Re-Ordering the Need for Retail Real Estate

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How Do We Solve for Retail?

"The emerging future cannot be predicted, but it can be rehearsed at some level if we can envision convergence, implications, accelerants and obstacles"

Gerd Leonhard

Disruptive and Enabling Technologies in CRE

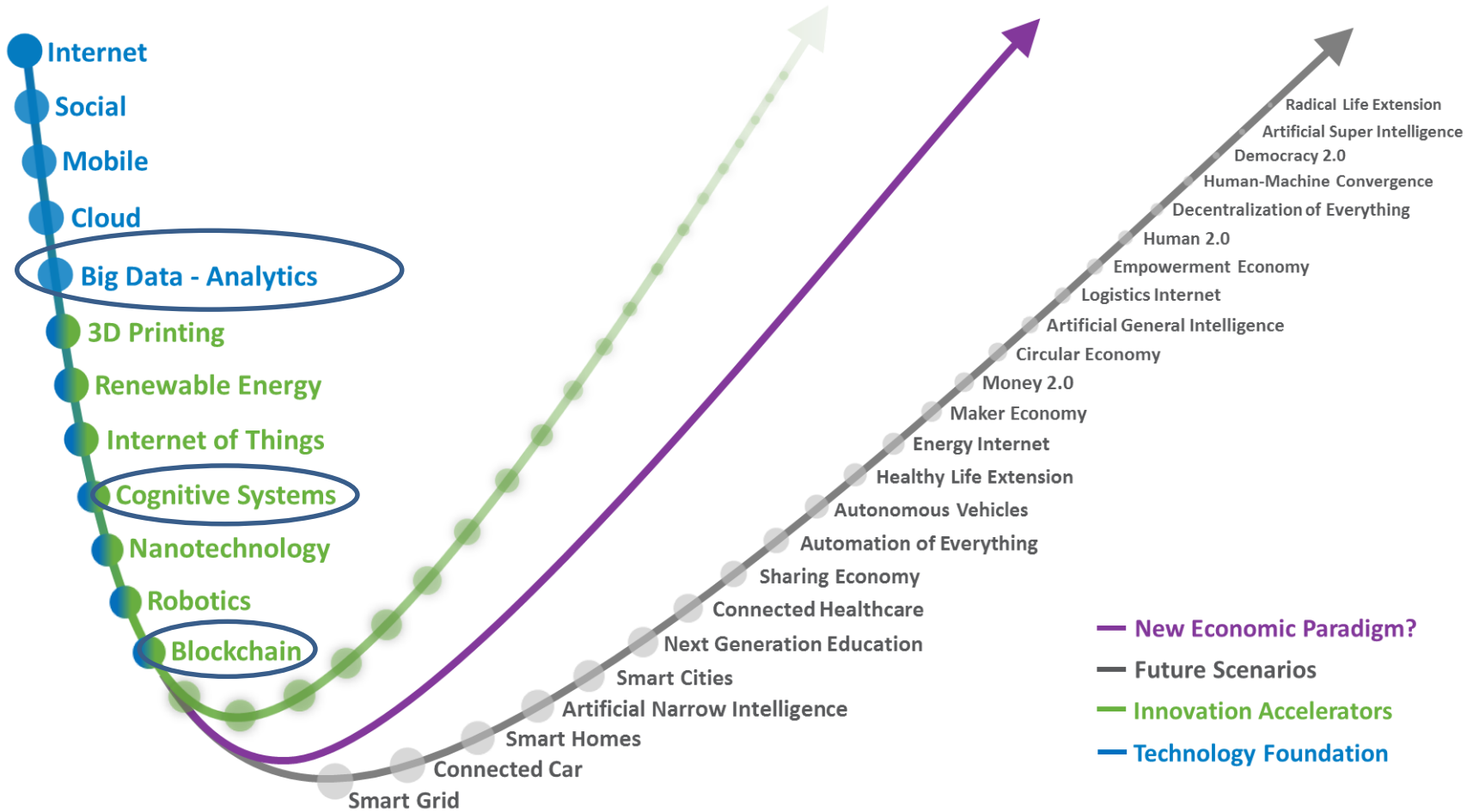**Trepp**®

Disruptive –

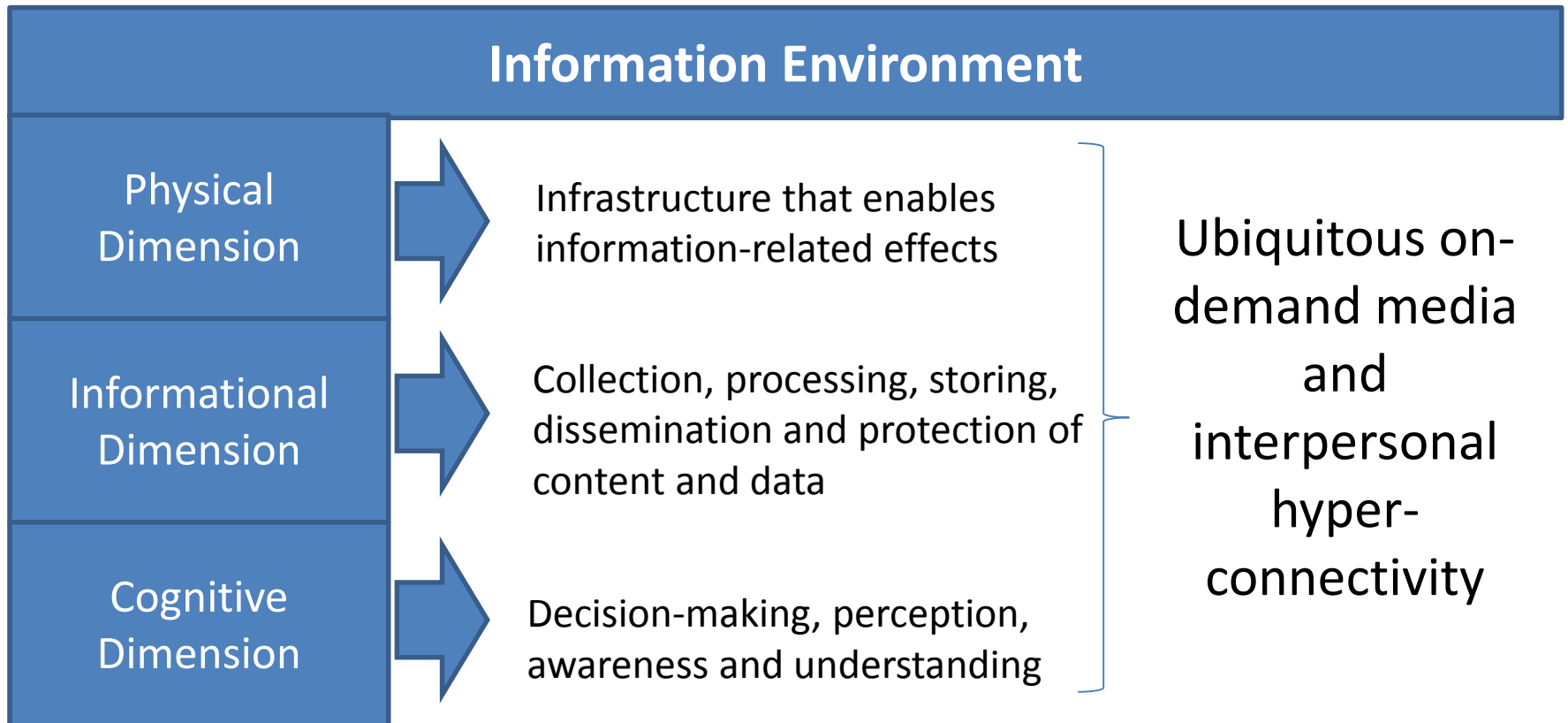Creates a new market and value network, often up-ending market leaders.

Enabling –

Helps existing companies adapt to change, focused on sustaining innovation to drive profitability.

Disruptive Technologies

Source: Future Thinking Canvas Frank Diana

Enabling Technologies: Information Environment

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Information Environment

| Physical Dimension | → | Infrastructure that enables information-related effects |

| Informational Dimension | → | Collection, processing, storing, dissemination and protection of content and data |

| Cognitive Dimension | → | Decision-making, perception, awareness and understanding |

Ubiquitous on-demand media and interpersonal hyper-connectivity
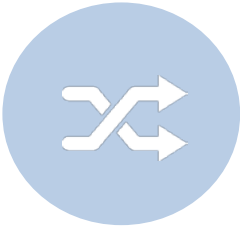
Convergence across the information environment.

Source: Dictionary of Military and Associated terms US DOD 2005

Technology Impact on Real Estate

Increase the available data and insights

- During Hurricane Harvey **Snapchat**'s map was one of the best ways to understand what was happening during the disaster.

