

The Impact of Explosive Growth in Internet Retail on Order Fulfillment



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What is the order profile of an Internet client?

- Small number of lines (1-3)
- Low number of items per line (1-2)
- Typically, 1.2 total items per order
- As internet ordering goes up...
 - Orders within the D.C. are going WAY up
 - Size of orders are going WAY down
 - Many individual items per order – very labor intensive



Internet business

1. Studies show an average of 15-20% **growth** per year for the next 7-8 years.
2. Rise of customers using **APPS** for shopping (online and in the store)
3. How do you **communicate** affectively with customers
4. Transportation: FREE **shipping**
5. Unknown & changing **legislation**
6. Volatile/unpredictable **economy**
7. Investing in **supply chain automation** to counter rising cost of business



Internet sales growth potential

Cyber Monday Sales 2012: Spending To Increase 20 Percent Over Last Year

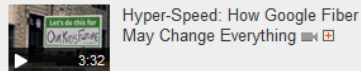
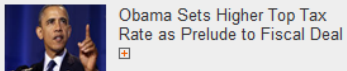
By MAE ANDERSON 11/26/12 09:42 PM ET EST AP

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Record Online Holiday Sales Seen as Mobile Drives Growth

By Danielle Kucera - Nov 26, 2012 5:48 PM ET

f t in +1 2 COMMENTS

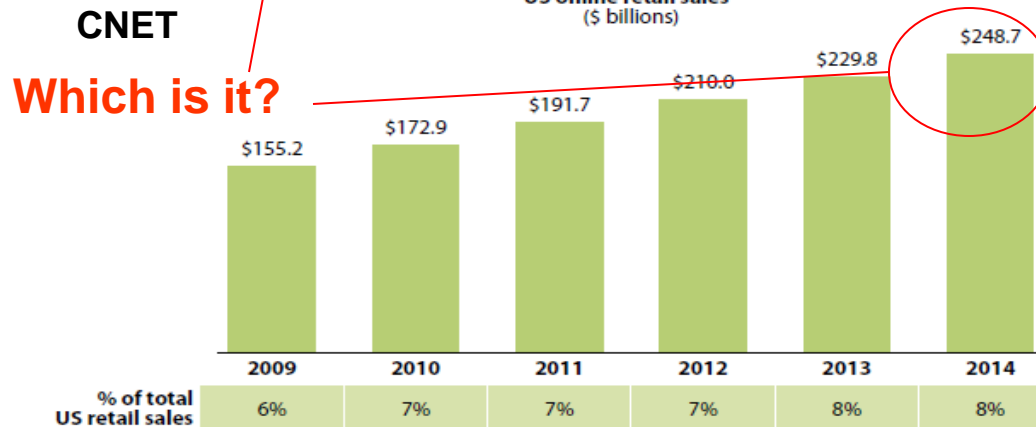
Online retailers are poised for a record \$43.4 billion holiday sales season as shoppers increasingly rely on social networks and mobile devices to find and buy merchandise.



- The Internet and mail-order retail industry in the US includes about 20,000 companies with combined annual revenue of about \$270 billion. Major companies include Lands' End, LL Bean, Amazon, Overstock, and Hanover Direct. The industry is **concentrated**: the top 50 companies account for about 70 percent of industry revenue. Over the past five years, the bulk of the industry's revenue has shifted from catalog to Internet sales. While most brick-and-mortar retailers have an online presence and many also offer catalog sales, this profile focuses on retailers who use the Internet or catalogs as their sole or primary sales channel.

