

Fall 2018

ComCap's Digital Retail Perspectives



COMCAP
Where commerce meets capital

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ComCap is pleased to present its digital retail perspectives for Fall 2018

The retail landscape is constantly evolving. Consolidation, new challengers, record-breaking fundraises, and the ever-growing threat of Amazon forces online and offline retailers and the technology companies supporting them to continually innovate and fight for their share of the consumers' minds and wallets.

In the following slides, we highlight our sectors of focus within the digital retail ecosystem, and the trends which are currently reshaping the commerce landscape.

SaaS

1. AI replacing traditional consumer interaction services
2. Augmented and virtual reality enhancing the consumer experience
3. Ecommerce platforms gaining vertical capabilities
4. Geospatial analytics and the rise of proximity-based marketing
5. IoT advantages from consumer experience to supply chain management
6. Marketing suites and ecommerce platform consolidation
7. Merchandising going digital in retail
8. Personalization services undergoing digital transformation

Pro
Serv

9. Ecommerce driving logistics sector unbundling and innovation
10. Rise of commerce in digital transformation increases technology players' need for agency capabilities

B2C

11. D2C customization driving business model innovation
12. Farfetch IPO as a case study for strong growth in digital retail platforms
13. d.Lux presents: Investing in and building 3.0 digitally native vertical consumer brands (DNVBs)

ComCap overview

- ComCap is the only premier boutique investment bank solely focused on the digital retail ecosystem - the intersection of commerce and capital
- Our key focus areas are B2B SaaS, B2B services for retail technologies, consumer and B2B payments, B2C ecommerce, mobile commerce, and marketplaces
- Headquartered in San Francisco with an office in Singapore, our firm works with mid-cap public companies on buy-side initiatives and public and private growth companies on financing and strategic M&A
- In addition to being the only boutique focused on disruptive commerce models, we differentiate by:
 - Bringing bulge bracket techniques to emerging models;
 - A strong and uncommon buy-side/strategy practice;
 - Deep understanding of industry drivers and synergy analyses;
 - Deep relationships across the sector; and
 - Worldwide coverage with closed transactions in the United States, Japan, China, the ASEAN region, Western and Eastern Europe and Latin America
- If you'd like to connect with us over the phone and / or meet in person to be included in this report or to discuss your strategic initiatives, please contact us:



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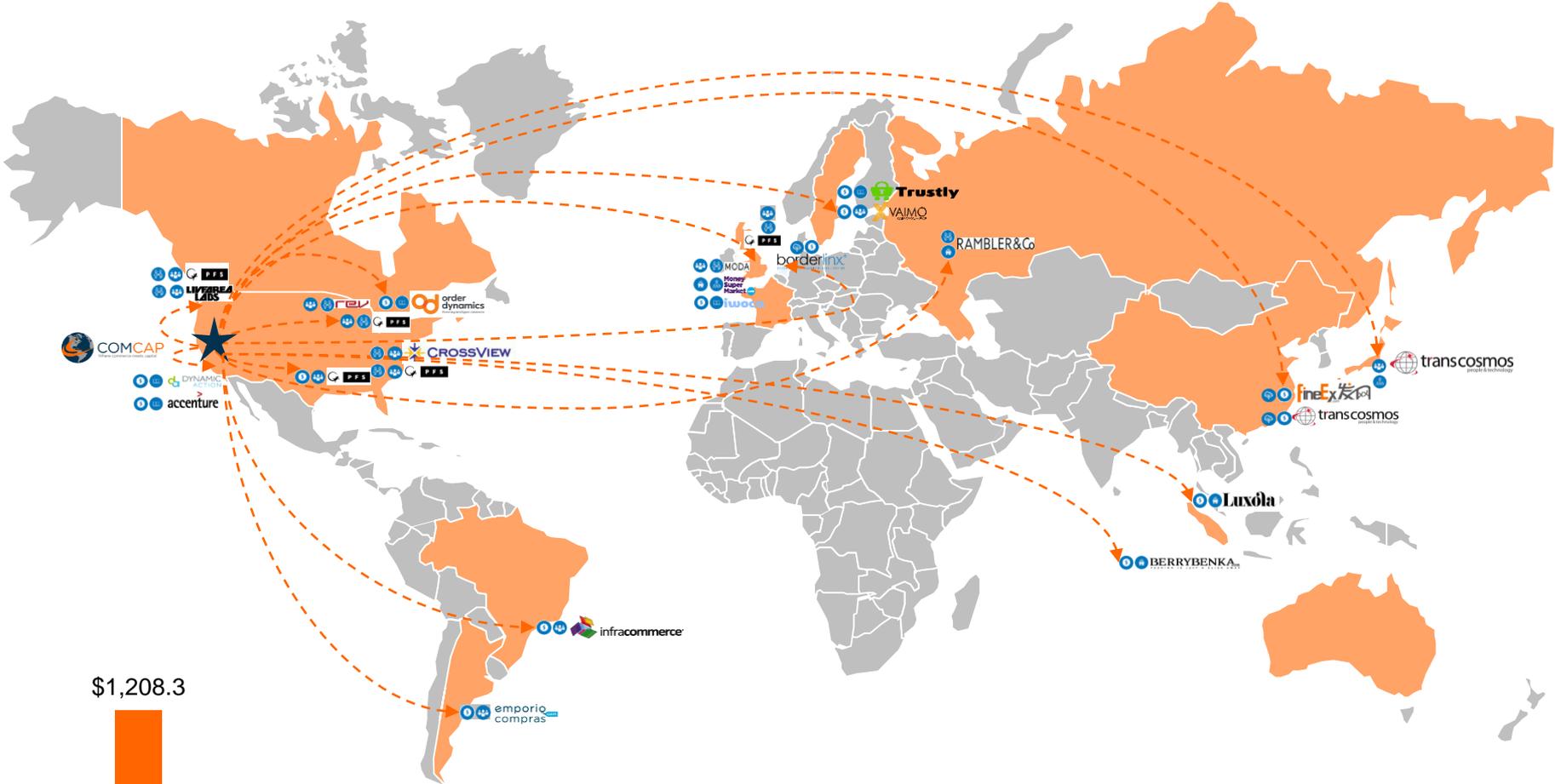


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ComCap – Active in 14 countries, including 8 of the top 10 global ecommerce markets



ComCap's current thematic focus areas

Theme	Description	Select companies
Analytics	Disruptors in the analytics space focused on ecommerce, logistics, retail, predictive, payment, risk and marketing	
AR/VR and content creation	Emerging technologies with retail applications that allow retailers to offer a differentiated customer experience and build brand awareness and loyalty	
Beauty, health and wellness	The universe of beauty companies, including product manufacturers, retailers, disruptors and new entrants	
Digitally Native Vertical Brands (DNVBs)	D2C digitally native brands covering clothing, accessories, personal care, home and kitchen, furniture, and other consumer-focused products	
Digital Retail SaaS	Emerging and disruptive SaaS businesses in the digital retail sector	
Fintech	Retail and commerce-related disruptors in the fintech universe. Current focus areas include payments, fraud prevention, and retail POS	
Geospatial Analytics	Disruptive technologies in consumer location data and analytics that retailers and brands can use for 1:1 marketing and insights	
Marketing suites	Emerging platforms in the digital marketing space	
Mobile	Focused on mobile solution providers optimizing the mobile experience from desktop-to-mobile website conversions, targeted mobile marketing, to simplifying the mobile checkout experience	
Outsourcing and service providers	Companies that provide outsourcing and end-to-end ecommerce services, such as contact centers, platform, marketing, photo services, logistics, warehousing etc.	
Personalization	Emerging players in the ecommerce personalization space	
Robotics	Robotics companies integrating into various aspects of supply chain and retail	
Logistics	Emerging platforms and providers innovating and optimizing the many facets of the supply chain ecosystem	
System Integrators	Systems Integrators with a particular focus on those standing up and supporting Demandware, Magento, and other ecommerce platforms	

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AI replacing traditional consumer interaction services

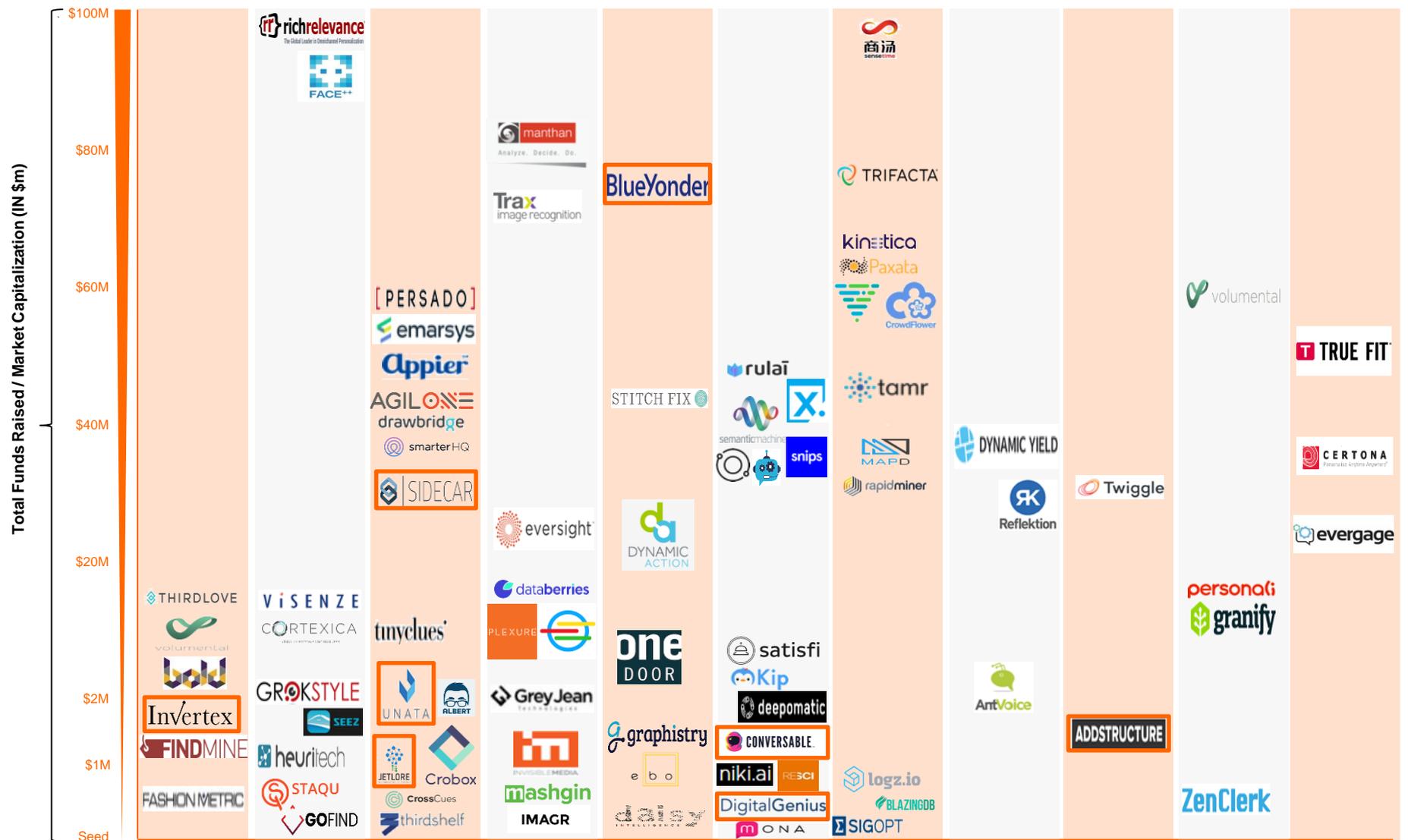
Artificial Intelligence and machine learning are replacing traditional consumer interaction services

- Artificial intelligence is changing the current dynamic of software as the industry shifts to deep and machine learning. As AI can replicate traditional human labor activities at much higher speeds, data analysis will improve and processes will become much more efficient. An AI-steady economy is predicted to culminate in a **4.6% United States GDP growth rate** by 2035.
- Retailers will spend heavily on AI tools that will enable them to differentiate themselves, aiming to replace traditional customer service. An estimated **85% of customer interactions** in retail will be managed by artificial intelligence by **2020**, allowing for merchants to obtain important user data that can help guide shopping experiences.
- The two biggest factors enabling AI growth are unlimited **access to computing power** and **growth in big data**, which provides AI the hardware and software in order to learn from experience and adapt over time to evolving demands.
- AI can drive growth by creating a new virtual workforce, also known as **intelligent automation**, and enhance the skills of existing workforces and physical capital.



Retailers use AI to analyze customer data in order to gain a better understanding of consumer behavior to adapt the approach through which the company interacts with shoppers and to predict consumer demand

Artificial Intelligence funding landscape

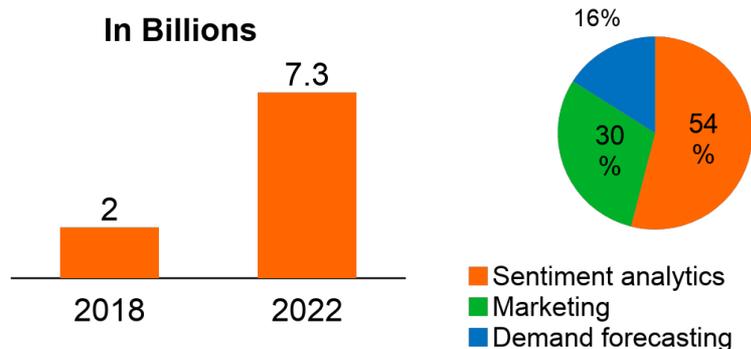


Retail spending on AI to jump nearly 4-fold by 2022, as retailers expect it to become a primary tool to drive business

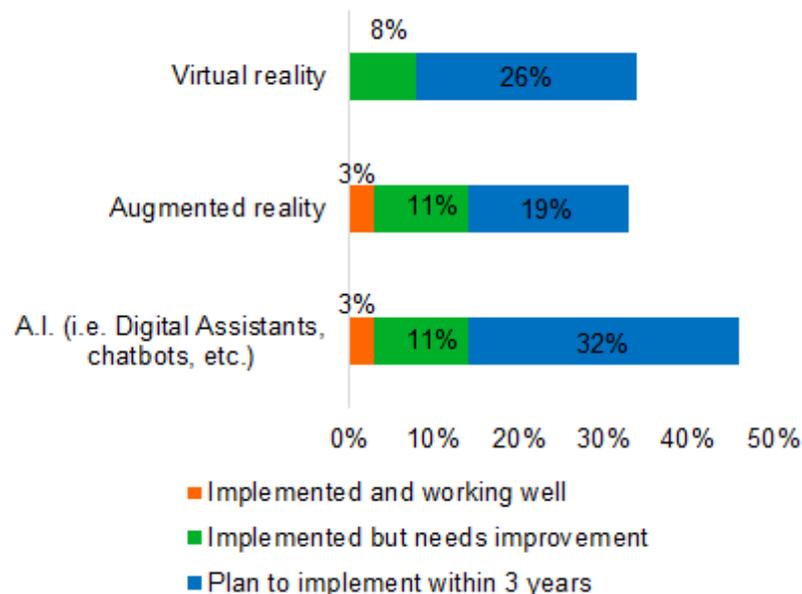
Technologies such as AI, AR, and VR are set to become the new norm in customers' shopping experiences

- Global retail spending on AI will grow to \$7.3 billion per year by 2022, up from an estimated \$2.0 billion in 2018, according a study from Juniper Research
- The cost of AI tools is currently too steep for many companies, but will become cheaper, declining by 8% over the next four years. Reduced AI pricing will help to increase software spending by ~300%
- AI-backed demand forecasting is rapidly becoming a key tool for retailers. Understanding customer demand and proper planning are vital components to maximizing sales on key shopping days such as Black Friday
- According to a GPSshopper survey, consumers are interested in using virtual and augmented reality as part of the shopping experience
- Half of the GPSshopper respondents want to use AR to get additional information about a product, such as ingredients or the materials used, while 42% want to use VR to see where / how a product was made