Augment and change the workflow

- **Bin-e**, a startup from Poland, applies artificial intelligence for office trash collection so you'll never again have to sort trash
- **GeoPhy** has developed an AVM for the commercial real estate market which uses actual transactions, enriched by hyperlocal information on amenities, demographics and economics
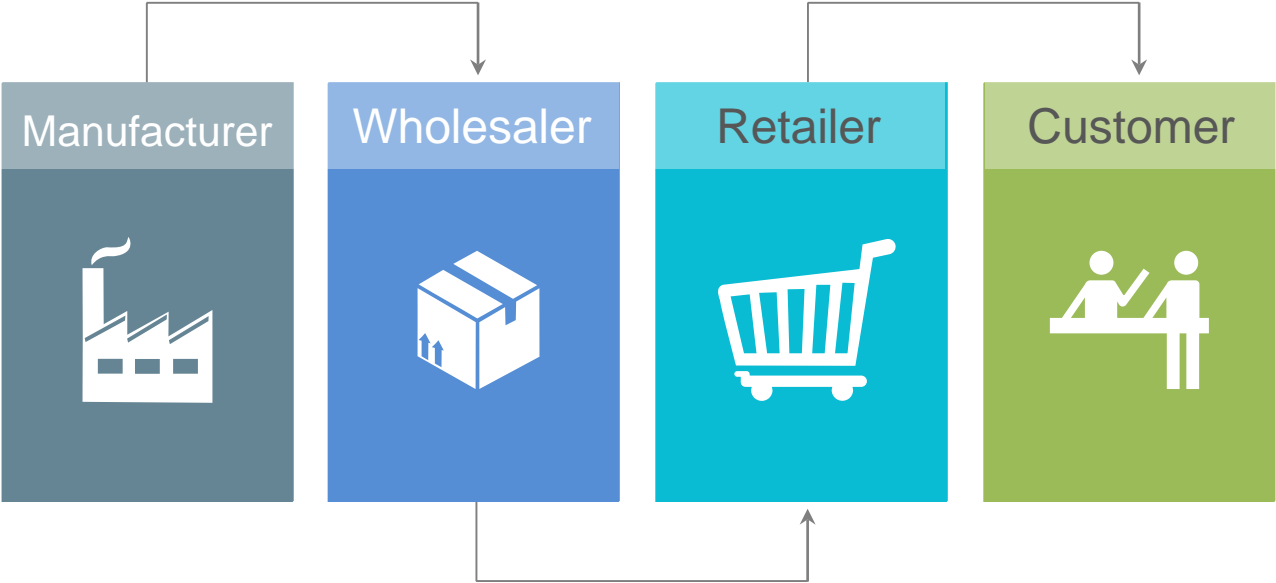
Reorder the need for CRE

- – Bank of America has **closed over 1,600 branches** since the financial crisis with most financial transactions now online
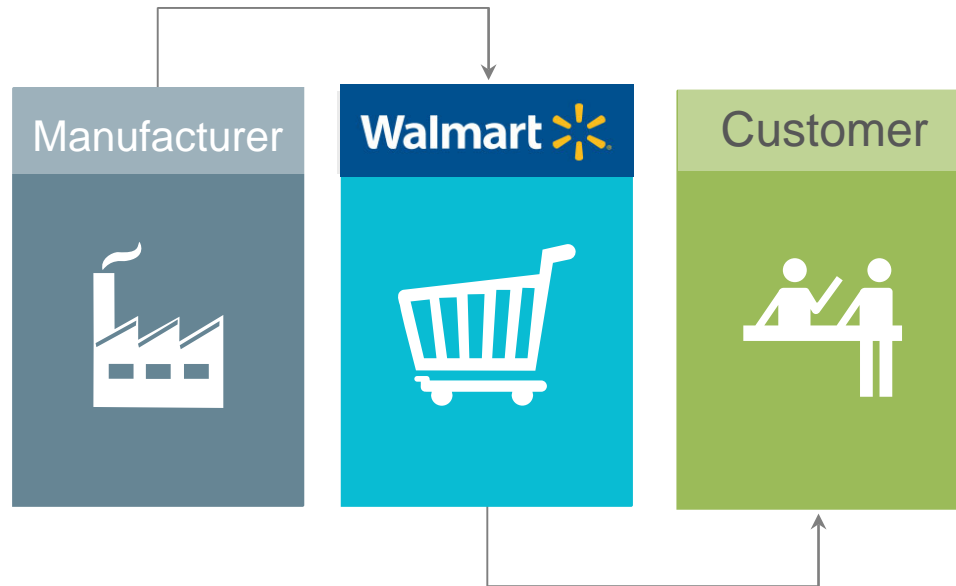
The Retail Story: Technology Disruption

Amazon Rules All!?

In 2016 Amazon accounted for 43% of all US online retail sales…

The Brick-and-Mortar Distribution Model

Walmart Disruption

Walmart began working directly with manufacturers to cut costs and more efficiently manage the supply chain.

Under a Walmart's supply chain initiative called *Vendor Managed Inventory (VMI)*, manufacturers became responsible for managing their products in Walmart's warehouses. As a result, Walmart was able to expect close to 100% order fulfilment on merchandise.