First Research - Source

1-1 US online retail sales will reach \$248.7 billion by 2014



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Rising use of phone apps

25% of Americans (82.2M people)
own a smart phone



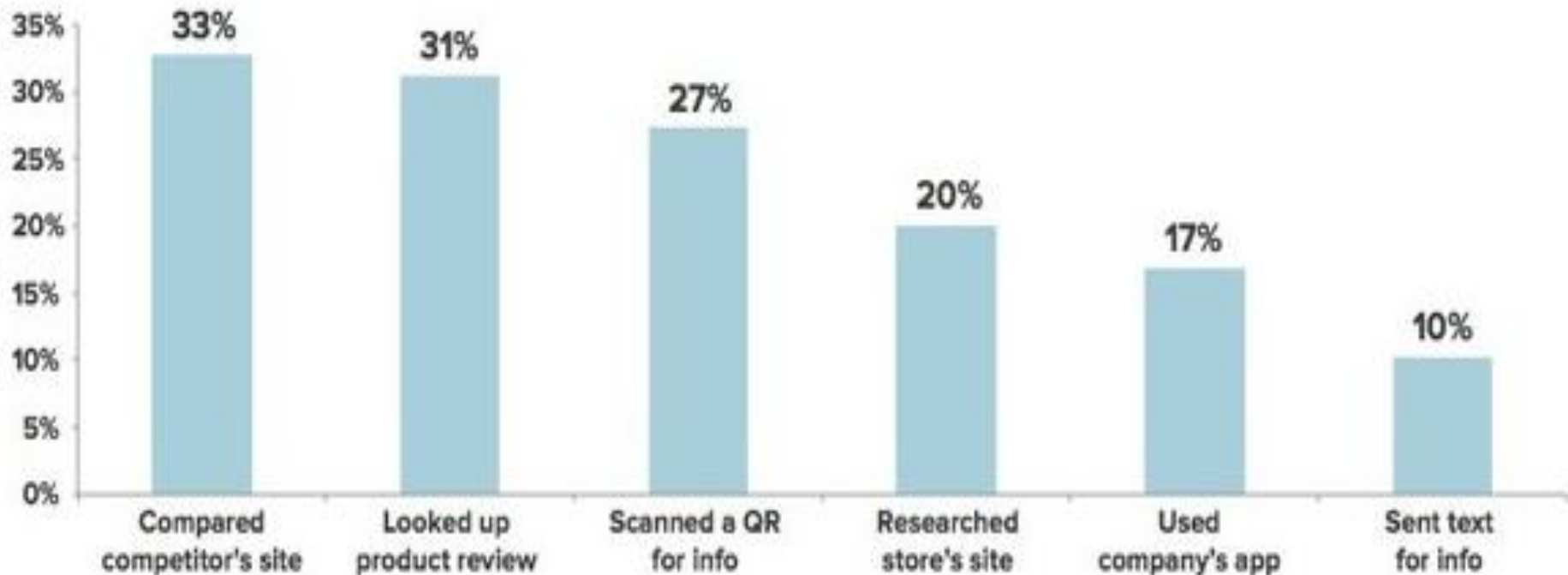
- **64%** of smart phone owners shop on-line.
- **34%** of smart phone owners made a purchase via mobile phone in 2012, (compared to **19%** in 2011.)
- **2/3** of all mobile shoppers make purchases while at home.
- Approx **50%** plan to make holiday purchases from their phones.
- **1/4** of all iPhone and Android phone users have used a shopping application within the past three months.
- More than **40%** of smart phone users have already bought something using the phone.
- More than three-fourths of all retail companies **plan to invest** in mobile this year.
- The retail market for mobile devices is expected to top **\$12 billion** by 2014.

Sources: eDigitalResearch & Portaltech Reply 2012; RSR Research 2011; ThriveMarketing Blog

Rising use of phone apps

25% of Americans (82.2M people) own a smart phone

Activities of smartphone owners while in-store



Smartphone owners (N=603)