Global Retail AI Spending & Major Applications



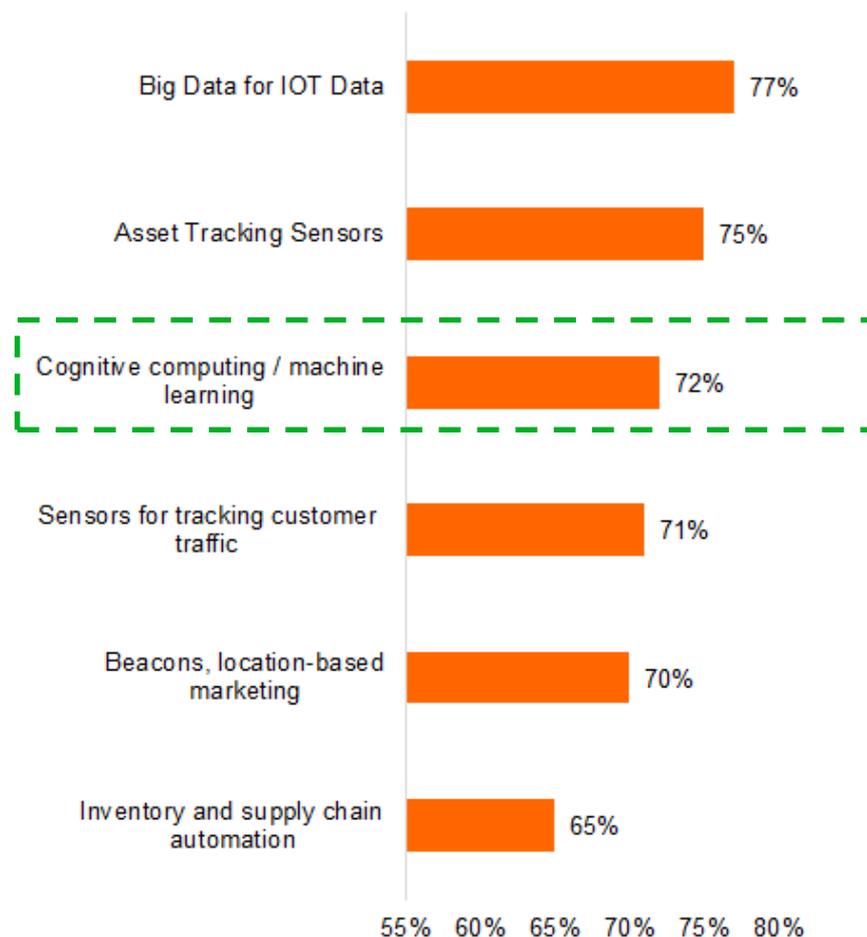
Customer Service Technologies



Amazon looks to gain a machine learning advantage

- In September 2017, Amazon announced plans to establish a new machine learning-focused R&D hub in Barcelona, employing more than 100 engineers and scientists at launch in early 2018
 - Amazon is trying to make machine learning its new competitive advantage
 - Personalizing online retail through the usage of AI is a major focus of Amazon
- Key benefits of the hub:
 - Amazon's product recommendations are mainly driven by machine learning, as the company utilizes its huge database of consumer purchases to predict what is consumers buying pattern
 - Machine learning and natural language processing are at the core of Amazon's digital assistant Alexa. The new R&D lab could help improve Alexa's functionality, as current Alexa voice detection is less accurate than Google Assistant
 - Amazon's logistics business is heavily reliant on machine learning. There are several factors in each individual order fulfilment, so employing AI that can reroute, change delivery arrival times, and make other adjustments accurately and efficiently is extremely valuable
 - Amazon has high interest in drone delivery; machine learning is what enables drones to fly autonomously
- Amazon has filed a number of machine learning- and AI-focused patents recently
 - The company has even be angling for a new revenue stream, as it has discussed making its machine learning and AI available to other firms through Amazon Web Service

Percentage of retailers planning to invest in select AI and IOT technologies by 2021



Select artificial intelligence funding recipients

Company	Country	Description	Total Amount Raised	Notable Investors
 商汤 sensetime		An AI firm that focuses on computer vision and deep learning technologies. Develops face recognition technology that can be applied to payment and picture analysis	\$2.6 Billion	SB China Venture Capital, HOPU Investment Management, Qualcomm Ventures, Silver Lake Partners, Tiger Global Management, Fidelity International, Alibaba Group, Suning.com, Temasek Holdings, Qualcomm
 TRUE FIT®		A footwear and apparel discovery platform. Its fashion platform, Genome, is mapped from the world's largest collection of fit and style data for footwear and apparel	\$97.4 Million	Intel capital, Jump Capital, Signal Peak Ventures, Cross Creek, Georgian Partners, BYU Cougar Capital, Promus Ventures
 DYNAMIC YIELD		Provides personalization, recommendations, 1:1 messaging, yield optimization across web, mobile, and email	\$77.3 Million	Union Tech Ventures, Viola Growth, Vertex Ventures, Marker, Global Founders Capital, Innovation Endeavors, Deutsche Telekom Capital, Lanta Capital Holdings
 AGILOX		A predictive marketing platform that offers customer profiles, predictive analytics and integrated marketing campaigns. Enables users to understand each customer and to send effective marketing messages.	\$41.0 Million	Tenaya Capital, Sequoia Capital, NextWorld Capital, Mayfield Fund, Four Rivers Group
 DYNAMIC ACTION		An advanced analytics solution specifically built for eCommerce, store and omnichannel retail teams. It uses more than 1,000 proprietary algorithms to pinpoint margin-eating disconnects in the business	\$19.2 Million	Accenture, West Coast Capital, ePlanet Capital, Frog Capital, WPP Ventures, GP Bullhound
 tamr		Designs and develops enterprise data unification solutions. The software combines machine learning and data science with collective human insight to identify data sources	\$3.2 Million	Granite Hill Capital Partners, Pear Tree, Fenox Venture Capital, Samsung Ventures, GV, Alumni Ventures Group, SBI Investment, INTAGE Innovation Fund, New Enterprise Associates, GE Ventures

Notable M&A activity in the AI space

Many large transactions marking an expansion of the industry

Target	Buyer	Date Announced	Implied EV	Multiples	Deal Rationale
		July 2, 2018	NA	NA	<ul style="list-style-type: none"> Accelerate product roadmap: The acquisition accelerates JDA's Autonomous Supply Chain capabilities connecting intelligent systems and data to enable automated and more profitable business decisions, while delivering optimized customer experiences.
		Jan 29, 2018	\$2.3bn	LTM Rev \$253.1m: 9.6x LTM EBITDA \$0.16m: NM NTM EV/Rev: 8.5x NTM EV/EBITDA: 58.6x	<ul style="list-style-type: none"> Expansion of services: The acquisition will give SAP immediate leadership in automated sales performance management and price quoting space. It will yield a differentiated, cloud-based CRM solution which SAP will add to its intelligent customer experience suite
		Sep 27, 2017	\$546.0m	NA	<ul style="list-style-type: none"> Strengthen market position: The acquisition will strengthen IHS Markit's presence in the vehicle retail space. As well as access to automotiveMastermind behavior predicting technology
		Mar 13, 2017	\$15.0bn	LTM Rev \$358.2m: 41.9x LTM EBITDA \$125.0m: 120.0x NTM EV/Rev: 30.1x NTM EV/EBITDA: 52.2x	<ul style="list-style-type: none"> Strengthen market position: The acquisition will strengthen Intel's presence in the autonomous driving systems market. Accelerating the future of autonomous driving with improved performance in a cloud-to-car solution at a lower cost for automakers
		Feb 9, 2017	\$372.6m	LTM Rev \$105.6m: 3.5x LTM EBITDA \$12.6m: 29.6x NTM EV/Rev: 3.1x NTM EV/EBITDA: 17.5x	<ul style="list-style-type: none"> Expansion of services: Nokia acquired Comptel to expand and strengthen its software portfolio and go-to-market capabilities. New capabilities help digital service providers bring new communications services more efficiently

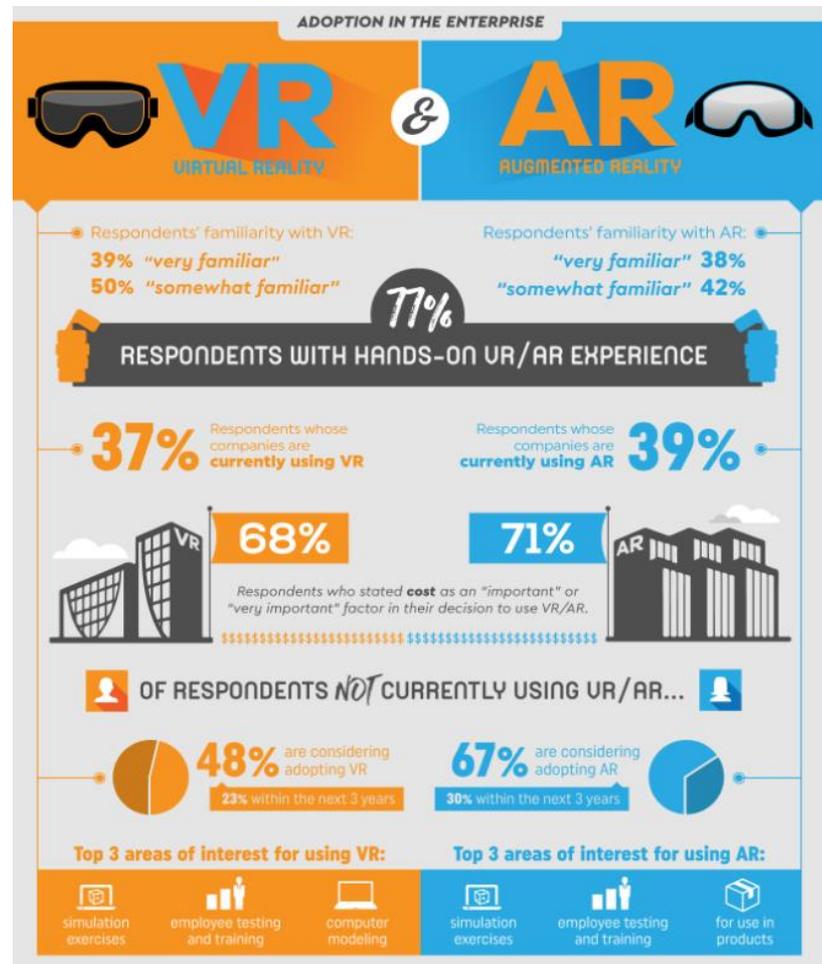


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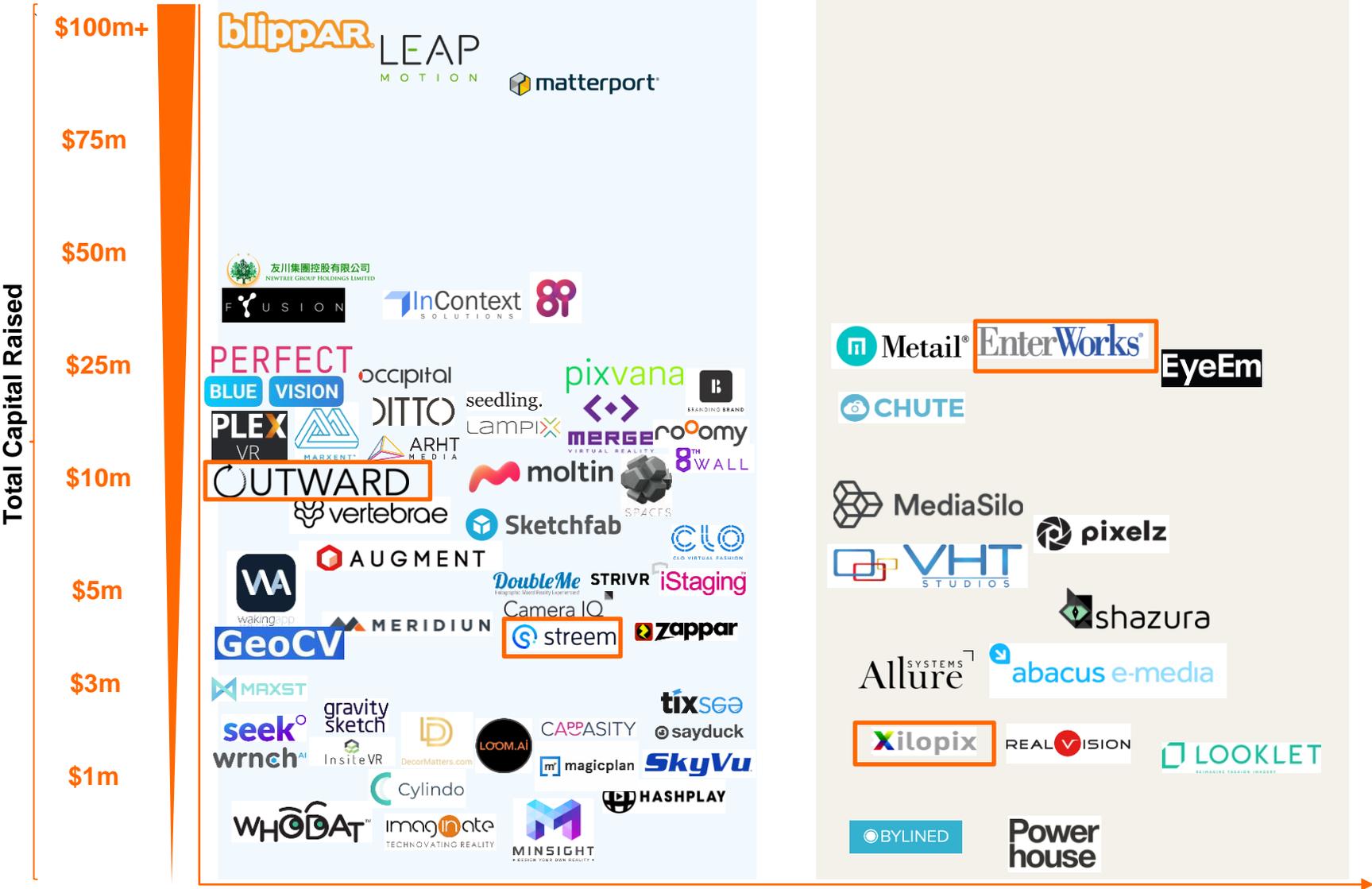
Augmented and virtual reality enhancing the consumer experience

Virtual and augmented reality are enhancing the in-store experience by providing more engaging content

- **Traditional retailers are leveraging** new technologies such as **AR/VR and image management to remain competitive** in today's quickly-changing consumer market
 - Customers are becoming increasingly familiar with AR/VR usage and experience enhanced stimulation
- These new technologies are allowing retailers to create **engaging content** (customer experience) and **informative content** (providing product information typically available to offline retail):
 - Enhancing in-store customer experience
 - Converting in-store experience into “in-home” experience
 - Incorporating AR/VR into the product itself
 - Building brand awareness
 - Increasing conversion rates
 - Reduction of returns to the warehouse/shop
 - Building loyalty



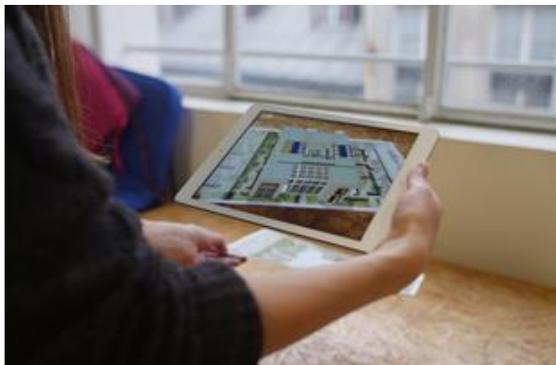
AR/VR & imaging management funding landscape



Role of AR & VR in retail

Retailers are looking for new ways to stand out and aid product discovery and customer experience in a competitive market – and AR & VR are helping them achieve exactly that

- **Augmented reality (AR)** layers computer-generated enhancements atop an existing reality in order to **blend digital components into the real world**, providing user interaction through mobile devices and kiosks
 - E.g.: Scores overlays on telecasted sports, pop out 3D emails, holograms and motion activated commands
- **Virtual reality (VR)** includes computer-generated simulations of a real life environment or situation. It **immerses the user** by making them feel like they are experiencing the simulated reality first-hand, primarily by stimulating their vision and hearing
 - E.g.: Video and computer games, 3D movies, head mounted displays, flight training simulators, etc



There are two key ways in which immersive technologies such as AR and VR can enhance the retail experience

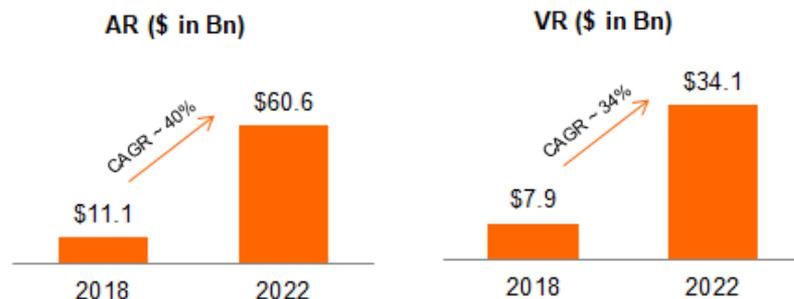
- **Product Discovery**
 - **Younger users** find it easier to interact with technology – enabled selling approaches
 - **Payment methods** are getting digitized extremely rapidly especially in developing markets
 - **Personalization** of shopping experience and product customizations are easier in a “virtualized” environment
- **Brand Recall**
 - Tech-enabled shopping adds the “wow factor” to the customer experience, establishing **high positive brand image**
 - **AR/VR combined with AI**, and cloud-enabled data analytics allows brands to formulate more **accurate** and effective **brand campaigns**

The AR & VR markets are expected to reach \$60.6bn and \$34.1bn by 2023 respectively

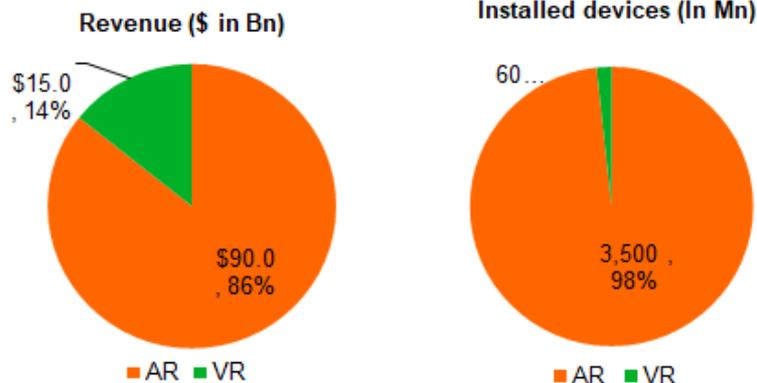
Technologies such as AI, AR, and VR are set to become the new norm in the customers' shopping experiences

