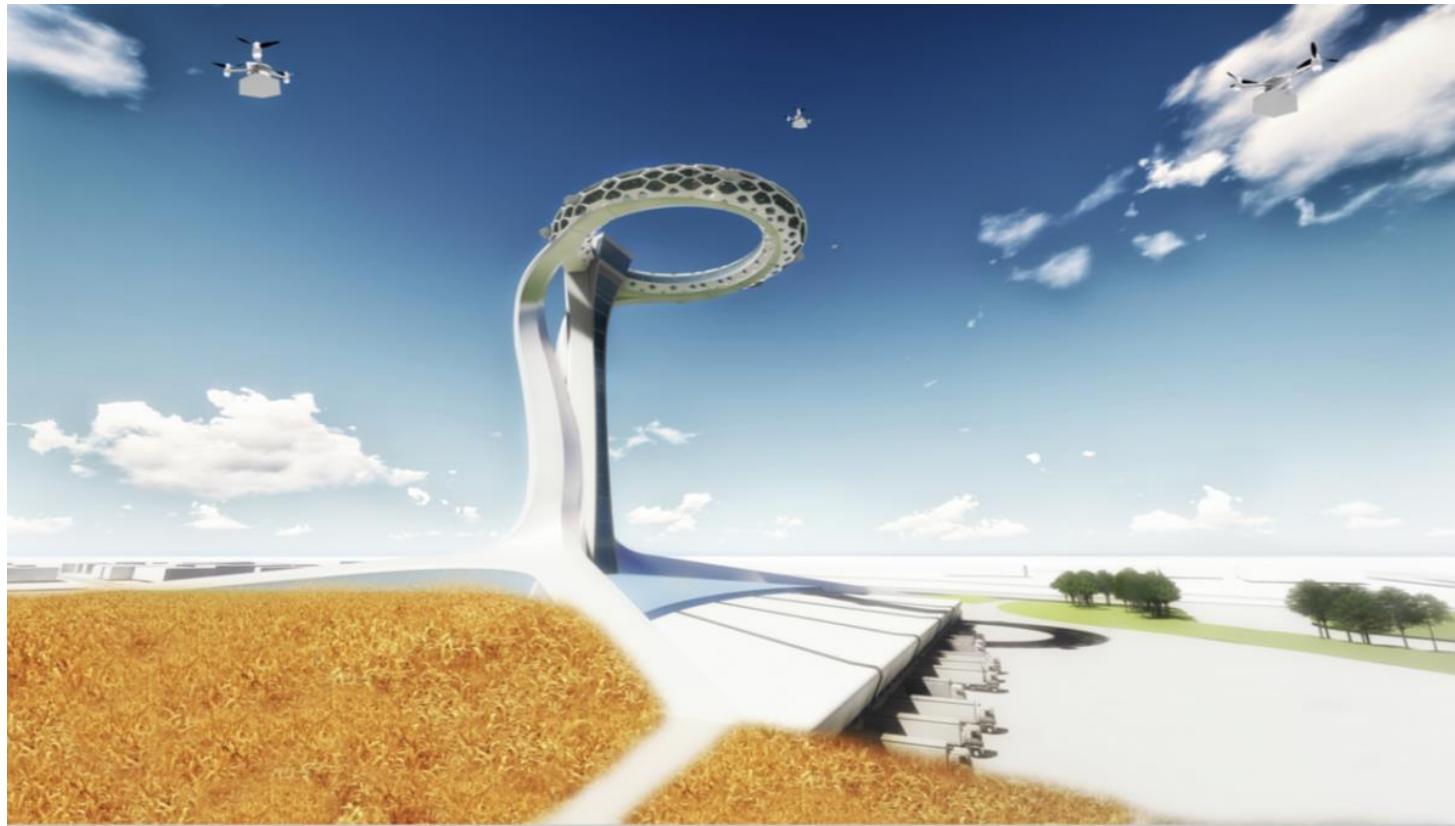
Could the new last mile delivery change the food and beverage industry itself

- Virtual restaurants located in cooking hub, delivered by unmanned vehicles
- Larger moving meal cooking trucks, cutting preparation time and allowing faster delivery (Zume Pizza cooks pizza en route) coupled with drones/droids
- New virtual shopping mall optimized for automatized picking, packing and delivering



The future of the last mile food delivery

Could this be the restaurant or grocery store of the future?



THANK YOU !!!