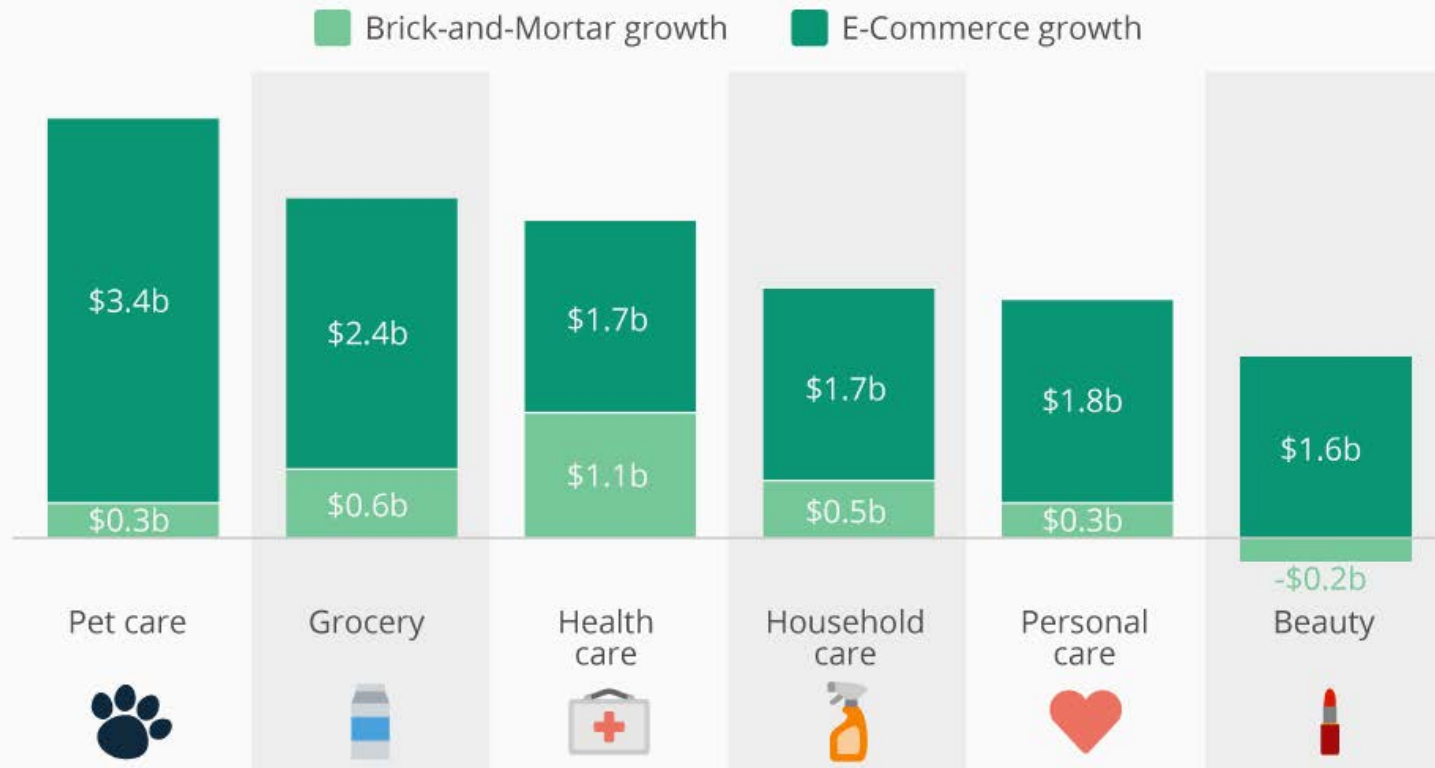*Source: Case Study Walmart, Tradegecko*

E-commerce Disruption

Focus on Speed to Market and Variety --Massive distribution and fulfillment centers and increasingly regional sortation centers.

Manufacturer

amazon.com

Customer

Or increasingly…

Manufacturer

Customer

Trepp®

E-Commerce Drives FMCG Sales Growth in the U.S.