- The **global** AR market is expected to grow from **\$11.1bn** in **2018** to **\$60.6bn** by **2023** – a CAGR of 40.3%, whereas the VR market is expected to grow from \$7.9bn to \$34.1bn, representing a CAGR of 34.0% during the same period
- **Major drivers of the AR market** include increasing demand for AR in **healthcare, retail and ecommerce**, as well as other rising industries
- While **North America** is currently the **largest market**, APAC is expected to deliver the highest growth due to an increasing adoption of latest technologies
- Further, according to a GPSopper survey, consumers are interested in using virtual and augmented reality as part of the shopping experience
 - Half of the GPSopper respondents want to use AR to get additional information about a product, such as ingredients or the materials used, while **42%** want to use VR to see **where / how a product was made**

Global AR & VR growth forecasts¹



Market size expected in 2022²



The vast difference between the growth trajectory and respective market size can be attributed to AR's ubiquity and VR's niche focus

Key private placements in the industry

Company	Country	Description	Round Details	Investors
 moltin		eCommerce platform & APIs for building an online store and a mobile app & VR retail experience	Feb 2018 Series A: \$8.0m	Connect Ventures; Frontline Ventures; Underscore.VC
 PLEX VR		Develops VR, AR, and mixed reality solutions for entertainment & sporting events, and classroom education	Dec 2017 Series A: \$15.3m	SAIF Partners; GSR Ventures Management Co. Ltd.; Alibaba Group Holding Limited
 ARHT MEDIA		Engages in the creation, transmission, and delivery of digital human holograms worldwide	Dec 2017 PIPE: \$6.0m	NA
 友川集團控股有限公司 NEWTREE GROUP HOLDINGS LIMITED		Develops 3D animations, AR tech applications, and e-learning web applications	Aug 2017 PIPE: \$25.6m	NA
 LEAP MOTION		Manufactures and develops motion-control hardware and software for VR and AR	Jul 2017 Series C: \$50.0m	Highland Capital Partners; J.P. Morgan Asset Management, Inc.; Founders Fund; SOSV; Andreessen Horowitz LLC
 InContext SOLUTIONS		Provides mixed and virtual reality solutions for retail optimization needs	Sep 2016 Growth: \$15.2m	Beringea LLC; Intel Capital; Plymouth Growth Partners; Hyde Park Venture Partners
 MARXENT		Develops AR and VR applications to be used in stores and e-commerce	Apr 2016 Series B \$10.0m	Stage 1 Ventures, LLC; Detroit Venture Partners, LLC
 blippAR		Mobile app for visual marketing based on AR, computer vision, and image-recognition	Mar 2016 Series D: \$54.0m	Khazanah Nasional Berhad
 matterport		Platform to create cloud-based 3D and VR models of real-world spaces	Jun 2015 Series C: \$30.0m	DCM Ventures; GIC Special Investments Pte. Ltd.; QUALCOMM Ventures; Lux Capital Management; Felicis Ventures

AR/VR M&A activity

Company	Industry	Description	Acquirers	Valuation	Date
 DECORADO Marketplace Ltda.	Internet Software and Services	Operates a 3D modeling creation platform catering to furniture retailers	CreativeDrive	Implied EV: \$100.0m EV/LTM Revenue: NA EV/LTM EBITDA: NA	Mar 2018
 Spatialand Inc.	Application Software	Software tools that creators transform existing content into immersive	Store No. 8 (Walmart)	NA	Feb 2018
 Mackevision Medien Design	Movies and Entertainment	Designs and produces CGI services for broadcasters	Accenture Plc	NA	Jan 2018
Living 3D Holdings	Application Software	Development of ecommerce platforms, mobile games, and VR applications	Hong Kong Cryptocurrency Exchange Ltd	NA	Dec 2017
 Outward, Inc.	Application Software	Imaging solutions for the home furnishing industry	Williams-Sonoma, Inc.	Implied EV: \$112.0m EV/LTM Revenue: NA EV/LTM EBITDA: NA	Nov 2017
	Application Software	Develops VR solutions for athletes, retail, hospitality, and gaming companies	Softvision, LLC	NA	May 2017
VR Outlet & Web Organic Food	Internet and Direct Marketing Retail	Operates a VR e-commerce platform and online organic food store	My Mobi Services	N/A	May 2017
 Valtech SE	IT Consulting	Omni-channel, experience-driven digital commerce agency	SiegCo SA	Implied EV: \$352m EV/LTM Revenue: 1.6x EV/LTM EBITDA: 25.5x	Jan 2017
 Cimagine Media	Internet Software and Services	SaaS based AR platform for retailers & brands	Snap Inc.	NA	Dec 2016

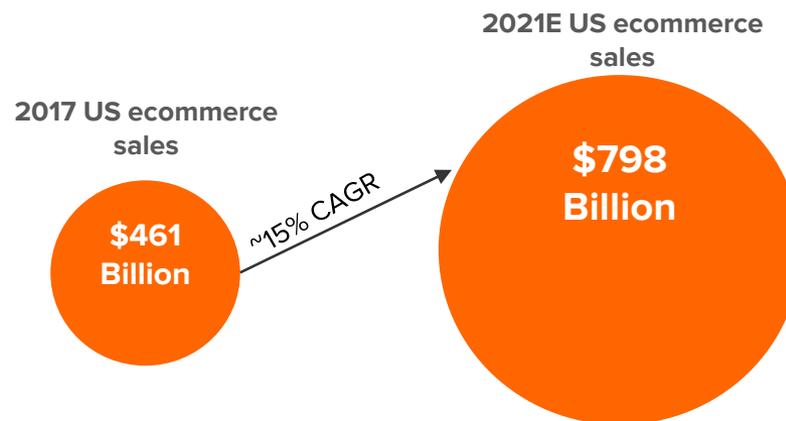
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Ecommerce platforms gaining vertical capabilities

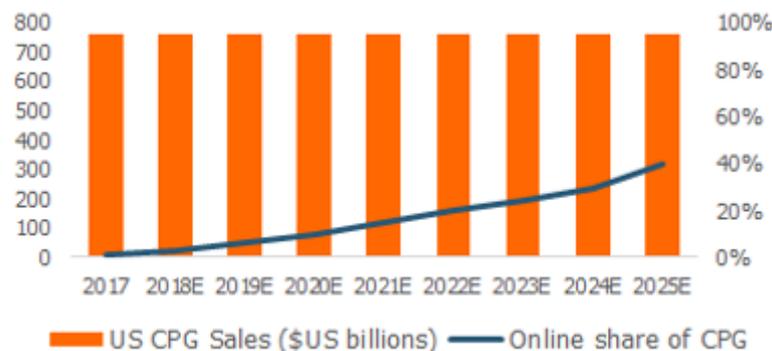
Ecommerce platforms provide end-to-end software services that allow retailers to better focus on their products

- Ecommerce platforms deliver **commerce-as-a-service**, allowing merchants to have an **omnichannel** retail presence. The alternative solution, creating a platform from scratch, is too costly and time-intensive for most retailers
- Ecommerce end-to-end platforms include tools for merchandising, pricing, promotions, search capabilities (including SEO), and custom marketing in order to tailor to the retailer’s vision
- Ecommerce is expected to **double in sales** by 2021, as retailers are shifting to SaaS in order to maximize customer acquisition and sales efficiency
- CPG is shifting to digital as legacy brands lose value: **online sales** will take up to **40%** of the overall **CPG market share by 2025**, while total CPG spending remains relatively flat

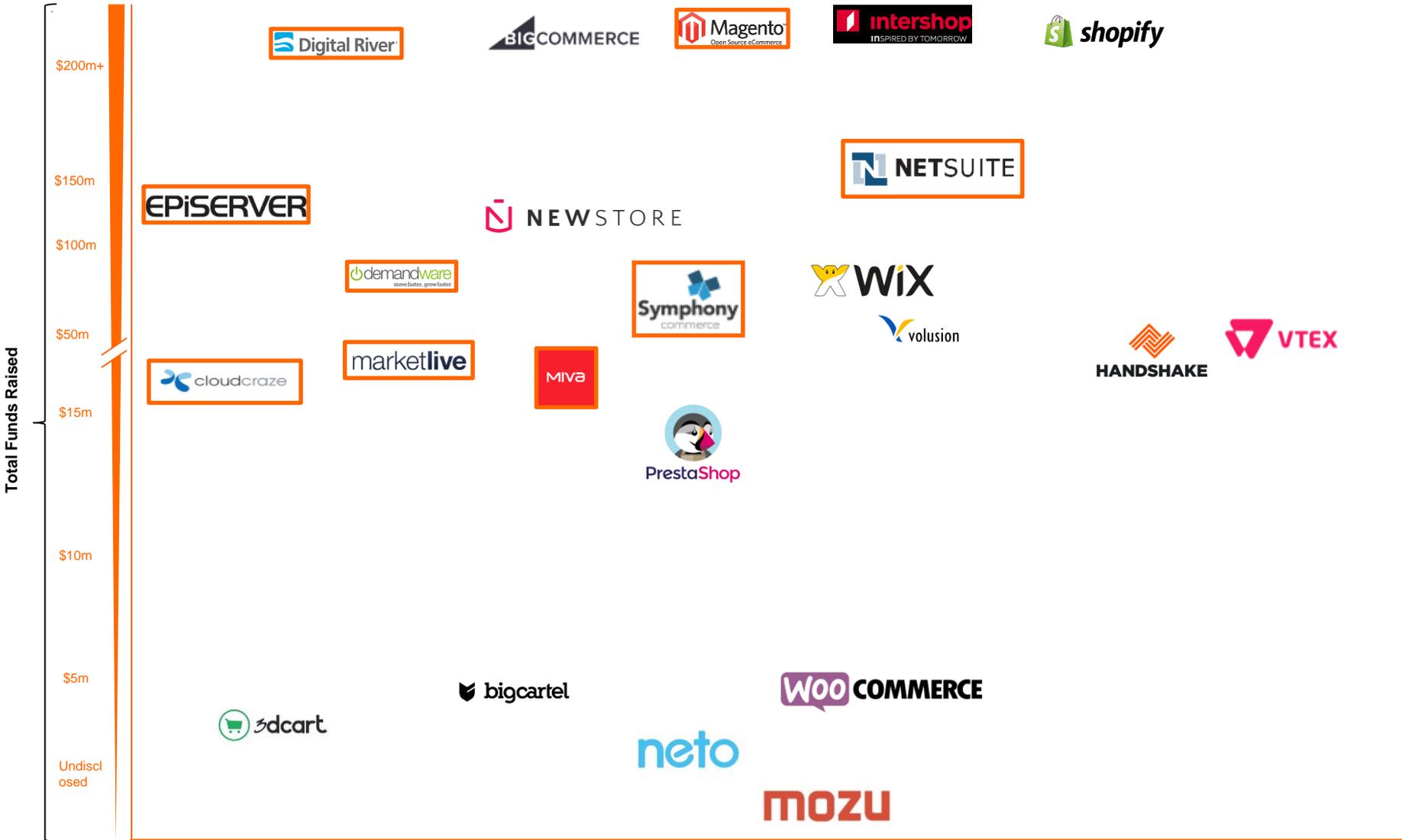
US Ecommerce expected to almost double by 2021E



Online CPG sales take increasing market share



ECP disruptors funding landscape



Denotes M&A

Ecommerce platforms solve the issue of increasing customer expectations



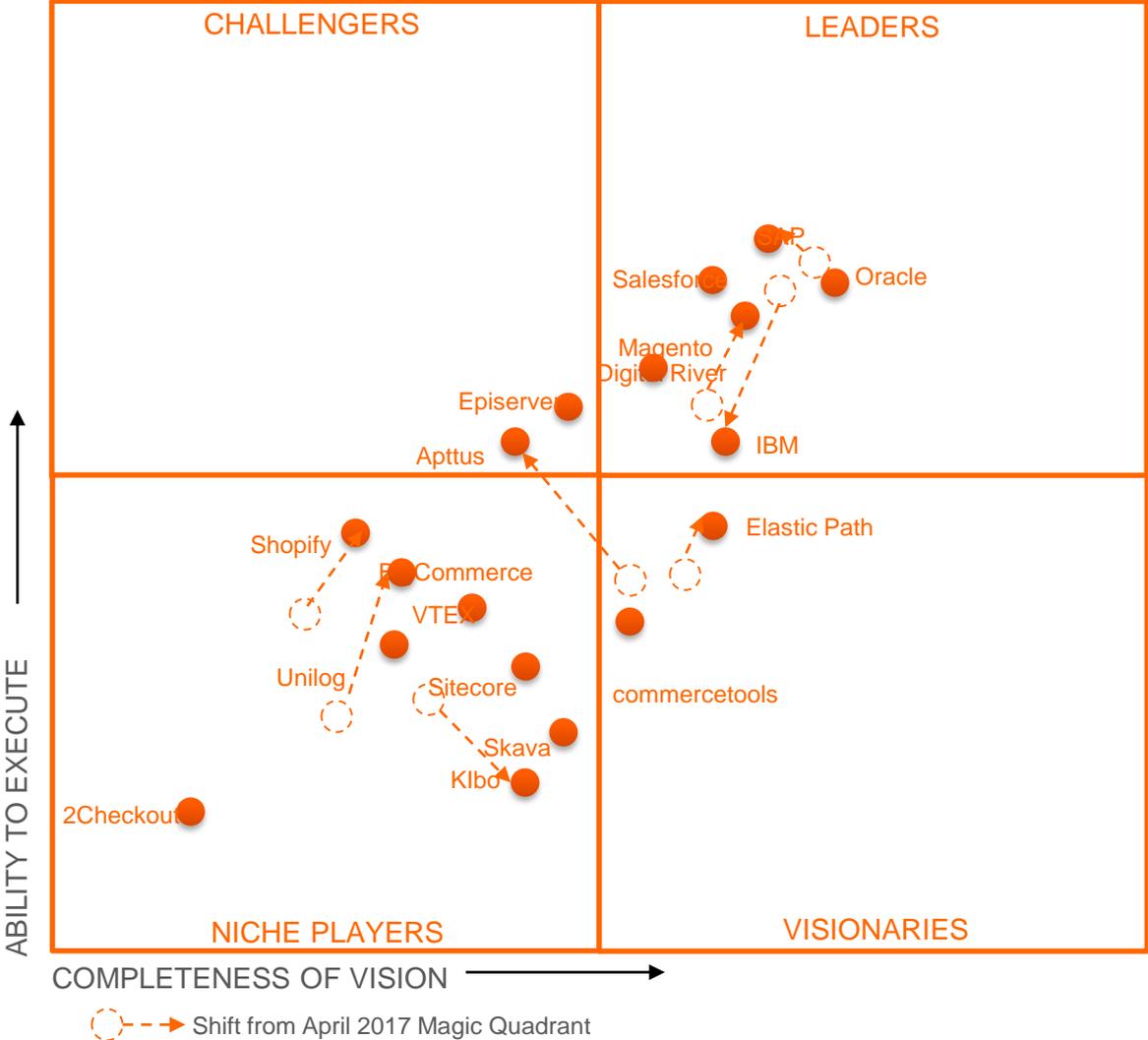
Quality ecommerce platforms keep users engaged, as 53% of the retail market will be driven through digital touchpoints

Magic quadrant for ecommerce platforms

Ecommerce platform choice has grown in complexity due to increased vendor choice and breadth of offerings, pricing model complexity and emerging managed service offering

Key takeaways

- The ecommerce platform market continues to grow steadily. Gartner forecasts digital commerce platform revenue to reach CAGR of 15.5% through 2022
 - The Gartner digital commerce team has seen continued growth in the number of digital commerce platform inquiries
- Ecommerce platforms support relationships between sellers and buyers, who may be consumers (B2C) or other business buyers (B2B)
- Platforms of the future will use technology to:
 - Understand the customer as an individual and anticipate that customer's needs
 - Bring simplification to the purchasing process
 - Personalize the customer's experience while maintaining privacy and respect
- By 2020, smart personalization engines used to recognize customer intent will enable digital businesses to increase their profits by up to 15%
- By 2020, more than 50% of online sellers will either list their products on marketplaces or sell third-party products on their core commerce sites