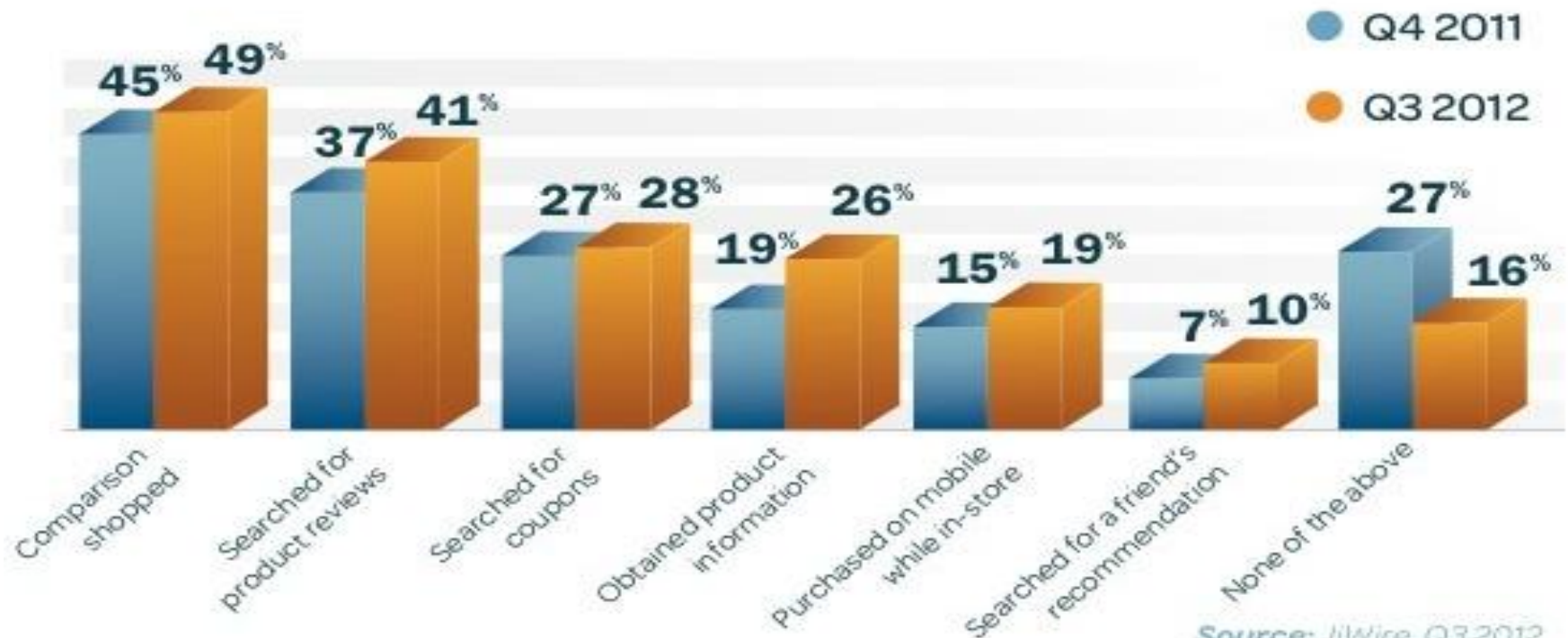
Source: Vibes Mobile Consumer Survey August 2012



Rising use of phone apps

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Which of the following have you done on your mobile device while shopping in a store?