Absolute dollar sales growth for FMCG categories in the U.S. by channel*

■ Brick-and-Mortar growth   ■ E-Commerce growth

Category	E-Commerce growth	Brick-and-Mortar growth
Pet care	$3.4b	$0.3b
Grocery	$2.4b	$0.6b
Health care	$1.7b	$1.1b
Household care	$1.7b	$0.5b
Personal care	$1.8b	$0.3b
Beauty	$1.6b	-$0.2b

Pet care   Grocery   Health care   Household care   Personal care   Beauty

(cc) (i) (=)   * 52 weeks ending April 29, 2017 vs. the same period a year ago
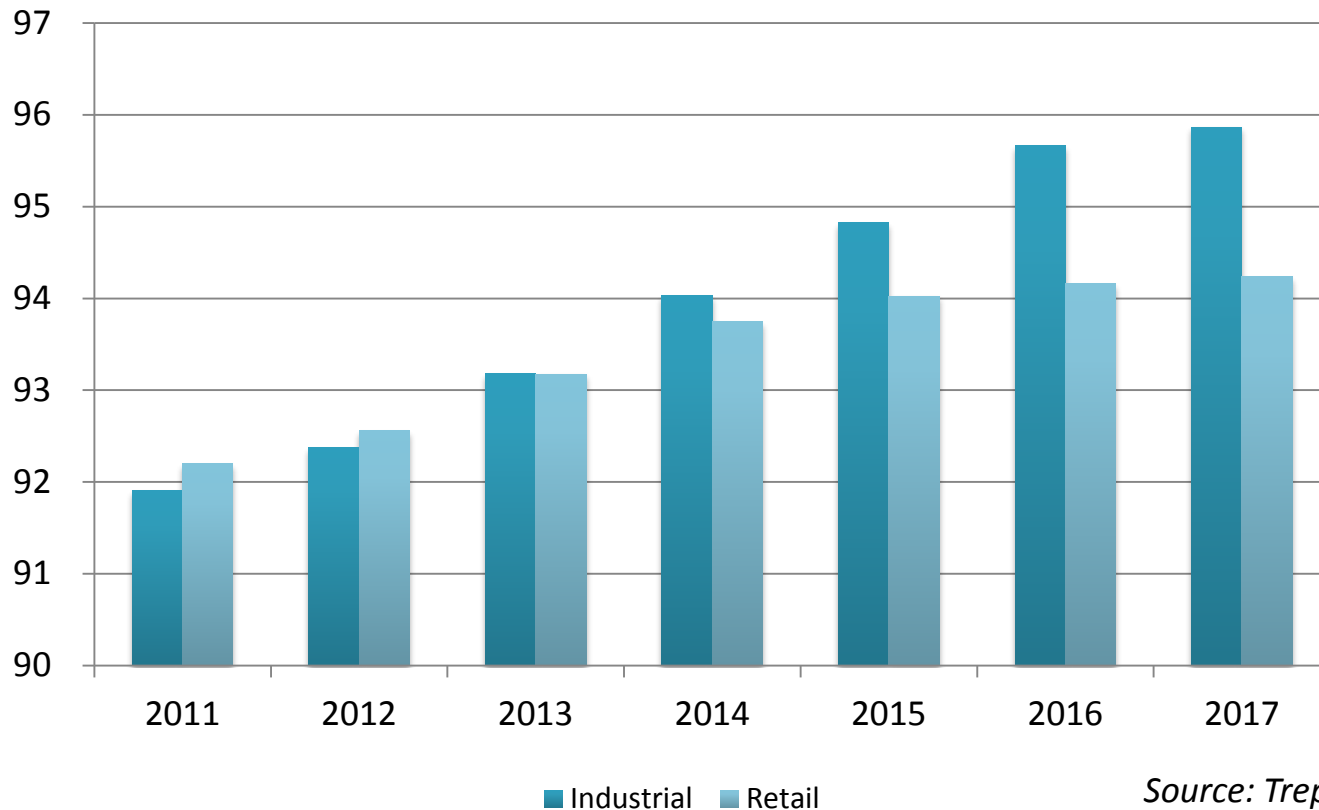@StatistaCharts   Source: Nielsen