Select ecommerce platform fundraising recipients

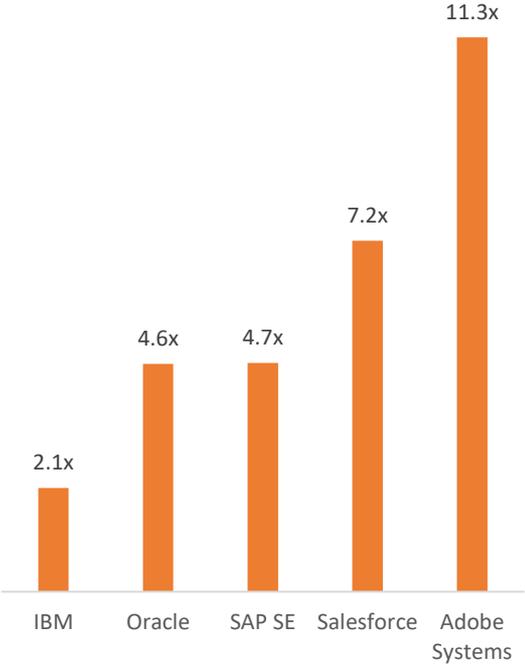
Company	Country	Description	Total Amount Raised	Notable Investors
 shopify		A cloud-based multi-channel commerce platform for small and medium-sized businesses	\$253.5 Million (went public in May 2015)	Bessemer Venture Partners, FirstMark, Klister Credit
 Magento		A leading platform for open commerce innovation with an open source ecosystem	\$272.5 Million (acquired by Adobe May 2018)	Hillhouse Capital Group and eBay
 BIGCOMMERCE		A SaaS provider for merchants running online businesses	\$219.2 Million	GGV Capital, General Catalyst, Goldman Sachs, Tenaya Capital, Telstra Ventures, American Express Ventures
 demandware <small>move faster. grow faster</small>		Provides enterprise cloud commerce solutions that empower retailers to continuously innovate	\$91.3 Million (acquired by Salesforce for \$2.8B in Jun 2016)	Sunbridge Partners, General Catalyst, Northbridge Venture Partners & Growth Equity
 volusion		Provides ecommerce software services and software including websites and shopping cart technology	\$55 Million	Sunbridge Partners, General Catalyst, Northbridge Venture Partners & Growth Equity
 Symphony <small>commerce</small>		Delivers Commerce as a Service, orchestrating multi-channel commerce from store to door	\$52.1 Million (acquired by Quantum Retail in May 2018)	Blue Cloud Ventures, Bain Capital Ventures, CRV, Commerce Ventures, FirstMark
 HANDSHAKE		Provides a sales order applications that enables mobile order writing, web order management, and bank office integration	\$23.5 Million	B37 Ventures, MHS Capital, Sozo Ventures, Uncork Capital, Boldstart Ventures, Emergence, Point Nine Capital, Primary Venture Partners
 MIVA		Provides ecommerce software, cloud-hosted, and custom website design and development solutions for businesses.	\$18 Million (acquired by Adknowledge in May 2009)	Bison Capital Asset Management

Marketing suites and ecommerce platforms are consolidating to create connected solutions across the consumer life cycle

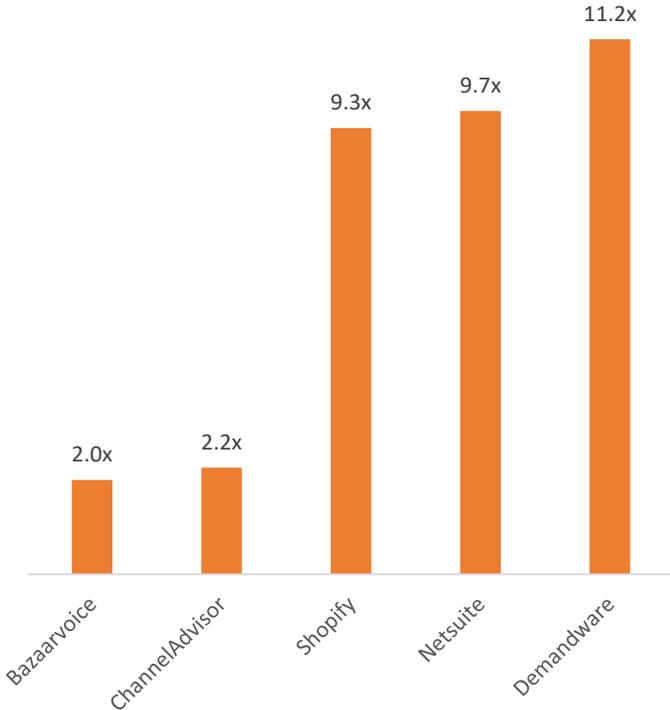
Acquiring Company	Target	ECP Product
		<ul style="list-style-type: none"> A market-leading cloud platform for B2B marketing engagement. With nearly 5,000 customers, it brings together planning, engagement and measurement capabilities into an integrated B2B marketing platform In September 2018, Adobe planned to acquire Marketo for \$4.7bn, to widen the Adobe's customer experience across B2C and B2B
		<ul style="list-style-type: none"> A market-leading commerce platform In May 2018, Adobe entered into a definitive agreement to acquire Magento Commerce for \$1.7bn to bring a leading commerce platform to the Adobe Experience cloud
		<ul style="list-style-type: none"> Offers capabilities for digital commerce, including OM (based on its acquisition of Mainstreet Commerce), POS (from its acquisition of Tomax) and predictive analytics (via its purchase of CQuotient)
		<ul style="list-style-type: none"> Cloud-based marketing platform for online retailers, multi-channel merchants, merchant marketplaces, branded manufacturers, sports and entertainment and other commerce driven organizations worldwide
		<ul style="list-style-type: none"> Multi-channel communication and commerce software solutions
		<ul style="list-style-type: none"> Provides unstructured data management, web commerce and business intelligence solutions
		<ul style="list-style-type: none"> Provides ecommerce software and related on-demand commerce optimization applications including ATG Commerce, a cross-channel commerce platform and software application

Fall 2018 ecommerce platform revenue multiples

Major players with marketing clouds and/or ecommerce

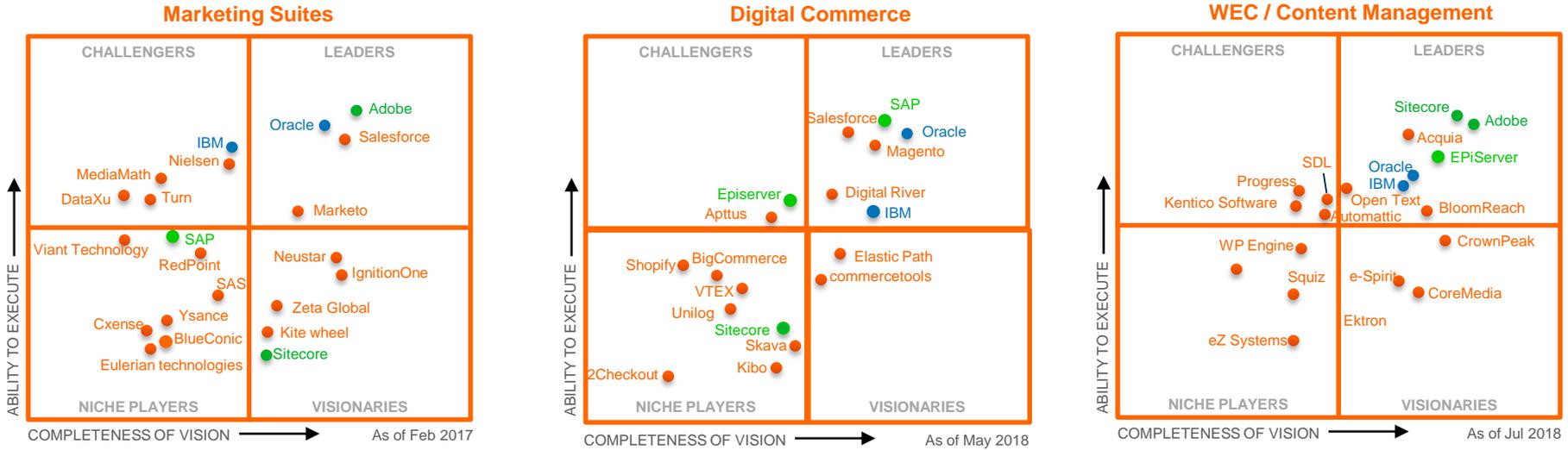


SMIDCap Ecommerce



Ecommerce private platform multiples are sky-high as established firms bet big on the future of end-to-end ecommerce solutions

Other players are seeking to leverage adjacent assets in their e-commerce strategies



Commentary

- Oracle and SAP have the best developed ecommerce / retail strategies
- The following parties all have well developed marketing cloud strategies and retail assets



Each of these players have had an active ecommerce program, seeking to leverage adjacent technology and client bases

- One category (orange dot)
- Two categories (green dot)
- Three categories (blue dot)

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Geospatial analytics and the rise of proximity-based marketing

Scope & need of proximity-based marketing in retail

Over 75% marketers believe that some form of "location based" marketing strategy is important for growth



There are two key ways in which location-based marketing strategies can enhance the retail experience

▪ **Relevant messaging**

- Promos contextual to location and event are more effective
- Mobile devices generate large amounts of data based on movement and browsing interests. This data must be leveraged by strategists to make messages more relevant

▪ **Persistence**

- Messages need to be consistent and persistent based on customers "interests" and previous buying history
- Ads must be engaging, yet non-intrusive

Proximity-based marketing funding landscape



Companies

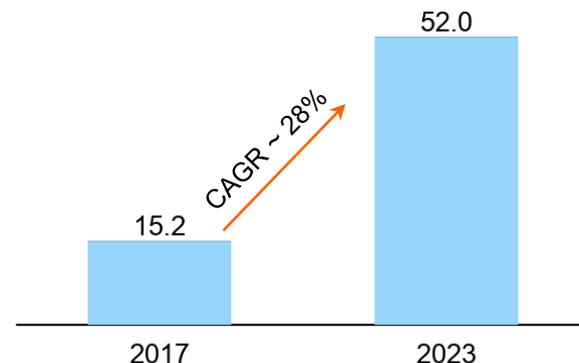
The proximity market is expected to reach ~\$52.0bn by 2023

Smartphone-based proximity marketing is set to drive incremental growth in retail sales

- Focus on business intelligence and competition is increasing the demand of proximity marketing services as firms fight to obtain a higher market share
- The increasing adoption of smartphone and development of analytical tools are significant factors driving market growth
- The chief enabler of the smartphone-based proximity marketing is beacon technology, which itself is expected to be a \$25.0 billion market by 2024
- North America is the largest market in proximity marketing due to major presence of technology leaders in the region, followed by Europe, due to the rapid adoption of advanced technology
- Asia-Pacific is the fastest growing region in proximity marketing due to the relatively smaller retail market and lower mobile penetration

Global Proximity Market forecasts

(\$ in Bn)



Key Players



Proximity-based marketing: statistics and benefits

Interactions with advertised products increased 19.0x & in-store app usage was 16.5x higher for users who received a beacon message.

Some statistics

20%

Online searches done through 'voice' searches in 2017, using Alexa, Google Home, Cortana, Siri and more

82%

Mobile penetration expected in the US by 2020

53%

Consumers willing to share their current location to receive more relevant advertising

57%

Consumers more likely to engage with location-based advertising

62%

Consumers share local ads with friends

63%

Consumers feel a coupon is the most valuable form of mobile marketing

Proximity-based marketing can help traditional retailers add value to their existing customer base through:

Personalization

Targeted location-based messaging can deliver personalized offers for customers based on their purchase history

Quantitative-based marketing

Allows for a more data-centric approach to framing marketing programs for specific audiences.

Accurate feedback gathering

The level of customer engagement can be multiplied many times by specific 1-to-1 feedback collection, rewarded by discounts

Build brand awareness & user engagement

As proximity marketing is still in its infancy, retailers who choose to use it can garner a lot of attention and improve customer engagement.

Enhanced Data Security

As mobile data security concerns rise, marketers can position their superior level of data protection infrastructure to encourage customers to share personal data more freely.

Accurate Social Media targeting

As customers increase their social media activity on their smartphones, more targeted campaigns can be implemented.

Building loyalty

Right after the conversion, retailers hope to turn new visitors into loyal customers. Proximity marketing can use the existing engagement to keep customers interested in the brand.

Select proximity-based marketing fundraising recipients

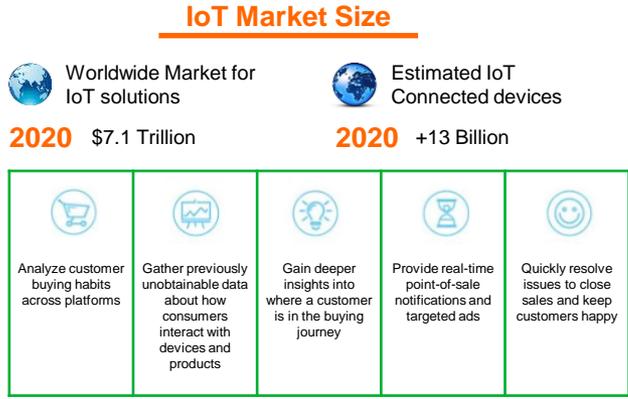
Company	Country	Description	Total Amount Raised	Notable Investors
		Provides a location-based marketing and advertising platform for publishers and developers	\$139.6 Million	Eminence Capital, LP, W Capital Partners, Institutional Venture Partners, SVB Silicon Valley Bank, Investment Arm, Emergence Capital partners
		Provides location based data for mobile advertising, developers, and enterprise solutions	\$106.3 Million	Felicis Ventures, Altpoint Ventures, Data Collective, Heritage Group, LLC., Tamarisk Global, LLC
		Develops and operates a marketing platform based on location data. It offers a mobile audience intelligence platform for advertisers	\$60.1 Million	Norwest venture Partners, Trident Capital, Inc., Comcast Ventures, Panorama Capital, Draper Fisher Jurvetson
		Develops and operates a location and data intelligence platform named AudienceQ	\$36.3 Million	Goldman Sachs Group, Merchant Banking Division, Tribeca Angels, TLcom Capital, DRW Ventures, Nasdaq, Inc. Investment Arm
		Provides a location-based consumer intelligence platform that identifies interests and affinities based on verified attendances at local events and activities.	\$32.3 Million	Gasper Global ventures, Loeb Holding Corp., Spring lake Equity Partners LLC, Plug and Play Tech Center, Manhattan Telecommunications Corp. of New Jersey
		Offers a technology platform that analyzes various data points about location, time, and real-world behavior.	\$27.8 Million	Alibaba Group, Harmony Partners, Iris Capital, U.S. Ventures Partners, Valhalla Partners
		Provides customer-based insights using GPS location data to translate "real life" behaviors into actionable customer insights	NA	NA

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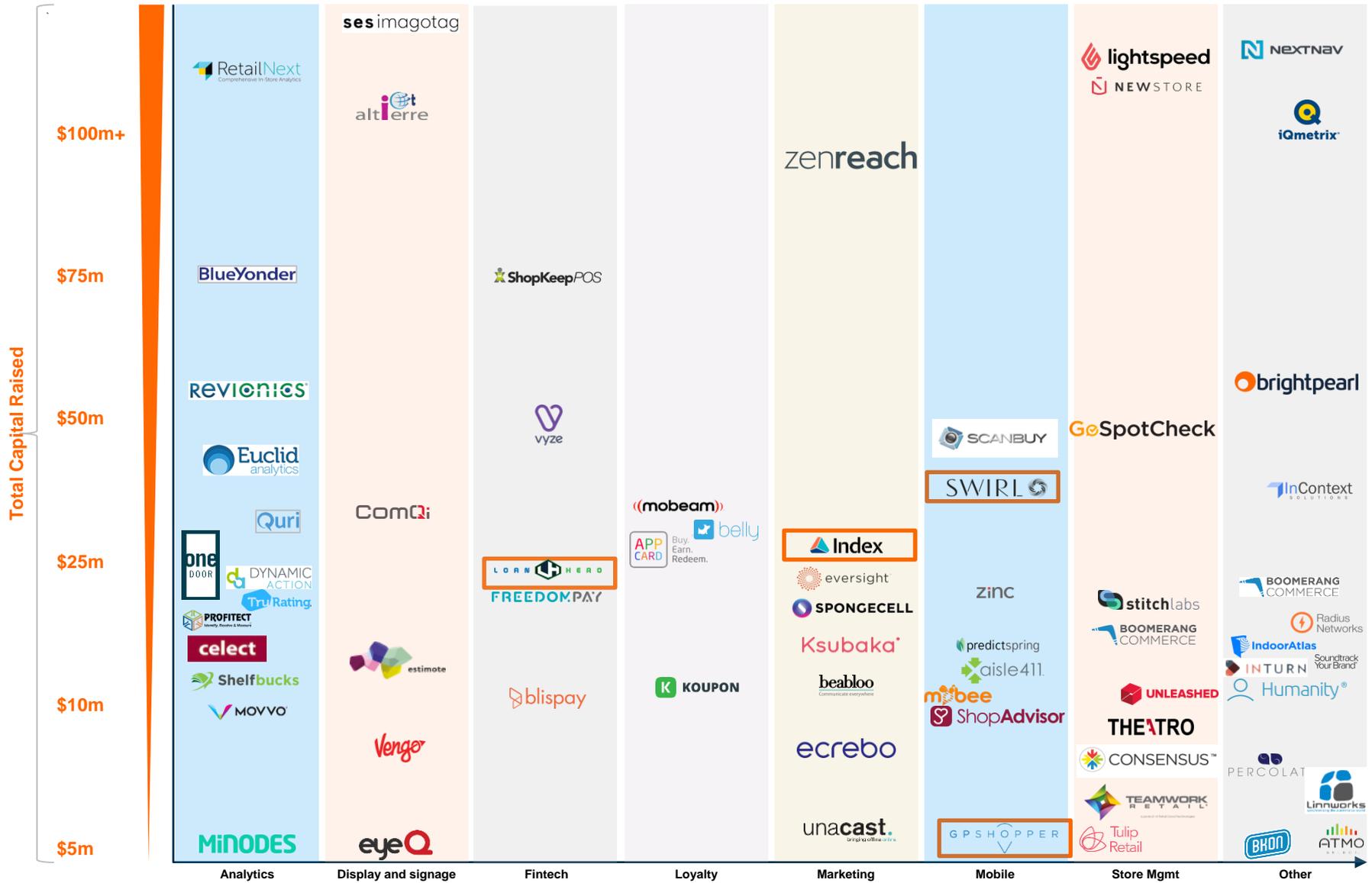
IoT advantages from consumer experience to supply chain management

In-store IOT technologies allow for physical retail stores to add critical digital components

- Shopping is no longer treated as a need-based activity, but has become an experience, providing a unique opportunity for retailers to develop strategies for delivering the experience customers desire and boosting their business.
- Disruptive new retail in-store technologies are changing the game in brick-and-mortar retail – stores are now competing to mimic the experience of shopping in-person as shopping on Amazon, offering unprecedented monetization opportunities.
 - Such evolutions have led to increased spending on connected technologies to monitor products, customer behavior, premises, and supply chain. Very large implied TAM: wide appeal for various industry verticals to remove areas of “data blindness”.
 - By empowering business processes and optimizing costs, this data can also provide insights that can help improve operations, create additional streams of revenue, and improve the overall customer experience.
- Furthermore, the emergence of Machine Learning and Artificial Intelligence (AI) technologies are changing the retail scene as they provide better insights to optimize retail execution efficiently.
 - Retailers can accurately anticipate customer behavior, predict demand, and personalize customer experience.
 - More broadly, the IoT opportunity has reached a tipping point and players such as Honeywell and Intel will make their bets on an innovator entrant to combine both customer solutions and added scale to land in a leadership position.
 - The global internet of things in retail TAM is expected to reach USD 94.44 billion by 2025, exhibiting a 21.5% CAGR during the forecast period.