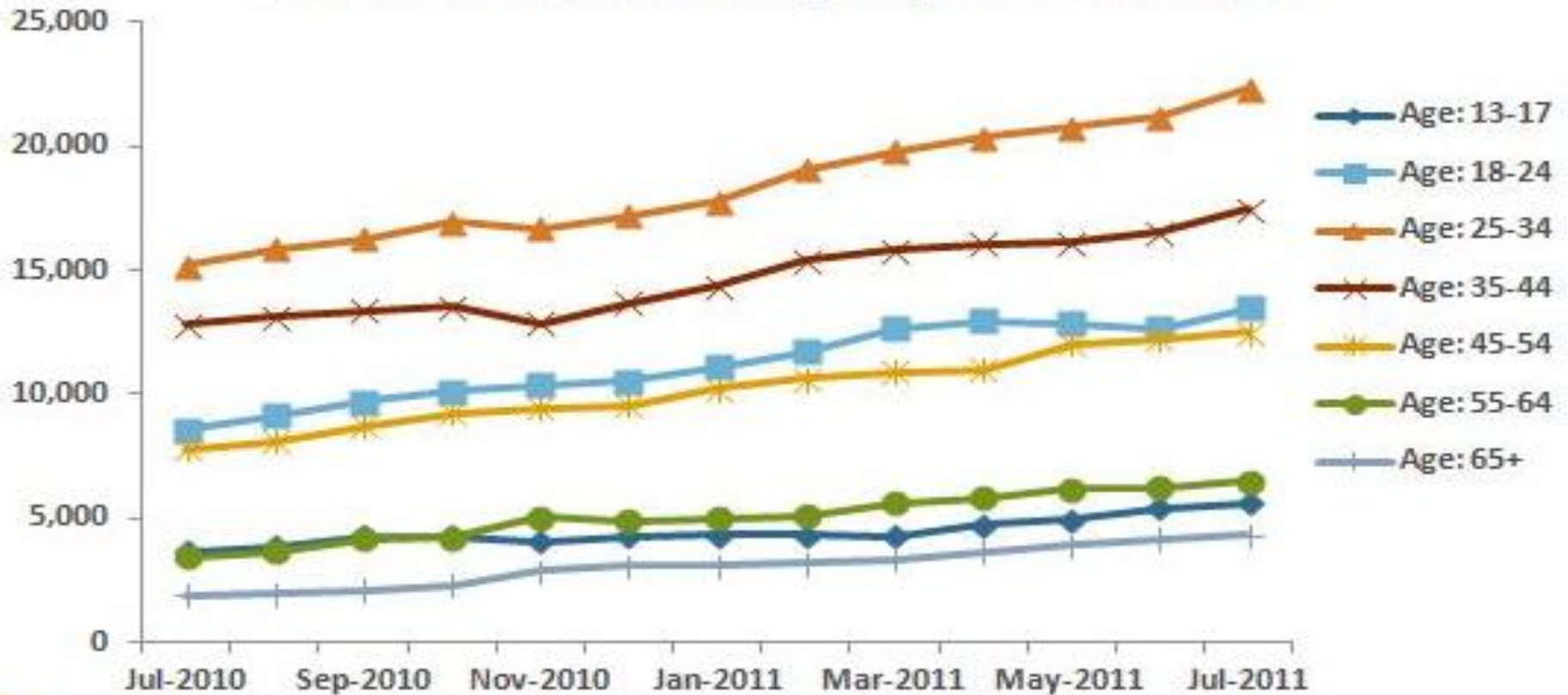


Rising use of phone apps

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U.S. Smartphone Audience (000) by Age Segment

Source: comScore MobiLens, 3 mon. avg. ending Jul-2010 to Jul-2011, U.S.



3 key aspects of effective communications

1. Visual connection 38%
2. Audio 55%
3. Words 7%



The Internet defies this



- Web site ease of use
- Informative
- Competitive pricing
- Free shipping
- Next day delivery

- | | | |
|----------------------|----------------|-----|
| 1. Visual connection | 38% | 15% |
| 2. Audio | 55% | --% |
| 3. Words | 7% | 7% |



- Damage free
- How it is packaged
- Completeness of order

Internet growth concerns

- Factors that will negatively affect the widely publicized double-digit sales growth projections



Transportation



The screenshot shows the top portion of a website. At the top left is the logo for 'internet RETAILER' with the tagline 'portal to e-commerce intelligence'. Below the logo is a navigation menu with tabs for 'NEWS', 'MARKETING', 'TECHNOLOGY' (highlighted in red), 'E-RETAILERS', 'VENDORS', and 'TRENDS + DATA'. Below the navigation is a breadcrumb trail: 'Home / Technology / Fulfillment/Delivery'. The main content area shows the date 'December 3, 2012, 1:10 PM' and 'Article Tools' with icons for print, email, Facebook, Twitter, and a share icon. The article title is 'UPS and FedEx raise shipping rates for 2013' and the sub-headline is 'Standard ground shipping will increase by an average of 4.9%'.

- Transportation/infrastructure (U.S. passed a bill to spend \$119B – falls short of the estimated \$220B needed)
- Less profit for e-tailers vs. brick-and-mortar due to shipping \$
- Shippers are raising rates – could hit e-tailers (BtoC) by as much as 7%-8% increase
- Work force legislation (driving hrs/ productivity)
- Rail / Air / OTR / Sea – what are your alternatives?

Legislation

- Cost of employee benefits (healthcare, 401K, incentives)
- FSMA (Food Safety Modernization Act)
- C-TPAT (Customs-Trade Partners Against Terrorism)
- Declining value of carbon credits
- Federal Reserve and interest rates
- U.S. State Taxation on Internet sales
- United Nations WCIT - Internet Tax
- World Conference on International Telecommunications

What does this do to average persons disposable income?



Economy Today

Eating away at your profit margins

- The “new normal”
- Companies much more hesitant to invest capital
- ROI justifications for capital project are tougher
- Companies are holding onto their profits, consolidating operations and demanding short-term, high return on capital investments
- Banks and investors are constantly under scrutiny
- Investors are skeptical – demanding more conservative company leadership/investment
- Disposable income issues - interest rates/housing starts?

Investing in warehouse automation



- Traditional Approach
 - ROI Target (typically 2-3 years)
 - Designed for Avg 10 year “PEAK” performance
 - Expensive
 - Reduces associated costs regarding facility footprint, energy, labor
- Today’s Approach
 - Warehouse automation (and the supply chain) is looked at as one of the last areas to reduce costs to counter the rising external cost demands on a business
 - Solutions need to be scalable, flexible and immediately cost justifiable

On-line retailer cautions

- What if your business does not grow at the industry rate?
- The advertised growth rates are **AVERAGES!**
- How long can your business afford free shipping?
- Projections are **NOT** taking into account many issues that will affect your costs of doing business
 - Legislation?
 - Economy?
 - Transportation spend
- Evaluate supply chain automation realistically



Investing in automation

Leading automation solutions will
grow *with* your company



What to look for in Automation?

