

# The Changing Last Mile: The Consumer, The Click and The Delivery

FHWA Talking Freight  
March 2016



# What is Retail Today (and Tomorrow)?

- Reshaping Demand
- Reshaping Expectations
- Reshaping Facilities
- Reshaping Delivery



Randall Park Mall

Sources: [http://www.cleveland.com/remembers/index.ssf/2011/04/randall\\_park\\_mall\\_and\\_the\\_smel.html](http://www.cleveland.com/remembers/index.ssf/2011/04/randall_park_mall_and_the_smel.html)

<http://news.yahoo.com/photos/abandoned-mall-that-was-once-the-largest-in-the-world-142135579-slideshow/>

# Dynamic Demand and Expectations



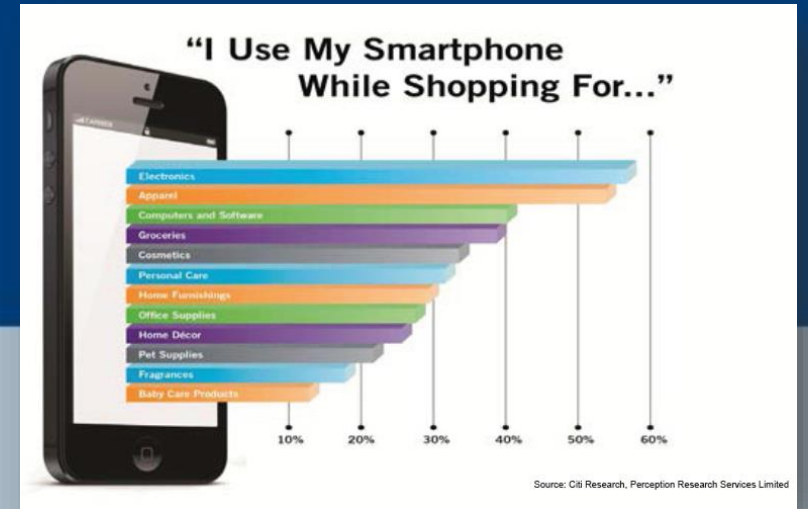
# The Empowered Consumer

- We demand a diverse selection that is always in stock.
  - If the item is not in stock or at the price we want, we'll find it someplace else
- We are informed.
- We require flexibility –
  - Order on line, through the mail, on the phone, or in stores.
  - Take home from stores, delivered to the house or office, delivered to someone else.
  - An equally flexible return policy.
- We demand service.
- We care about the environment.
- We want delivery to be free.

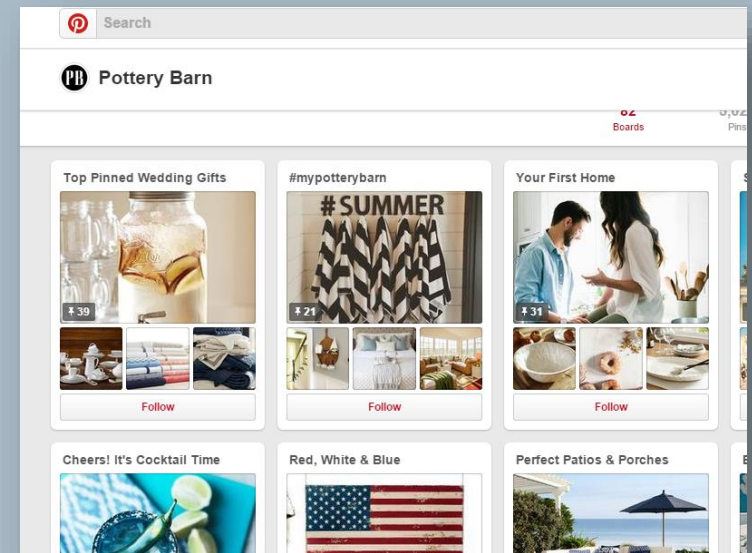


# Retail Channels

- **Omni-channel** – defined as retail merchants that use multiple channels to reach and serve their customer base.
- **M-commerce** – defined as mobile commerce and refers to the increased use of tablets and smart phones role in retail trade.
- **Social commerce** – defined as the use of social media sites such as Facebook and Pinterest to market products, build awareness and increase demand.
- *Since 2010, more than 24 enclosed malls have closed and 60 more are on the brink of closing.*