Retail in-store disruption funding landscape



IoT applications present unique solutions for retailers

- According to Juniper Research, the number of IoT-connected devices will reach 38.5 billion in 2020, a 285% increase from 13.4 billion in 2015
- The devices include smartphones, tablets, smart signage and wearables. Using data from a smartwatch, retailers will be able to gain insight into how long a customer stands near a product, or the speed at which they wander down the aisle
- To make in-store digital signage even more interactive, avant-garde retailers are integrating beacon technology to detect users with Bluetooth-enabled smart devices as they approach the digital displays. For example: Zatar and Samsung are creating an engaging customer experience by affixing RFID tags within labels on wine bottles

BEACON- AND SENSOR-BASED ANALYTICS

BEACON-BASED MARKETING

LOSS PREVENTION

INVENTORY TRACKING

INDOOR MAPPING

AT-HOME SHOPPING BUTTONS

BEACON ANALYTICS & MARKETING

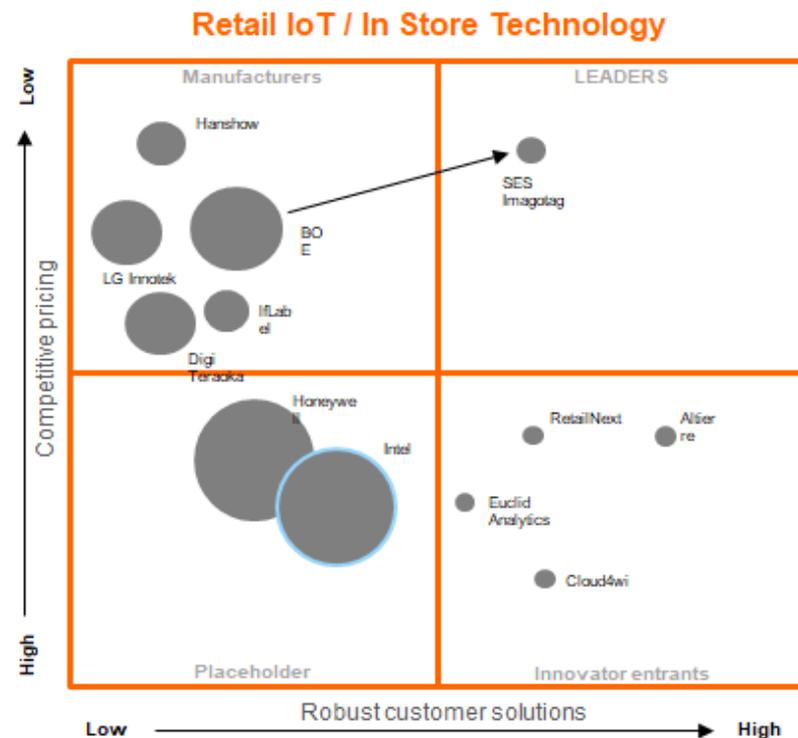
SERVICE ROBOTS

SMART BEACON ROOMS

The startups in this market map have raised \$900m in aggregate to bring IoT into retail

Retail IoT - by the numbers

- 56%** Every dollar spent in a store is influenced by digital interaction
- 79%** Retailers will be able to customize the store visit for customers based on knowing if they are in the store by 2021
- 78%** Retailers say it is business-critical to integrate ecommerce and in-store experiences
- 87%** Retailers will deploy mobile point-of-sale devices by 2021, enabling them to scan and accept payments from anywhere in the store
- 99%** Level of accuracy provided for inventory tracking via RFID tags
- 96%** Forrester research respondents are ready to make the necessary changes to implement IoT solutions in their business
- 67%** Respondents have already begun deploying IoT as part of their business strategy



Select retail IoT fundraising recipients

Company	Country	Description	Total Amount Raised	Notable Investors
 lightspeed		Develops POS systems and eCommerce platform	\$291.7 Million	iNovia Capital, Caisse de dépôt et placement du Québec, Investissement Québec, Hercules Capital, Accel Partners
 NEXTNAV		Offers urban and indoor positioning services for public safety and commercial applications	\$158.4 Million	Columbia Capital, NEA, Oak Investment Partners, Telcom Ventures LLC, Goldman Sachs Group,
 RetailNext <small>Comprehensive In-Store Analytics</small>		Provides real-time analytics that enable merchants to collect, analyze, and visualize in-store data	\$183.5 Million	American Express Ventures, Activant Capital Group, Pereg Ventures, Siguler Guff & Company, EDB Investments Pte. Ltd
 SHOPKEEP		POS hardware, cloud-based software, and analytics and payment processing for SMBs	\$97.2 Million	FDC, Activant Capital, Thayer Street Partners, Canaan Partners, Contour Venture Partners
 altierre		Provides wireless dynamic pricing solutions for retail chains.	\$91.5 Million	D. E. Shaw & Co., Stratim Capital, DuPont Capital Management, ATA Venture Management, Kinetic Ventures
 BlueYonder <small>a jda. company</small>		Develops a cloud-based platform for predictive applications and automated decision-making	\$75.0 Million	Otto, Warburg Pincus, JDA Software
 Euclid analytics		Solutions to improve in-store experiences and connect with their visitors in a personalized way.	\$43.6 Million	Benchmark, Cox Enterprises, NEA
 Quri <small>a trax company</small>		Web application to monitor the way retail products and promotions are being executed	\$31.2 Million (Acquired by Trax)	Big Sky Partners, Catamount Ventures, Kern Whelan Capital, Matrix Partners, Simon Equity, Western Technology Investment
 ses imagotag		Engages in the installation and maintenance of electronic shelf labels for the retail industry	\$30.9 Million (Market Cap: \$400.3M)	Alto Invest, CM-CIC Private Debt, Pechel Industries Partenaires, Phison Capital, Sycomore Asset Management, Tikehau Capital Partners,

Select retail IoT fundraising recipients

Company	Country	Description	Total Amount Raised	Notable Investors
 SPONGECCELL		Transforms banner advertising into flash advertising with interactive features	\$27.8 Million	Safeguard Scientific, IPG, Crown Predator Holdings, Halo Venture Partners
 DYNAMIC ACTION		Provides analytics solutions for retail merchandising organizations	\$17.2 Million	Accenture plc, West Coast Capital, ePlanet Capital, Frog Capital, GP Bullhound
 Shelfbucks		IoT enabled inventory management solution addressing the retail sectors' \$2.5 billion waste problem	\$16.7 Million	Capital Factory, FireStarter Fund, Musketeer Capital
 one DOOR		Provides retail merchandising system via fixture-based planogramming	\$16.5 Million	Spring Lake Equity Partners, Bridge Bank
 beabloo Communicate everywhere		Digital marketing and digital signage solution provider	\$12.1 Million	Baozun Inc., SoftBank Group Corp., Infema SA, Candriam France, La Fundación ESADE
 aisle411.		Provides mobile in-store location services platform for retailers	\$7.9 Million	Plug & Play Ventures, St. Louis Arch Angels, Cultivation Capital, Capital Innovators
 iQmetrix®		SaaS-based retail management and customer experience technology solutions to the retail industry	NA	NA

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Marketing suites and ecommerce platform consolidation

Marketing suites are evolving into all-encompassing platforms that connect consumers and products

- **Marketing suites** are platforms of integrated components that provide **customer insight** and **engagement functionality**.
 - Marketing suites include provider-engineered **data integration** and **lower costs** in order to guide retailers to market effectively. Marketing automation helps retailers find the most effective marketing solutions from an abundance of available options.
- Suites include an integrated portfolio of marketing technology products that provide analytics, orchestration, and execution of **insight-driven customer interactions** to support inbound and outbound marketing.
- Marketing suites provide retailers the ability to integrate and coordinate among systems. The platforms manage and optimize **individual dialogues** in real time across channels, devices and contexts on a **real-time basis**. This allows for retailers to better connect their products to meet customer demands.
- Marketing suites are also evolving to incorporate back-office connectivity such as integrating products under a **single product line**, giving retailers the ability to connect customer acquisition and product optimization.
- Digital marketing suites offer:
 - Global marketing (combining inbound and outbound marketing)
 - A cohesive technology stack
 - Omnichannel marketing strategies
 - B2B account-based marketing

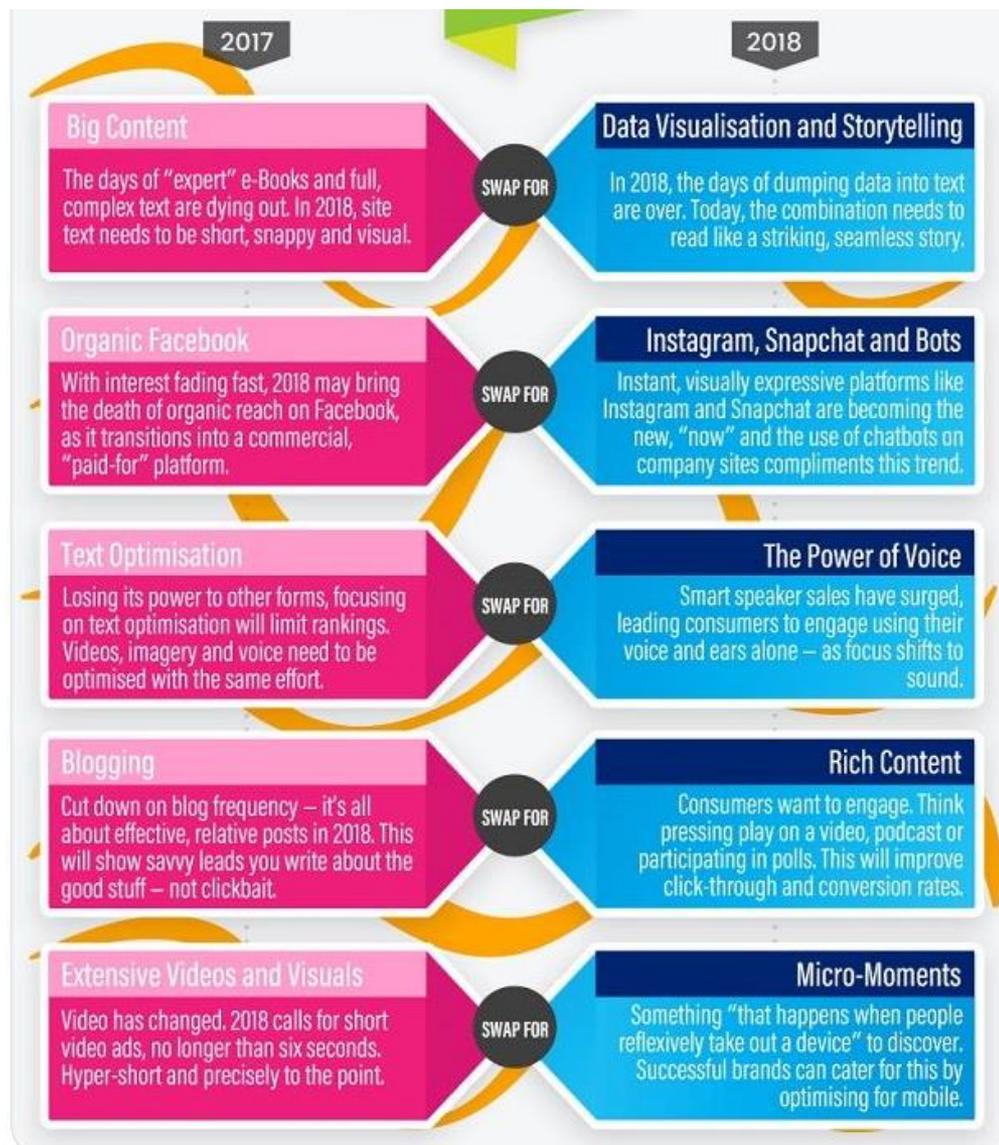
2018 Digital marketing trends

61% of 6,399 professionals believe their digital marketing is **effective**

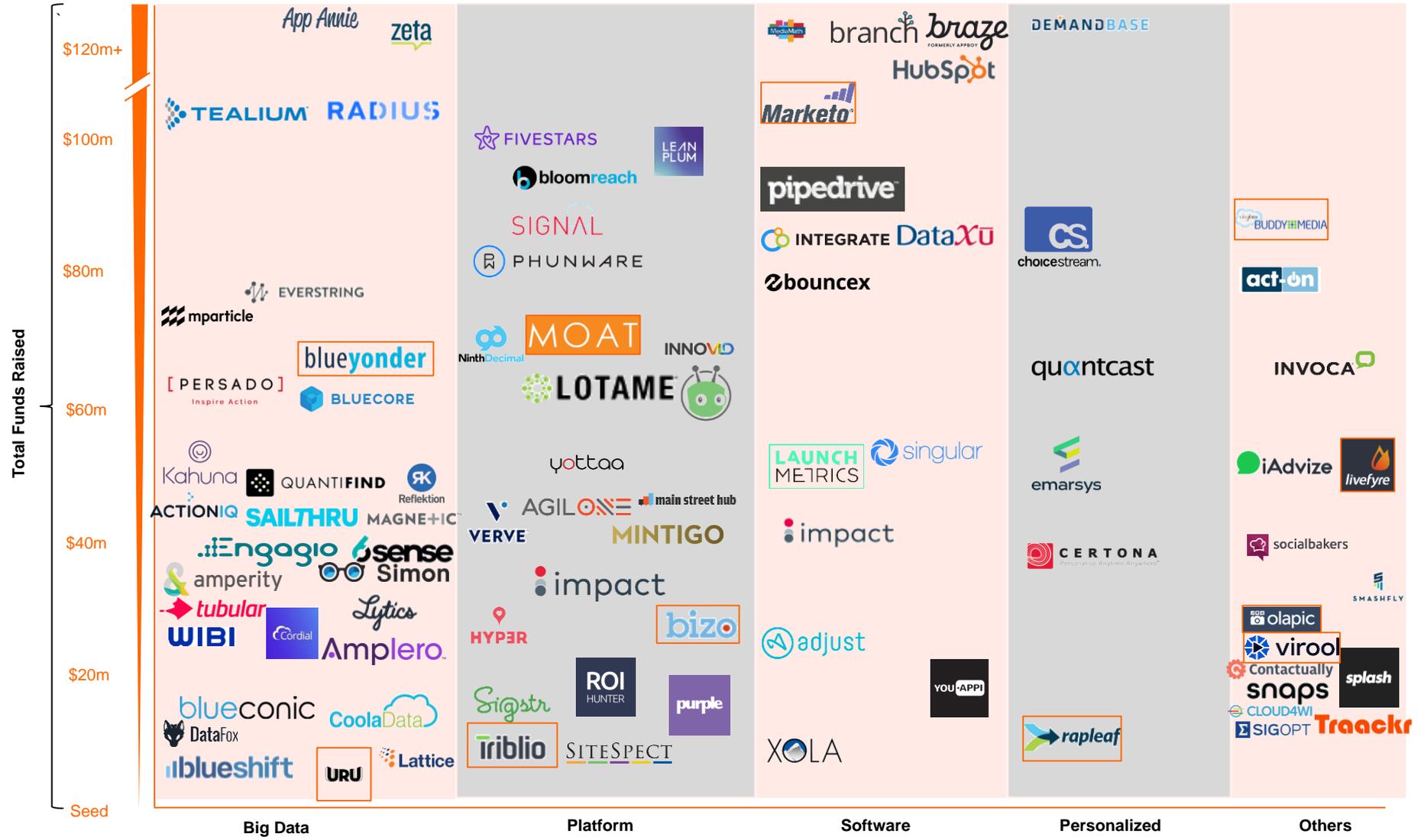
- **Generating website traffic/leads** has been 2018's biggest marketing challenge
- **Growing SEO/organic presence** is the top marketing priority in 2018
- **Paid advertising** has been named the "most overrated" marketing tactic