statista

Growth in Demand for Industrial Space

Increased need for warehouses and distribution centers

Historical Average Occupancy

■ Industrial ■ Retail

Source: Trepp

Growth in Demand for Industrial Space

Industrial CMBS Loan Issuance
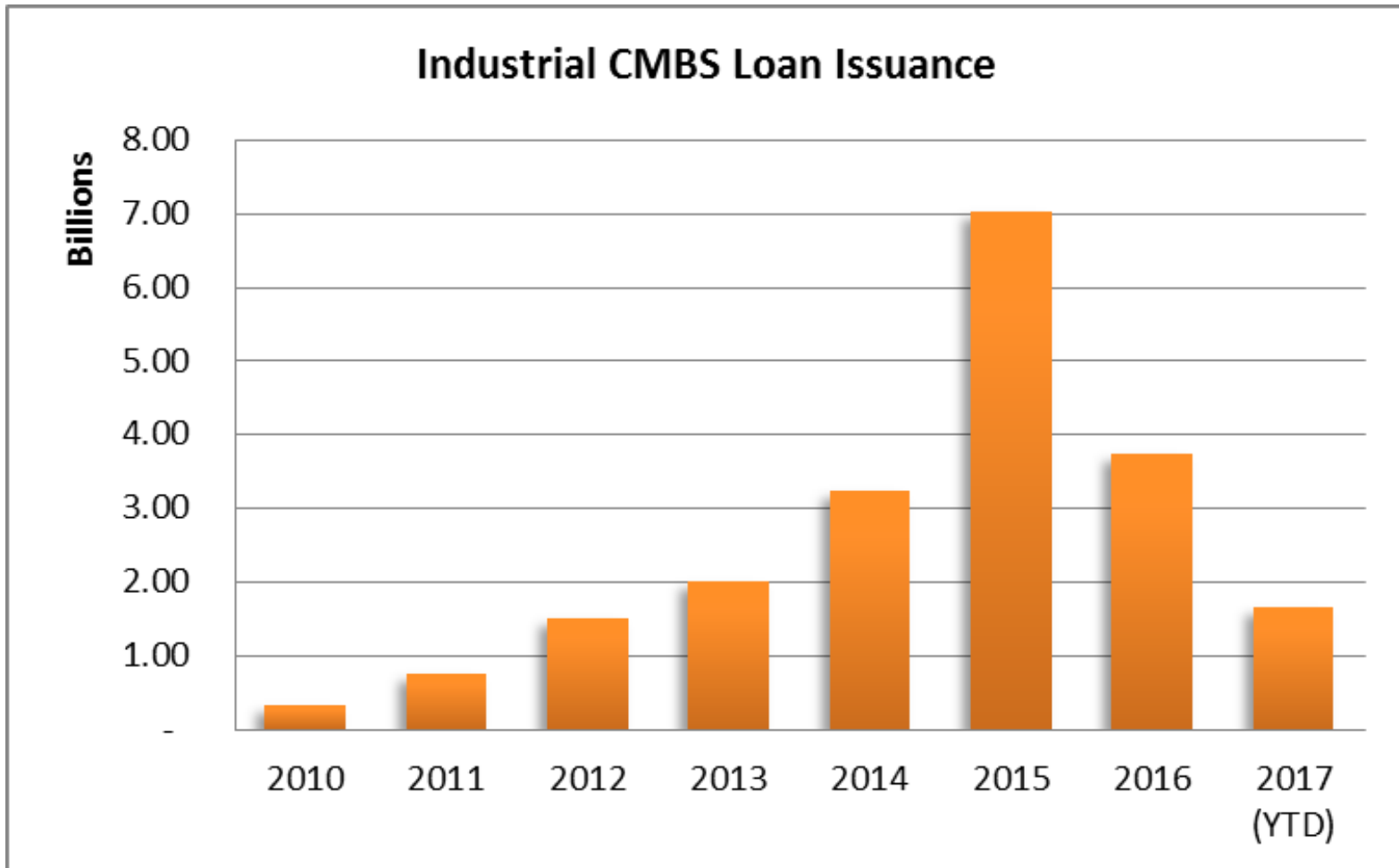
Source: Trepp

Changing Nature of Brick and Mortar

General Merchandise & Department Stores
Limited runs of designs
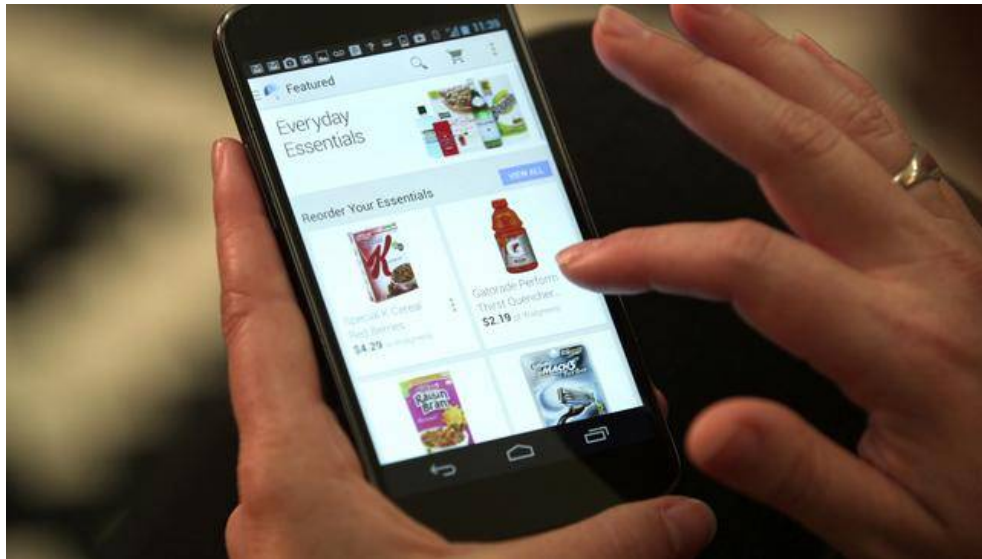