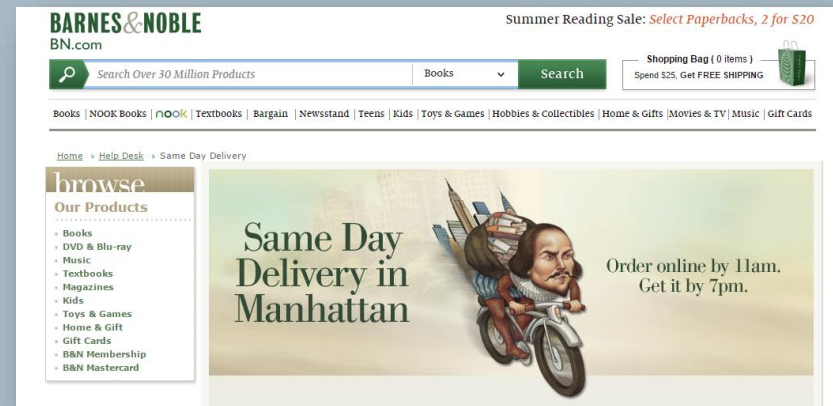
Source: Cassidy Turley



# Changing Retail Changes Freight Imperatives

- Free shipping
- Faster delivery
  - Free two day delivery
  - Next day delivery
  - Same day delivery
- To anywhere
  - Rural and less accessible locations
  - Manhattan