Marketers surveyed will focus first on converting **leads into customers (70%)** and **growing traffic** to their website (**55%**). To achieve this, global professionals will observe the following **digital marketing priorities in 2018**:

1. Growing SEO/organic presence – 61%
2. Blog content creation – 53%
3. Content distribution and amplification – 47%
4. Marketing automation – 40%
5. Interactive content creation – 38%



Marketing suite disruptors funding landscape



Denotes M&A

The marketing suite landscape

Segment	 Adobe	 IBM	 Microsoft	 ORACLE		Best of Breed/Independent Vendors	
Analytics <i>Analyze and segment markets to provide real-time insights and actionable feedback</i>	Site Catalyst Demdex Uru	Coremetrics Tealeaf IBM Digital Marketing Network Weather FX	Microsoft Advertising (aQuantive)	Oracle Business Analytics Endeca Moat Oracle Infinity (By Webtrends) Oracle CX Audience	RelateIQ Datorama	ComScore Yahoo Bizible Looker	Infor Nielsen Tableau
Content Management <i>Platform that allows marketers to create and manage content and optimize user experience</i>	CQ Livefyre	IBM Web Content Manager Resource/Ammirati	SharePoint	FatWire AddThis Grapeshot	ExactTarget Sites	Automony OpenText Alfresco	SAS Insite Web Analytics 24/7 Real Media Aprimo
Social <i>Helps organization manage, understand and engage with their audience on social media sites</i>	Adobe Social	IBM Social Media Marketing Solution	Yammer	Vitruve RightNow Maxymiser	Radian6 Buddy Media Social.com Sequence	Lithium Technologies Buffer	Acquia Drupal Joomla! WordPress
Marketing Automation & SEM <i>Automate and optimize multi-channel marketing campaigns based on campaign targets and rules</i>	AdLens Efficient Frontier	Unica	Microsoft Dynamics CRM	Eloqua Bluekai Datalogix	Pardot	Marketo Marin Software SearchForce Criteo	Hubspot
E-commerce <i>Facilitates transactions over mobile and web through commerce enabling tools such as payment services and content management</i>	Magento Commerce	WebSphere Commerce Ex.io		ATG	Demandware	Ecwid	DecideDNA IgnitionOne Kenshoo
Campaign Management & Email Marketing <i>Track, measure, and deliver email and advertising campaigns to develop customer relationships</i>	Neolane	IBM Campaign and Interact (Unica) Silverpop	MarketingPilot	Responsys	ExactTarget Email	StrongMail Systems CheetahMail	SendGrid

Marketing suite industry leaders



Salesforce puts its marketing suite into the context of its Customer Success Platform -

- Salesforce places marketing alongside enterprise solutions such as sales, service, commerce, and communities
- Since the last Forrester Wave, Salesforce has made substantial investments in AI, partner integrations, the acquisition of Krux, and the launch of the Data Studio offering for data sharing
- The firm is pursuing technology solutions and innovating the commercial models for how data and technology are consumed

Adobe sits at the nexus of content, media, and marketing -

- Adobe provides an EMSS (enterprise marketing software suite) offering spanning marketing, advertising, analytics, and content management capabilities
- The firm is investing heavily in its platform's core services to unify data, content, and shared functionality across products
- The firm stands out for its digital intelligence, content handling, and aggressive rollout of AI features

Adobe Marketing Suite



Select marketing suites fundraising recipients

Company	Country	Description	Total Amount Raised	Notable Investors
		A software company offering web content management, digital commerce, and digital marketing	\$140.0 Million (acquired by IVP in Sep 2018)	Accel-KKR, Insight Venture Partners
		A provider of a tag management system, including analytics, advertising and affiliate enterprise websites	\$112.9 Million	Citi Ventures, Tenya Capital, Georgian Partners, Bain Capital Ventures, Presidio Ventures, Silver Lake Partners, Battery Ventures
		An independent data management platform. It helps companies use data to build stronger connections with their consumers. It offers the most comprehensive data exchange in the industry	\$61.7 Million	Battery Ventures, Emergence, Sozo Ventures, TruBridge Capital Partners, Pinnacle Ventures, Hillcrest Management
		Brings call intelligence to the marketing cloud to help marketers drive inbound calls and turn them into sales. Has over 30 technology partners under its ecosystem	\$60.8 Million	Rincon Venture Partners, Morgan Stanley Alternative Investment Partners, Salesforce Ventures, Accel, Upfront Ventures, StepStone Group
		A Predictive Marketing Platform for enterprise enables insight-driven customer engagement to win and retain customers	\$44.0 Million	Sequoia Capital Israel, Giza Venture Capital, La Maison Compagnie d'Investissement, Adams Street Partners, Gllitot Capital Partners, Maverick Ventures Israel, Vintage Investment Partners
		A predictive marketing platform that offers better customer profiles, predictive analytics and integrated marketing campaigns	\$41.0 Million	Tenaya Capital, Sequoia Capital, NextWorld Capital, Mayfield Fund, Four Rivers Group

Adobe completes its content + commerce strategy with the acquisition of Magento for 11.2x 2017 Rev.

Integrating commerce with ADBE Experience Cloud

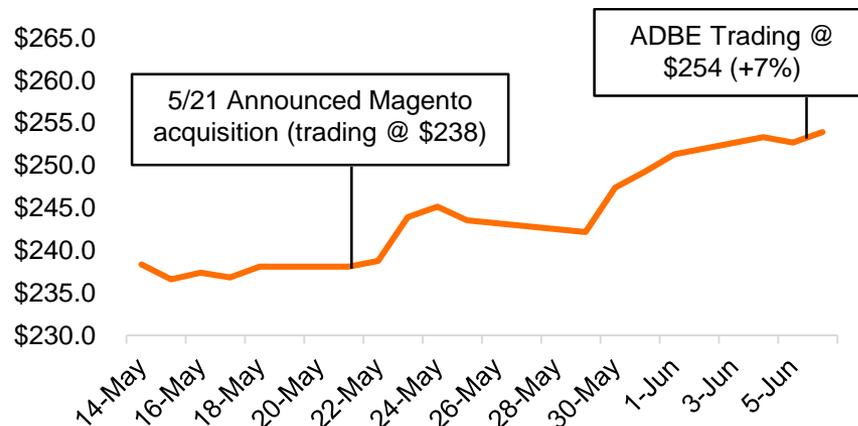
- The acquisition of Magento fills an obvious hole in Adobe's commerce capabilities, enabling it to compete in a range of categories
- Magento's B2B and B2C capabilities, seamlessly functioning within Experience Cloud, will allow it to compete directly with experienced market leaders like IBM, Microsoft, and Oracle and Shopify in not only creative storefronts, but digital tools for the entire consumer journey

... even while paying a rich multiple



Total consideration: \$1.68b
Magento 2017 Revenue: ~\$150m
EV / 2017 Rev. : ~11.2x

Positive market reaction ...



*“Adobe is the only company with leadership in content creation, marketing, advertising, analytics and now commerce – enabling real-time experiences across the entire customer journey ... **Embedding commerce into the Adobe Experience Cloud with Magento enables Adobe to make every moment personal and every experience shoppable.**”*

- Brad Rencher, Adobe, EVP and General Manager - Digital Experience, PR dated May 21, 2018

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Merchandising going digital in retail

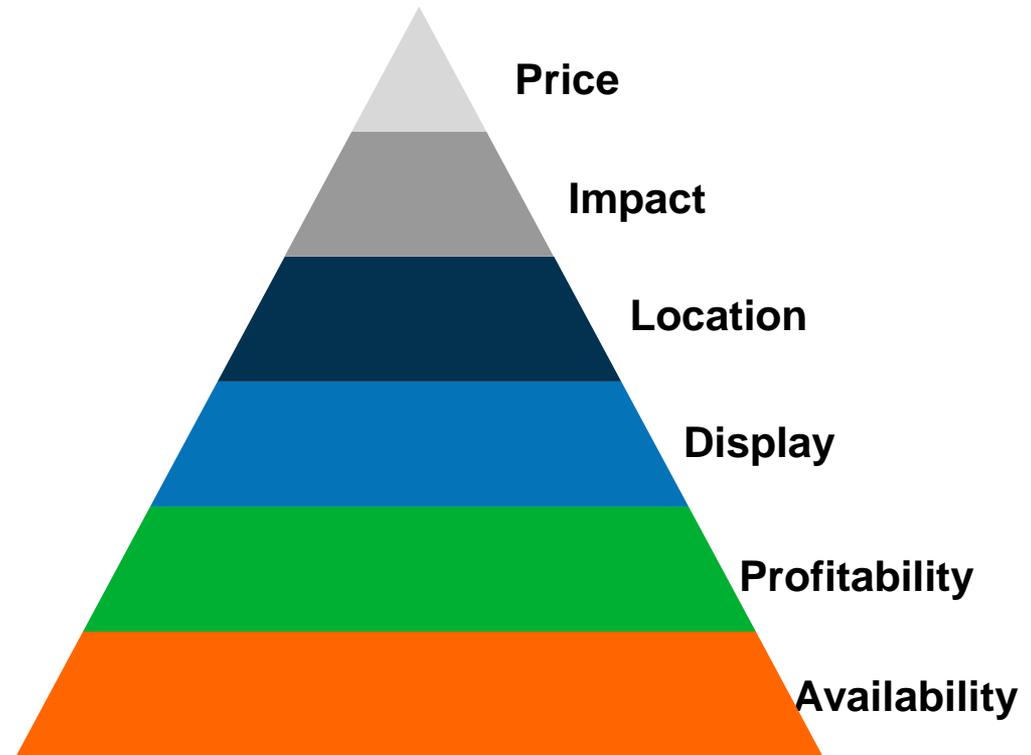
ComCap's keys to a successful merchandising offering

Sensory availability remains the physical retailer's key advantage over online competitors

Sensory factors in merchandising

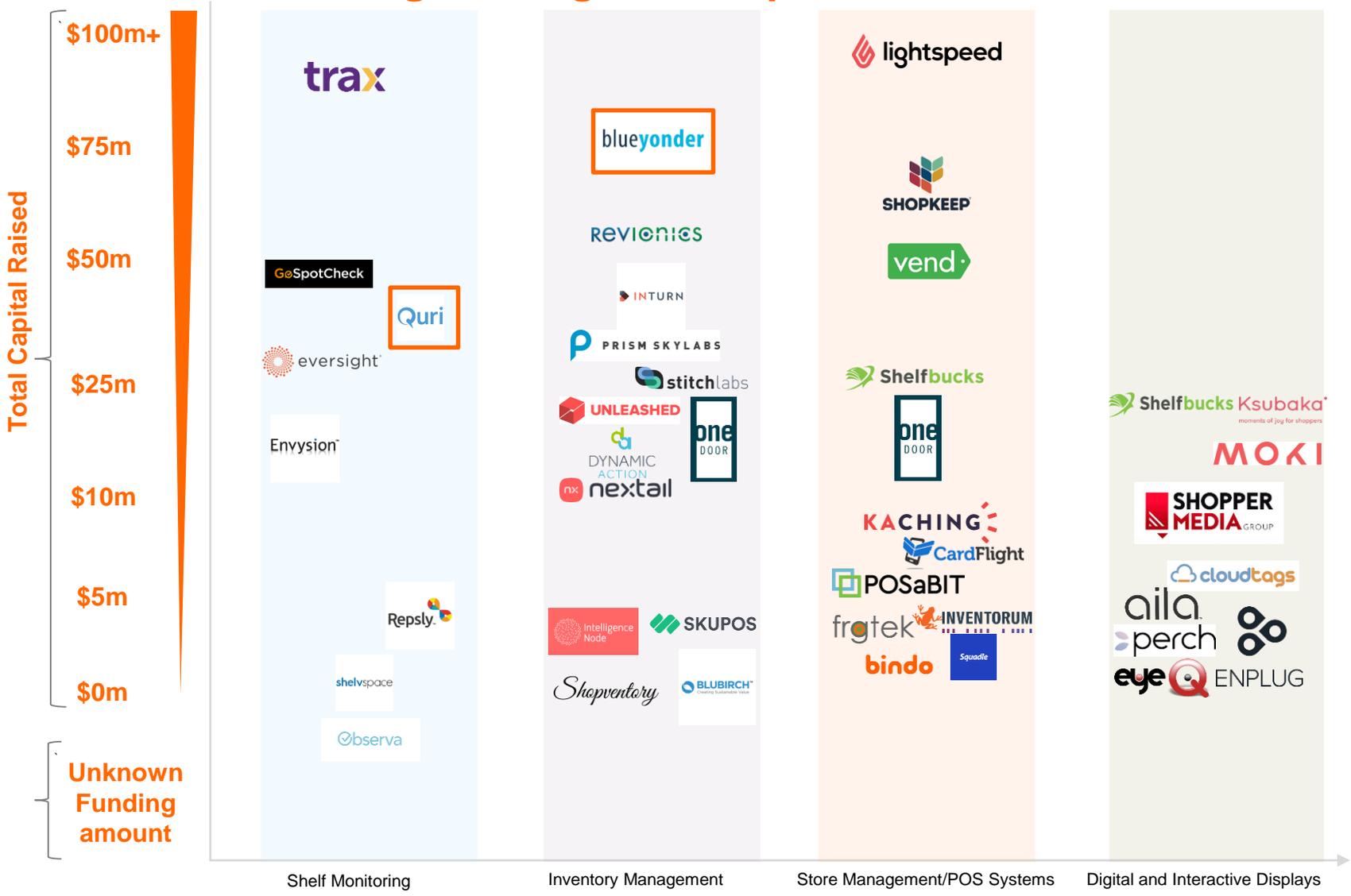
- **Visual stimuli** are significant to customers making purchasing decisions as first impressions drive sales
- **Color** is the first thing a customer sees subconsciously before entering a store: every consumer reacts differently to hues
- **Discount signage** had a significant effect on behavior: customer retention and branding effects overcome the initial loss in revenue
- **Music** plays a deep impact on customer satisfaction, establishing store ambience

Key factors in merchandising success



While technology has evolved since the golden age of retail, the underlying principles of merchandising have not

The merchandising funding landscape



Capital is pouring into the sector, with these companies alone raising \$720 Million

Numbers don't lie: how merchandising can make or break the bottom line

Product placement, layout and display are additional weapons in the physical retailer's arsenal

60%

- Over **60%** of purchasing decisions are made within stores with **checkout items** as significant decision-making factors

74%

- 74%** of consumers follow the layout of a store in order to find a product

90%

- 90%** of information sent to the brain is visual, making it the most important sense in merchandising

1.9%

- Store ambience improves sales, with dynamic lighting improving sales by **1.9%**

91%

- 91%** of consumers said they are more likely to buy from an authentic brand than from a dishonest brand

87%

- 87%** of customers remember the product display at a recent store visit

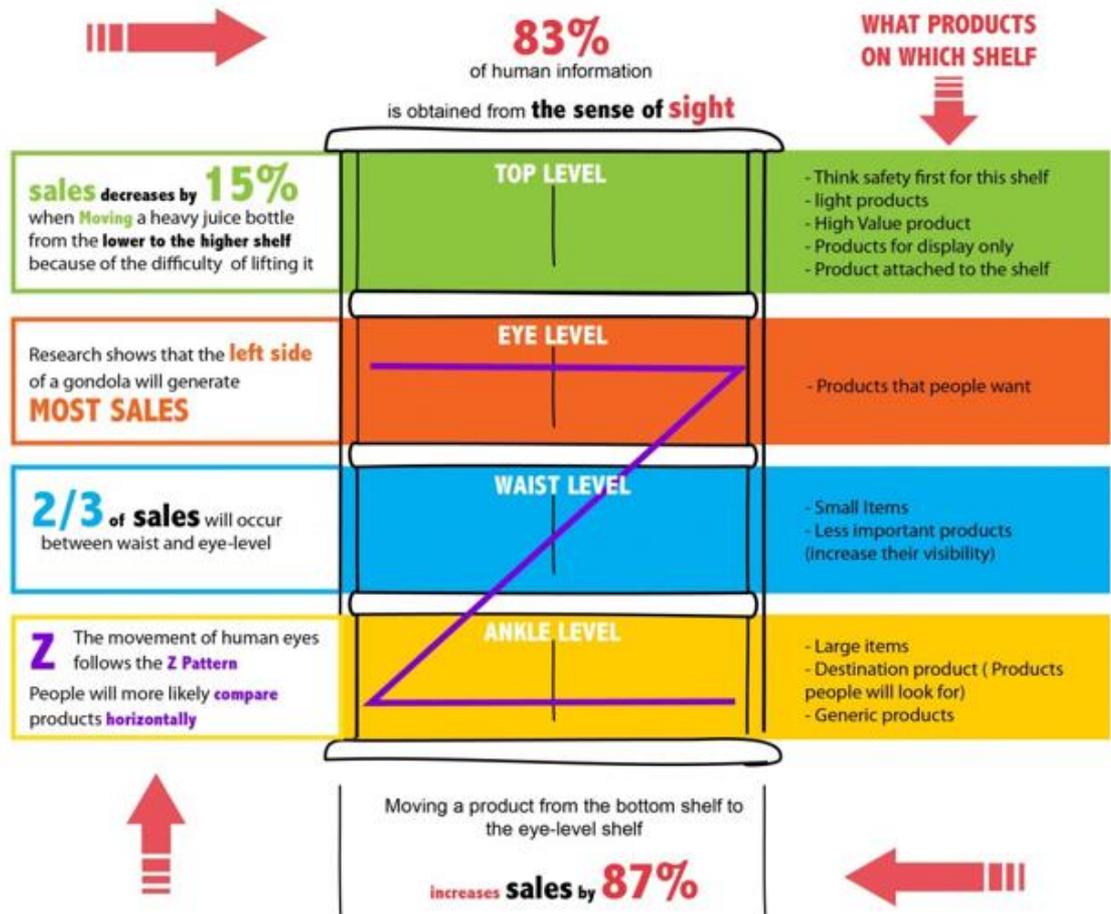
In our age of digital and social media, **visuals** matter because:

- The average person's **attention span is 8 seconds** or less
 - 65%** of individuals say they're **visual learners**
 - Visuals** increase message retention by **42%**
- **Intelligence Node Research**

The ability to upsell customers through the in-store experience is a key differentiator for brick-and-mortar in the age of Amazon

Shelf Merchandising: optimizing product shelf placement

While rules of product placement haven't changed, technology can help optimize placement for maximum margin impact



SaaS Platforms like Onedoor, Eversight, and Perch can help optimize shelf placement through the use of algorithms and machine learning

Select merchandising fundraising recipients

Company	Country	Description	Total Amount Raised	Notable Investors
		Provides computer vision solutions to retail through image recognition	\$286.7 Million	Boyu Capital, Warburg Pincus, Investec, Broad Peak Investments
		Real-time retail intelligence enterprise software	\$47.5 Million	Point Nine Capital, Insight Venture Partners, Service Provider Capital, Hinge Capital, Techstars
		Provides market liquidity for off-price inventory	\$36.1 Million	B Capital Group, Forerunner Ventures, Lerer Hippeau, BAM Ventures, Novel Ventures
		Retailer spending optimization SaaS platform	\$24.2 Million	Bow Capital, Sutter Hill Ventures, Emergence
		Online inventory control solution that simplifies multichannel retail businesses	\$23.0 Million	True Ventures, Triangle Peak Partners, Costanoa Ventures
		IoT enabled inventory management solution addressing the retail sectors' \$2.5 billion waste problem	\$20.5 Million	Undisclosed Various Strategic Investors
		Provides retail merchandising system via fixture-based planogramming	\$16.5 Million	Spring Lake Equity Partners, Bridge Bank
		Provides computer vision solutions to retail through image recognition	\$12 Million	Sonae IM, Keen Ventures, Nauta Capital, Realiza Business Angels
		Provides interactive display technologies to improve user retail experience	\$3.2 Million	Corigin Ventures, The Visuality Corporation, Forefront Venture Partners, Grace Beauty Capital

Fall 2018

Personalization services undergoing digital transformation

Personalization services are undergoing a digital transformation powered by analytics

- **Personalization capabilities are now viewed as critical in achieving a unified customer experience**
 - B2C, and increasingly, B2B sellers are investing in customer individualization and intimacy

- Historically a poorly defined category, Personalization Services is now entering its “**Version 2.0**”
 - **First generation solutions** were characterized as being **complex** and difficult to implement resulting in delays as marketers had to rely solely on IT
 - Next generation SaaS providers are now **leveraging big data**, AI and machine learning to create meaningful **one-to-one** consumer and buyer connections
 - This new generation of providers puts the marketer in charge, through **personalized pages** and **personalized product recommendations**

- **Consolidation** occurs as larger platforms strive to meet retailers’ agendas

- **Strategic acquisitions** lead to early interest from venture capitalists/private equity

“77% of consumers have chosen, recommended, or paid more for a brand that provides a personalized experience.”

- Forrester Research

“59% of shoppers who have experienced personalization believe it has a noticeable influence on purchasing.”

-Rethinking Retail, Infosys

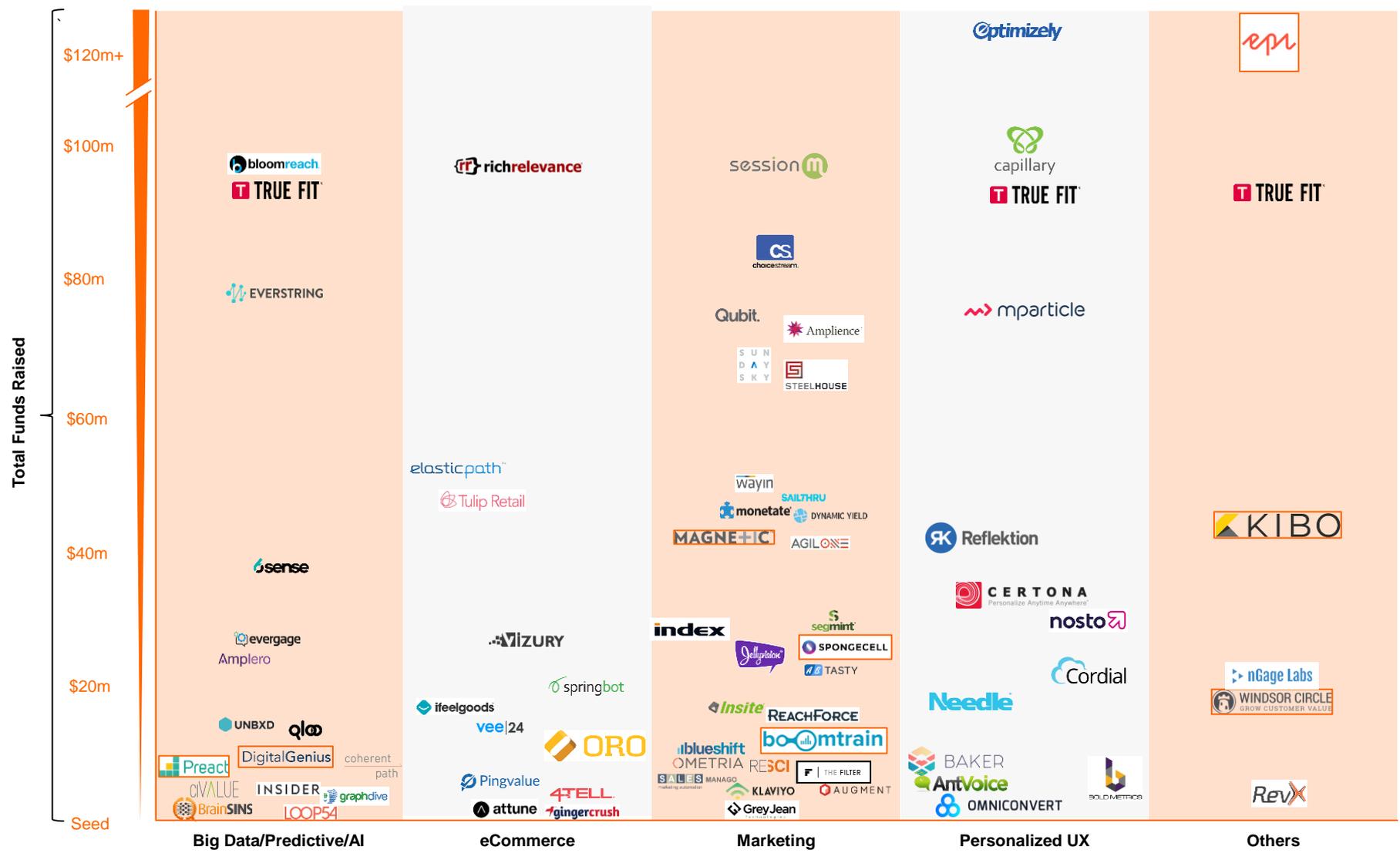
“Personalization is helping us build relationships with our customers that translate into increased engagement, loyalty and revenue.”

- Simon Pritchard, Group Digital Director, Arcadia

“70% of retailers cited personalization of the customer experience as a leading customer engagement priority for 2017.”

- Boston Retail Partners 2017 Customer Engagement Survey

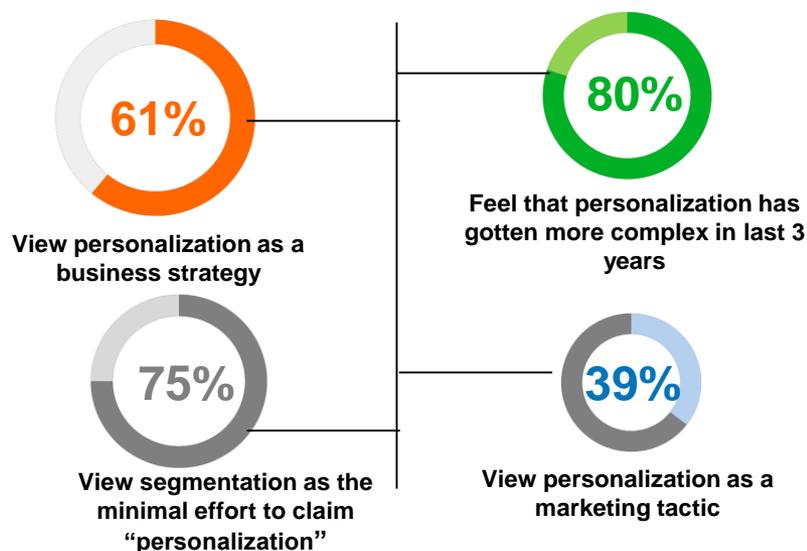
Retail personalization funding landscape



Organizations are quickly implementing personalization strategies

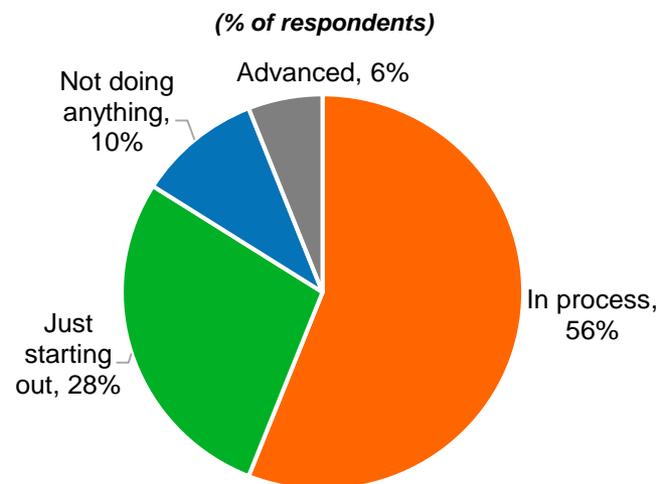
- Personalization is widespread, but techniques remain relatively basic: roughly **90% of senior marketers worldwide** are implementing personalization strategies, but only **6% rate their strategy as advanced**
- Email remains the most common channel that retail marketers personalize: **two-thirds of US marketers use personalized email content**, followed by 56% that have personalized elements of their website
- 48% of US marketers** reported that personalization on their websites or apps lifted **revenues in excess of 10%**; only 11% reported no lift
- Integration of data across devices, channels and functions** is essential, but most companies lack this capability: data from customer relationship management systems is often the hardest to tap for personalization purposes
- A recent survey from eMarketer found that **55% of US internet users** ranked **Amazon** as the digital platform having the **best personalized** customer experience

Organizations define Personalization Differently



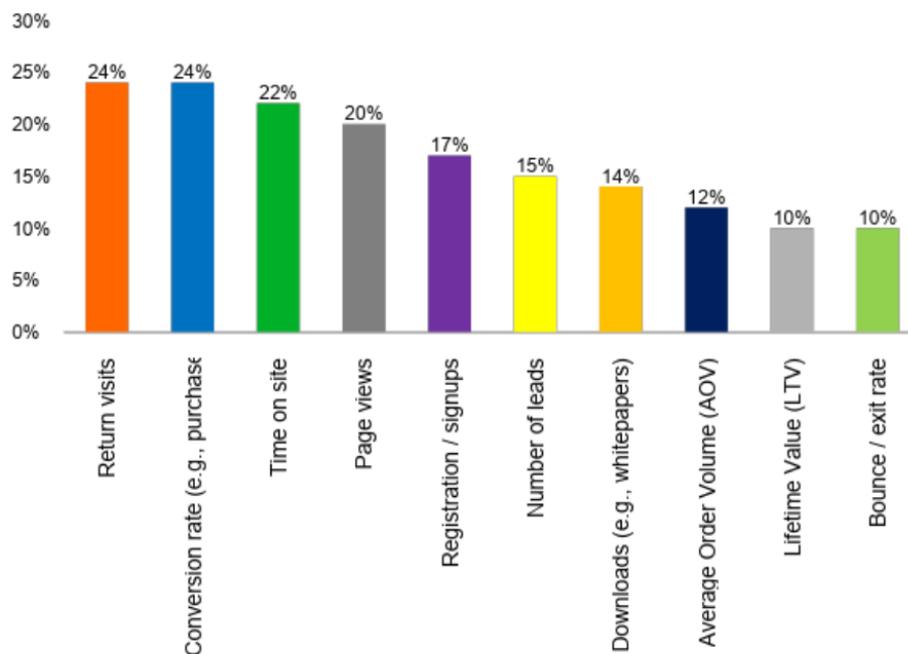
Implementation of Personalization Strategy

According to Senior Marketers Worldwide



Marketers view personalization as critical to drive their most important metrics

What are the primary metrics marketers use to improve web personalization efforts?



- **Web personalization** is becoming democratized and is providing ROI for large, medium, and small businesses
- Web personalization has proven to affect bounce rates, time-on-site, page views, conversions, etc.
- Over **85%** of marketers report seeing a **lift** of at least **5%** in their most important metrics
 - Roughly **40%** have seen increases of at least **20%** in their metrics

The consumer and the data they generate is driving mass personalization

Need for Customer Input

- **Direct input** from the **customer** is key to creating compelling and relevant personalized retail experiences
- **Retailers** can use information from online buying behavior to serve customers at the point of sale based on the **relevant user input** he or she requires
 - This **closes the gap between online and physical shopping** experiences that previously created headaches for a lot of retail brands
- **Email and website personalization** allows retailers to deliver a hyper-relevant online experience to every customer
- **Hyper personalization** relies on additional dimensions about the customer; these dimensions relate to their **activity, interest, opinion** (AIOs), attitudes, values and behavior

Case Study: Sephora's Beauty insider loyalty program



- The **loyalty program** allows customers to set up a **profile** in which they **input specific attributes** relevant to a provider of beauty products, such as skin tone
- This information is then used to **serve special offers** to the customer relevant to their requirements
- In addition, shoppers can save 'loves' and purchases in a 'beauty bag' both online and in store. This information is available across devices, including in store via the provision of iPads at store counters

Select personalization in retail fundraising recipients

Company	Country	Description	Total Amount Raised	Notable Investors
		A leader in customer experience optimization, allowing businesses to drive up the value of their digital products, commerce and campaigns through its software platform	\$146.2 Million	SharesPost Investment Management, Tenaya Capital, Salesforce Ventures, Pharus Capital Management, Digital Horizon Capital, Citi Ventures, Index Ventures, Andreessen Horowitz, Battery Ventures, Correlation Ventures
		Develops customized and cloud-based customer analytics marketing platforms for retailers and consumer businesses. The company serves over 300 marquee brands worldwide	\$102.1 Million	American Express Ventures, Sequoia Capital India, Norwest Venture Partners, Warburg pincus, InnoVen Capital,
		Develops and provides Big Data marketing applications for Internet retailers. It is an open and intelligent Digital Experience Platform	\$97.0 Million	Bain Capital Ventures, Lightspeed Venture Partners, New Enterprise Associates, Salesforce Ventures, Battery Ventures, Bain Capital Ventures,
		Leader in omnichannel personalization and is used by more than 240 companies to deliver customer experiences across web, mobile and in-store	\$95.8 Million	DFJ, Centerview Capital, Crosslink Capital, Dell Technologies Capital, Greylock Partners, Shea Ventures,
		A customer engagement platform that empowers brands to forge stronger and more profitable customer relationships.	\$97.3 Million	CRV, Salesforce Ventures, Causeway Media Partners, Kleiner Perkins, General Atlantic, Highland Capital Partners
		A Digital Campaign CMS platform enables marketers to ideate, create and reuse interactive experiences. It serves more than 300 brands across industries worldwide	\$49.6 Million	Hasso Plattner Ventures, U.S. Venture Partners, Wayra, Tibco Software

Fall 2018

Ecommerce driving logistics sector unbundling and innovation

Logistics

- A paradigm shift in the logistics industry towards technology is affecting everything from omnichannel purchasing to reverse logistics.
 - This technological leap is leading to the unbundling of the logistics sector.
- The logistics market is buoyed by global ecommerce growth.
 - With this growth, shipping efficiency is becoming increasingly important, driving demands for technology that can help logistics providers reduce shipping costs while meeting higher services standards as ecommerce deliveries increase.