Town Centers

Urban Storefronts
Lists spaces for pop-ups

Specialty Retailers
Rent floor space to other brands

Changing Nature of Brick and Mortar

Grocery

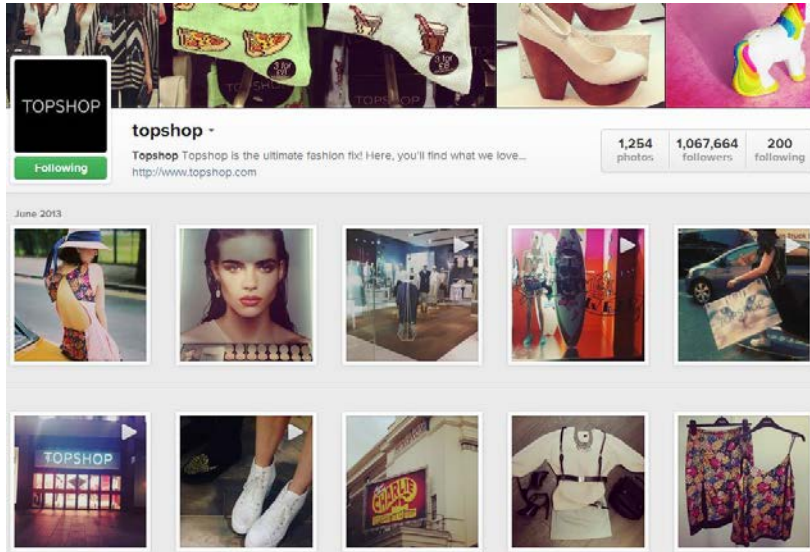Grocery disruptors and the rise of food delivery service apps

Changing Nature of Brick and Mortar

Older malls struggle, modern specialty retailers thrive

Social Media Impact on Retail

Apparel brands that can mass produce at a fast pace are thriving

- Snapchat and Instagram create demand for new styles at a faster pace. H&M, Zara, Topshop have high-speed production times to meet demand
- Traditional brands (BCBG, Abercrombie, the Gap, Aeropostale) have slower production time, higher prices

Experiential and digital innovation

- Millennials spend time and money at "photogenic" places – innovative specialty stores, fitness retailers, restaurants, bars and entertainment
- Department stores and oversupply of malls fail to deliver this experiential aspect

New E-Commerce Related Uses

Experiences and Entertainment

Healthcare, Education & Alternative Uses

Warehouse & Distribution Centers

Data Centers

Disruptive Technologies in the Built Environment

Internet of Things

Sensors and actuators connected by networks to info systems.

Autonomous Vehicles

Blurred lines between city and suburbs. Smaller warehouses closer to population.