Free shipping a boon for Alaska's Amazon customers



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**The Last Mile**

# The Changing Last Mile Landscape

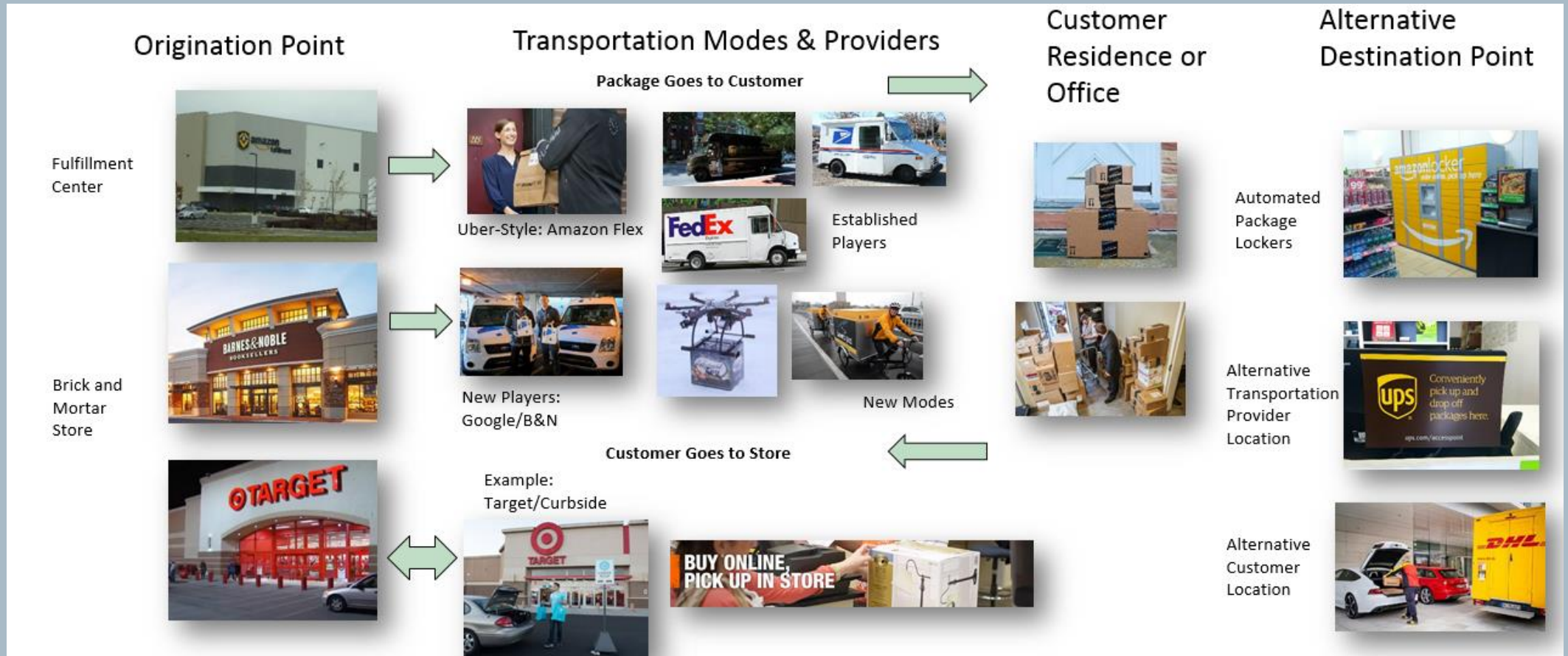


Photo sources include: Reuters (Target), BarnesandNoble.com, Curbside, Yelp (UPS), DHL, Google, UPS, USPS, FedEx, Geekwire (Amazon packages), NY Times (Amazon packages), Home Depot, Amazon, YouTube (drone), BikePortland



# Changing Origin Points

## Origination Point

Fulfillment Center



Brick and Mortar Store



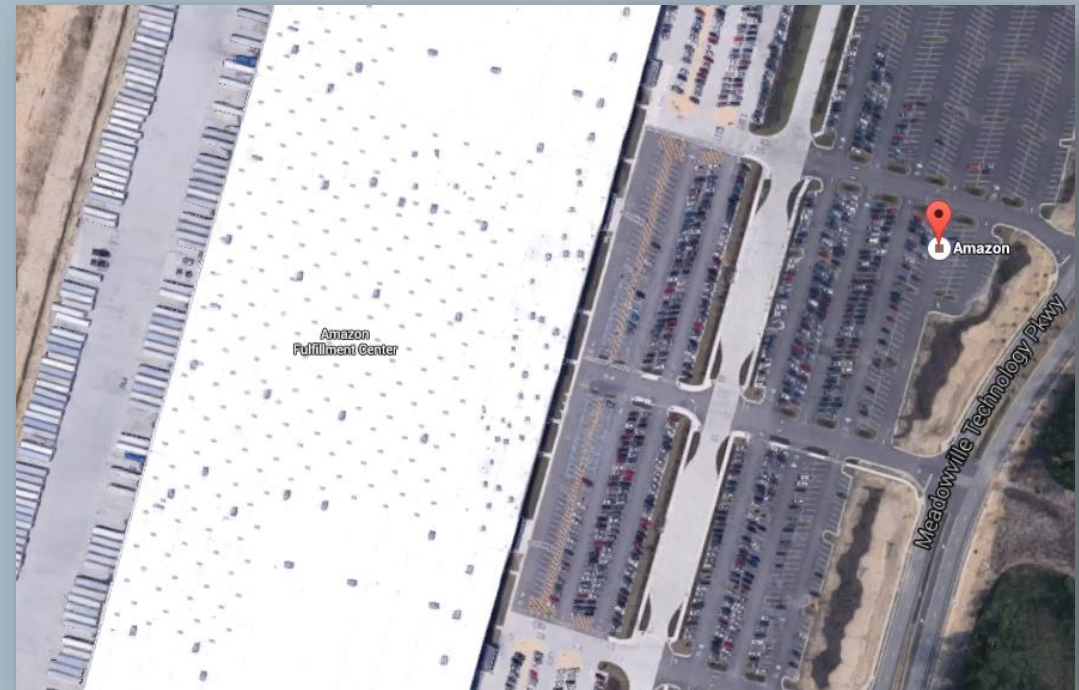
- Fulfillment centers have at least 3x the workforce of typical distribution centers.
  - Workforce, access and traffic considerations
- Brick and mortar stores are closing, shrinking in size or shifting their function.