- Accuracy
 - Does it help you better fill and track orders
 - How well does it perform it's task
- Reliability
 - Consistent
 - Has a high run time rate and low down time
- Space Efficiency
 - Makes best use of your cubic space
 - Makes best use of your vertical space
 - Does this solution free up space for other functions?



What to look for in Automation?

- **Simplicity**
 - Easy to understand
 - Easy to implement
 - Simple to operate & service
 - Easy to expand
- **Sustainable (Green)**
 - Friendly to the environment
 - Does it reduce your energy consumption?
- **Flexibility (too many unknowns)**
 - Keeps pace with your business growth
 - Solutions that adjusts easily / is nimble



Scalable Automation CHART

TECHNOLOGY	FLEXIBILITY (1 - 5)	RELIABILITY	SPACE EFFICENCY	SIMPLICITY	GREEN	PRICE ENTRY POINT (\$ - \$\$\$)
AGV	Good	Good	Good	Fair	Fair	Poor
Conveyor	Poor	Good	Poor	Poor	Fair	Poor
M/L ASRS	Poor	Good	Good	Poor	Fair	Poor
Carousel	Fair	Good	Fair	Fair	Fair	Fair
Shuttle	Good	Good	Good	Good	Good	Good

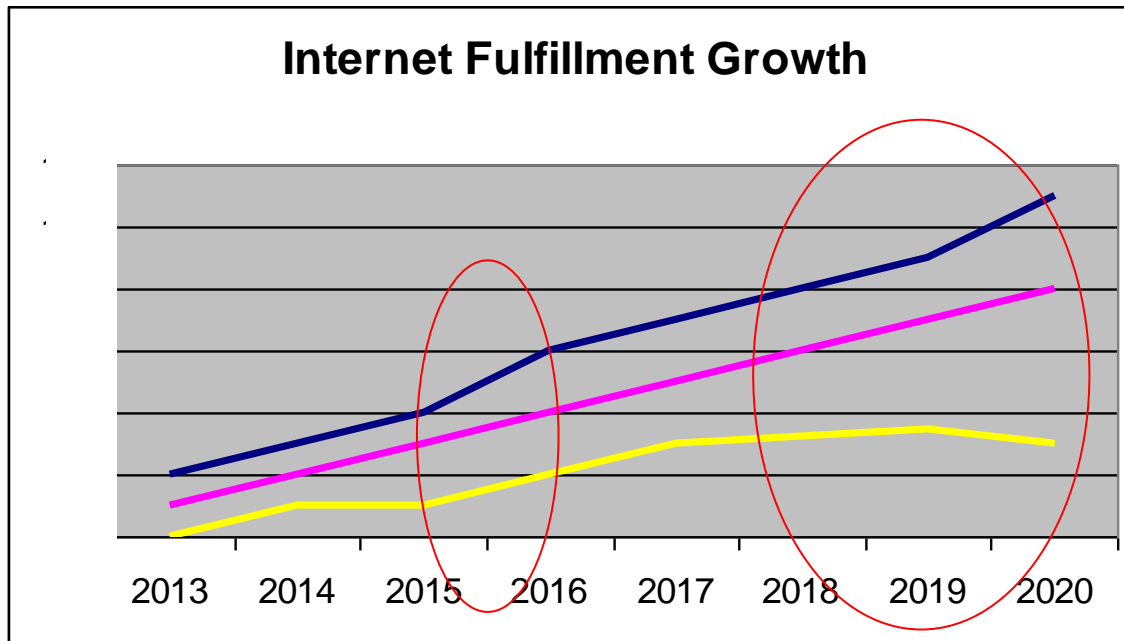
Good	
Fair	
Poor	



Jeff's unscientific prediction

Two key events:

- **Phase I:** Increase sale of Internet companies (large players buying up the prime performers)
- **Phase II:** Poor performers will begin to fail - too costly to compete (free shipping, same day delivery, state taxing)



The new normal for automation investment?

- Times have changed
 - **Think long term** /solve for the **short term**
- Get rid of the crystal ball – be realistic
 - Invest in automation that can **grow at the actual rate your business grows** - automation should be scalable
- Be realistic when projecting ROI
 - How will your investment better prepare you to deal with economic, legislation and transportation unknowns?
- What if your business does not grow at the industry rate?
 - The advertised growth rates are AVERAGES
- Think about the unknowns
 - State collected tax on internet orders
 - How long can you afford free shipping
 - Taxes (property, health care,)
 - Declining value of carbon credits
 - Evolutions of the FSMA (fees, inspections, etc.)
 - Declining transportation infrastructure
 - Rising transportation costs (gas)

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