Green Buildings

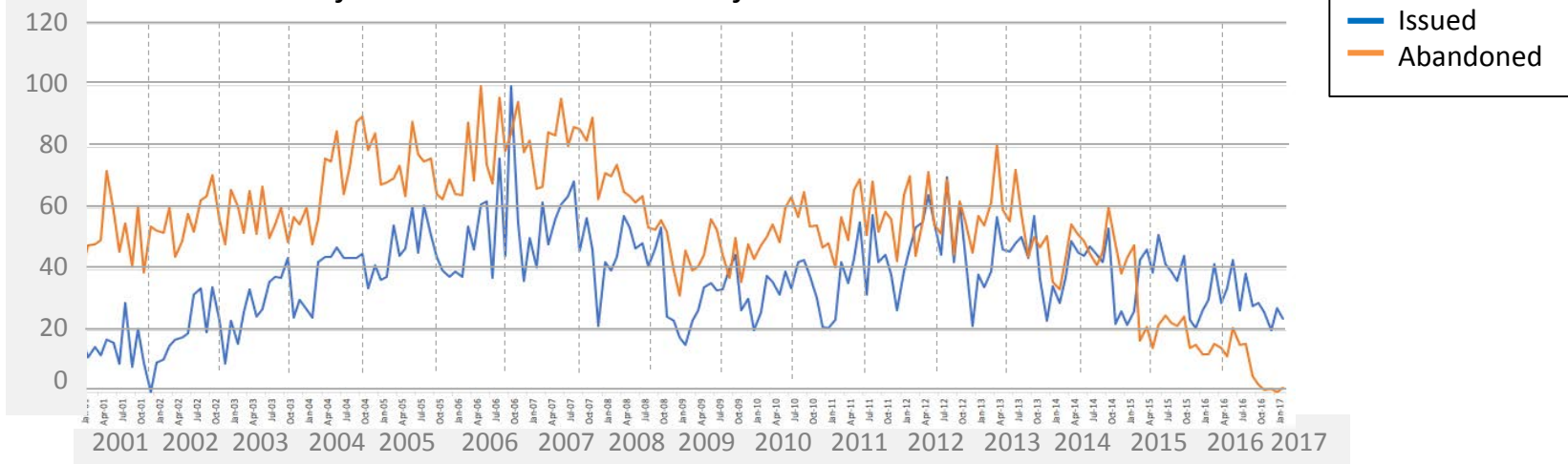Investors consider sustainability as a value to real estate transactions.
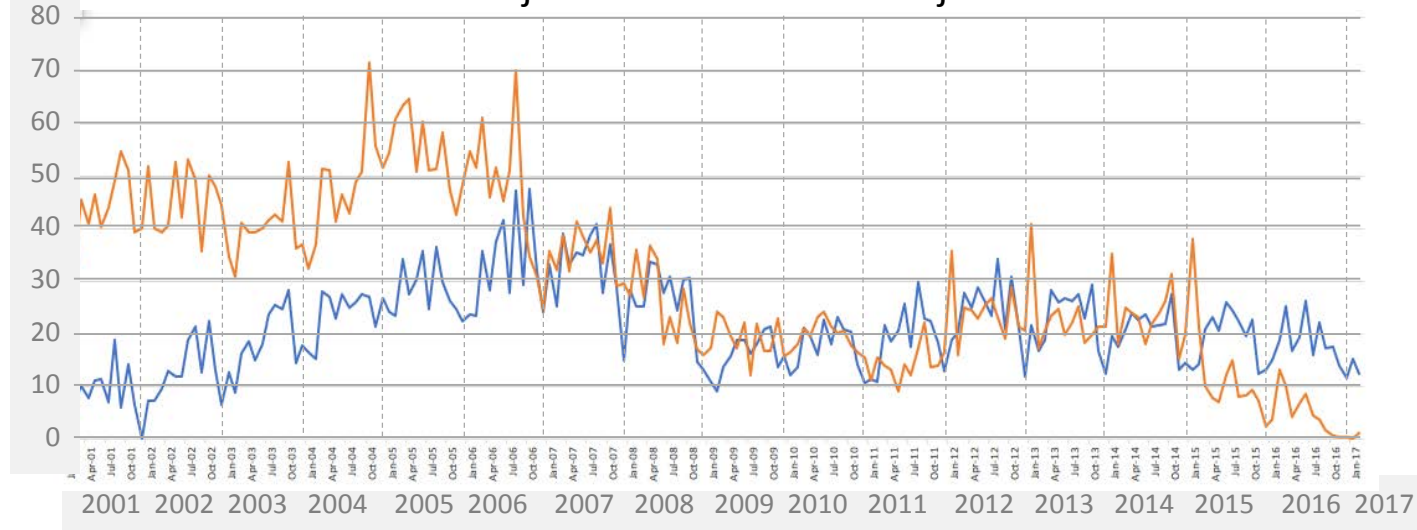
Construction Tech

Industry's slow to evolve nature will need respond to new technologies, workforce demands and rising costs.

Signals Abound in Many Data Sources

Urban Retail Issued Projects vs. Abandoned Projects

Suburban-Rural Retail Issued Projects vs. Abandoned Projects

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Source: BuildFax

Connecting the Dots: REIT Performance

Property Sector	Total Return (%)		
	2016	**Aug-2017**	**2017: YTD**
Infrastructure	10.04	7.46	**34.07**
Data Centers	26.41	4.08	**31.79**
Industrial	30.72	3.63	**19.25**
Health Care	6.41	-0.06	**9.79**
Residential	4.54	0.02	**9.62**
Lodging/Resorts	24.34	-3.3	**-2.81**
Self Storage	-8.14	-0.54	**-4.88**
Regional Malls (Retail)	-5.2	-2.86	**-13.61**
Shopping Centers (Retail)	3.68	-3.14	**-14.47**

Focus on the "Last Mile"

- Faster Fulfillment (Same-Day, On-Demand)
- Improved Traceability
- Carrier Becomes Salesman
- Insourcing Delivery
- City Warehouses
- Delivery by drones, auto-drive cars and robots

Source: SupplyChain Dive

In Conclusion

How can we be more predictive about retail?

"…envision convergence, implications, accelerants and obstacles…"