# Distribution Center Layouts



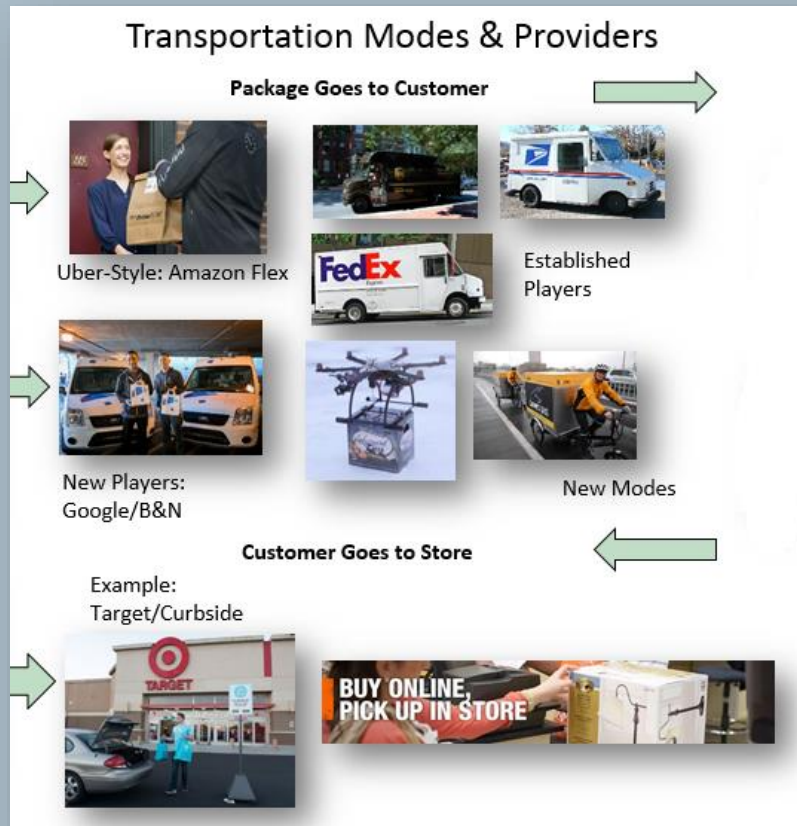
# Fulfillment Centers – More Truck and Associate Parking



# Interior Functions








# Changing parameters, markets and competitors



- Repurposing existing providers
  - In 2015, the USPS handled 40% of Amazon's shipments.
- Going Uber style
  - Amazon Flex, Instacart, Postmates, Deliv
- Starting new services
  - Google, Curbside
- Bringing back modes
  - B-Line Freight Bikes
- Prototyping new modes
  - City of Chiban (Japan) drone program



# What to do with all those packages

Customer Residence or Office	Alternative Destination Point
	Automated Package Lockers 
	Alternative Transportation Provider Location 
	Alternative Customer Location 

- At-home delivery conveniences and issues.
  - Residential buildings were not designed for the current and projected levels of package deliveries.
- Alternatives:
  - APLs operated by shippers, providers and third parties.
  - Alternative locations near the end users.
    - UPS Access Point
  - Alternative customer-controlled locations.
    - Audi/DHL/Amazon trunk trial program

The New Last Mile – This is no longer your parents' shopping experience



# The Take Away – Retail and the Last Mile and Still Evolving

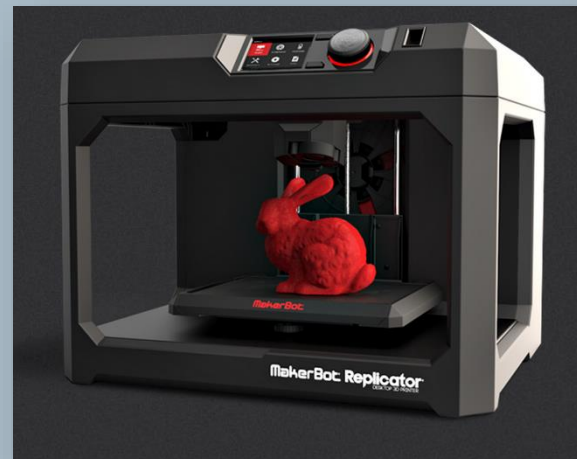
- Follow the consumer
- Monitor the regulatory landscape
- Track new technologies
- Identify new service providers

*The Supply Chain is ever evolving.*

## Walmart to Install Surface-to-Air Missiles on Store Rooftops to Shoot Down Amazon Drones

Greg Henderson — December 3, 2013

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# Thank You

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