The Periodic Table Of Supply Chain & Logistics Tech

An overview of key companies and investors in the supply chain & logistics scene



Logistics and Supply Chain landscape

Ecommerce Logistics

Last Mile Delivery

Fulfilment & Tech

Warehousing & Storage

Logistics Software

Inventory Management

ERP/Logistics/Software

Big data

Trucking

Crowd Shipping

Freight Services

Platform Services

Moving

New Technology

UAVs

AR

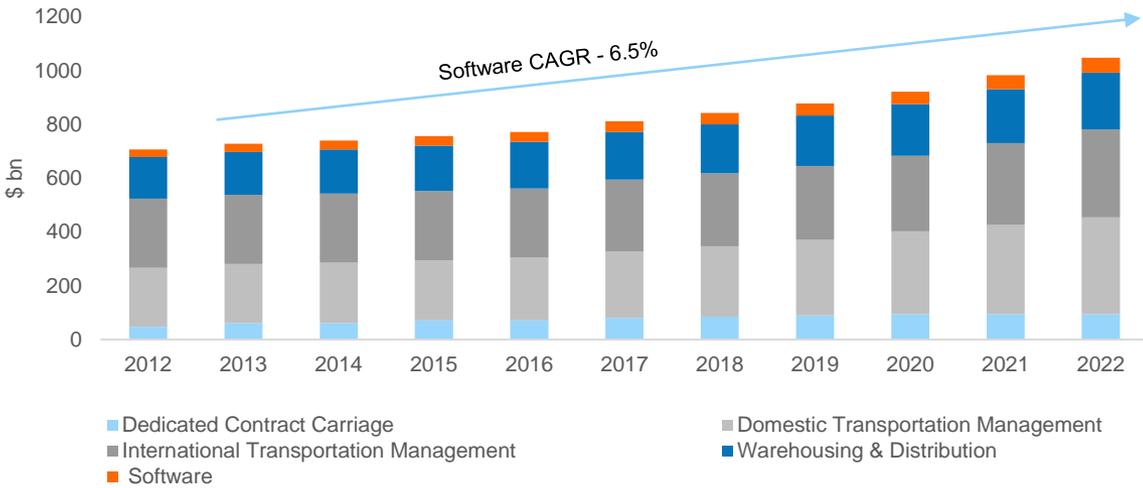
Localization

Robotics & IoT

Paradigm shift in the logistics industry towards technology

Large global players have been increasingly relying on technology for enhanced operational visibility and to drive efficiencies

Software is expected to grow the fastest in the 3PL market during 2012-2022



- Innovation in supply chain management is expected to reduce costs for global 3PL players and in turn, increase affordability for end customers
- While software is a small component of the overall 3PL market size, technology innovation is being adopted at every level to enhance operations and drive efficiency

Traditional logistics leaders are moving towards technology



- Developing an 'Alexa app' for consumers to initiate shipments by simply talking to a smart device
- Investing in self-driving technology

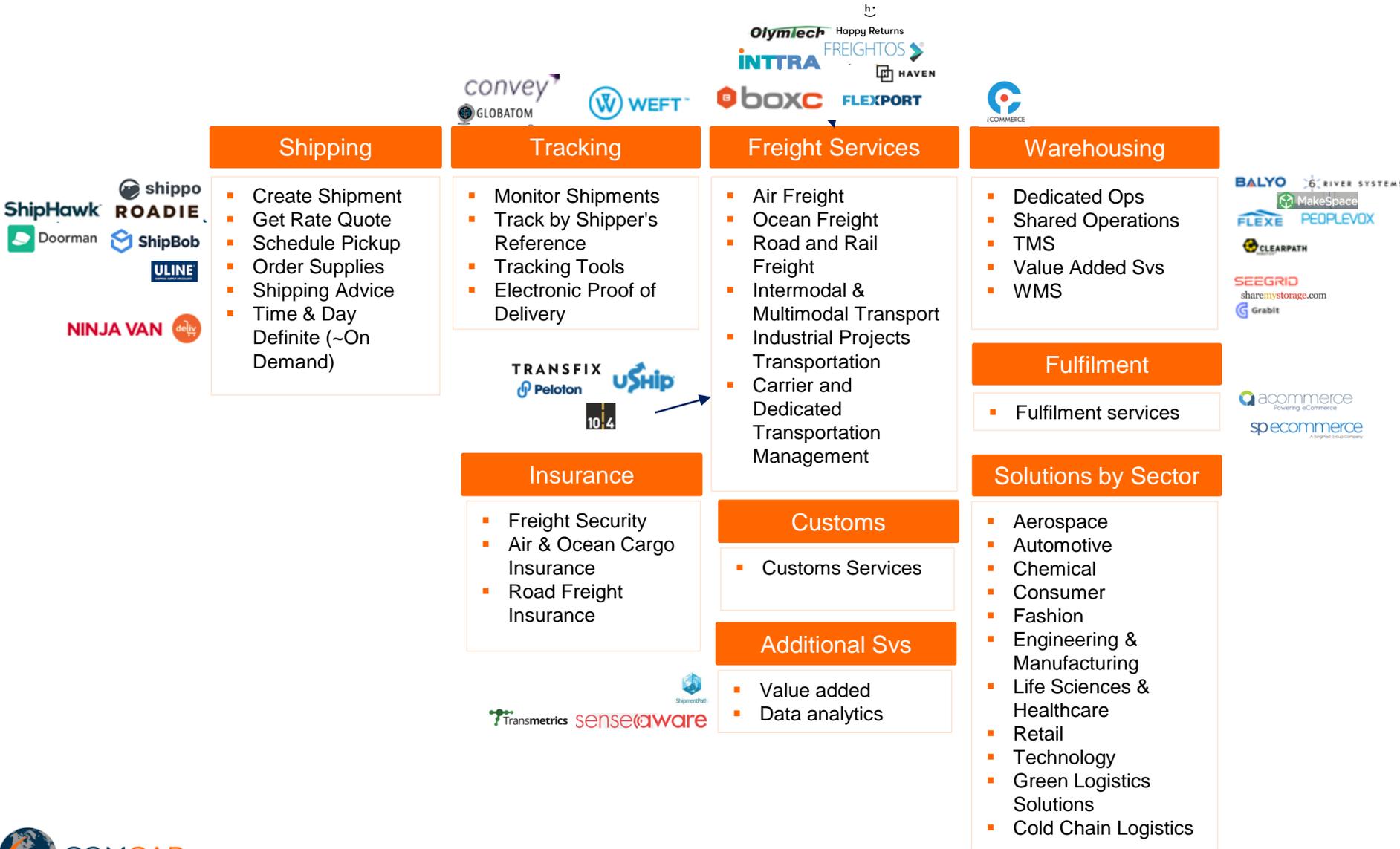
- UPS and SAP announced a deal to develop an end to end industry solution
- UPS' ocean container-tracking technology to provide all travel details via online dashboard

- Launched the 2nd innovation centre to develop technology such as self-driving vehicles, robotics, IoT and augmented reality
- DHL Supply Chain UK and Fujitsu to develop new services based on IoT

- Developing drone technology
- Launched automated parcel sorting facility and Centre of Innovation to develop new technologies

Unbundling of the logistics sector

Cloud computing & ease of integration across providers and services has resulted in the unbundling of the logistics sector...



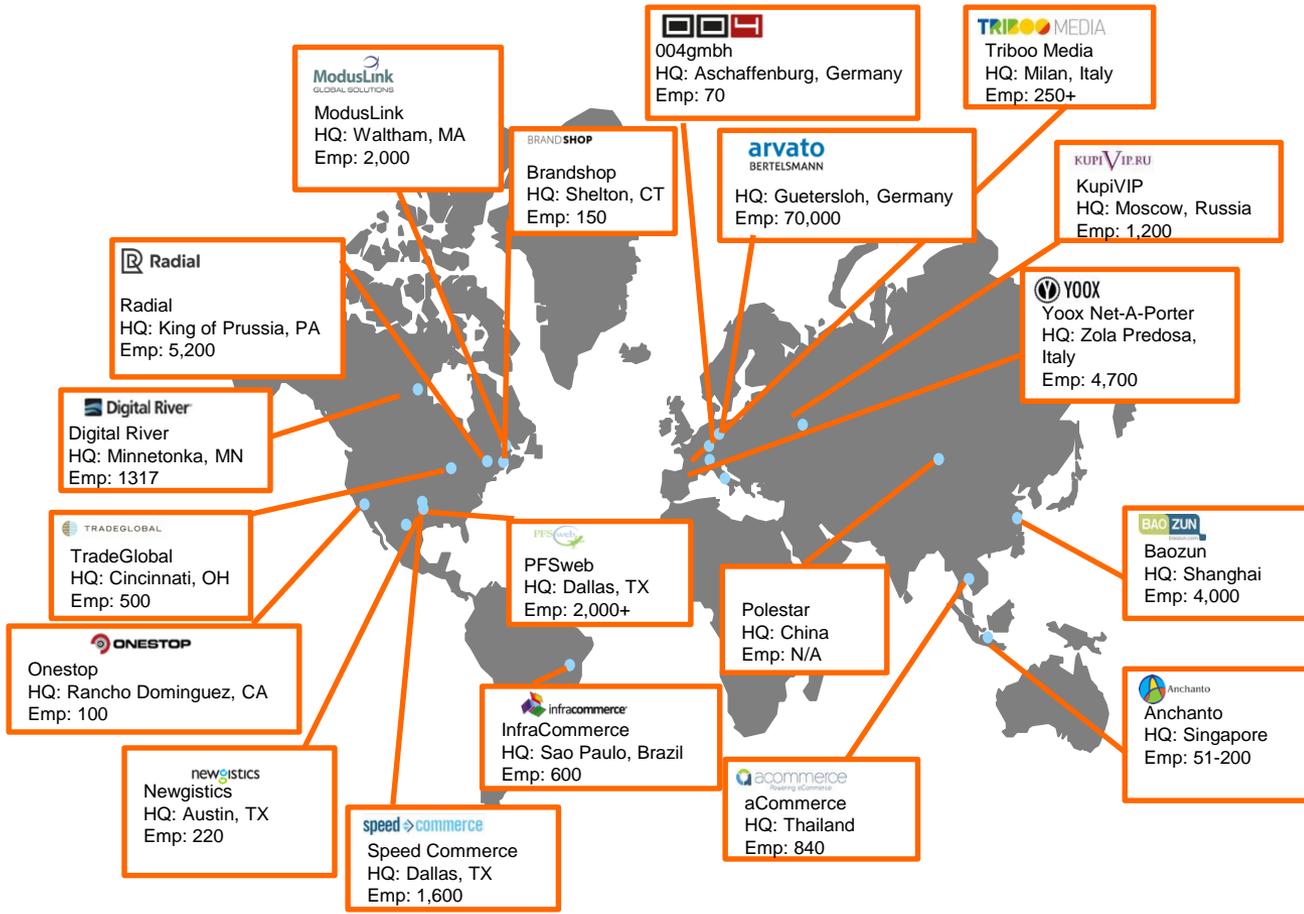
End-to-end players

...however, end-to-end players have retained their importance in offering one-stop shop solutions for customers

Advantages of end-to-end logistics providers

- ✓ One centralised system to manage entire fleet
- ✓ Load optimisation
- ✓ Optimal planning for multi-hub, multi-leg and multi-modal routes
- ✓ Real time feedback ensures prompt response to emergencies or rerouting / resource breakdowns
- ✓ Lesser bottlenecks
- ✓ Better asset and human resource utilization
- ✓ Overall enhanced efficiency for the organization

Select end-to-end logistics providers globally

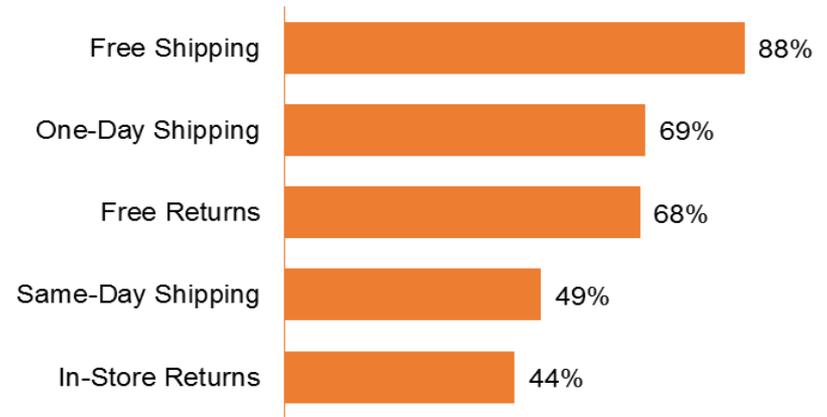


Ecommerce is re-shaping logistics and shipping expectations

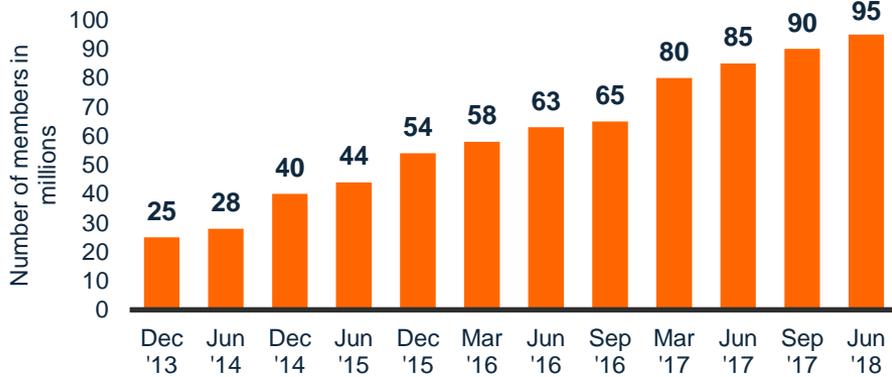
Logistics providers seek new ways to optimize shipping costs for retailers to prevent them from moving up the supply chain or turn to other retailers, like Amazon, to increase efficiency

- ✓ Shipping efficiency is becoming increasingly important, driving demands for technology that can help logistics providers reduce shipping costs while meeting higher services standards as ecommerce deliveries increase.
- ✓ As shipping costs continue to rise, customer demands for free shipping on online purchases remain the norm creating additional pressure for retailers.
- ✓ As a result, retailers are looking for ways to reduce costs by optimizing their supply chain and packaging processes.

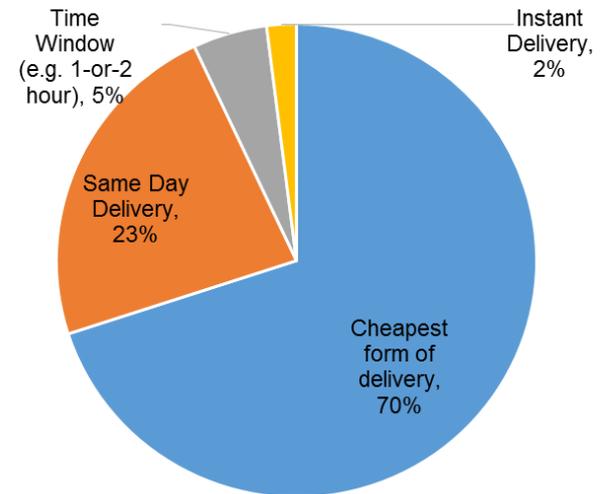
Services most likely to convince US consumers to shop online more



Amazon Prime Members



Consumers Who Prefer Different Delivery Options



- ✓ In order to improve delivery efficiency, many sellers use Fulfilment By Amazon (FBA) services, which has been around since 2006.
- ✓ Merchants using FBA automatically get their products flagged as eligible for fast Prime shipping.

Omnichannel influencing supply chain & logistics strategies

Over 40% of purchases involve channel crossing, i.e. more than one channel is used to shop and buy a product

Benefits of omnichannel for customers

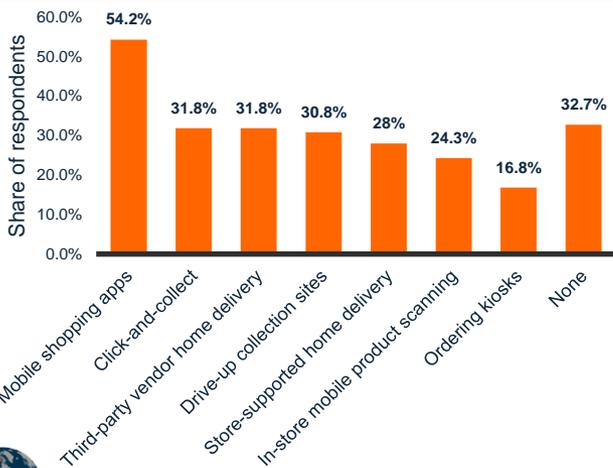
- ✓ Many access points such as online, mobile, stores
- ✓ Many delivery options, i.e. specific, after-hours, weekend delivery
- ✓ Shorter lead times: same-day delivery, less than 2 or 4 hours delivery
- ✓ Flexible delivery points
- ✓ Seamless transition and customer service across channels

Benefits of omnichannel for merchants

- ✓ Multiple touchpoints of gathering customer behavior data
- ✓ Less reliance on storefront and hence less retail and labour spend

Key considerations in logistics for adaptation to an omnichannel approach

Distribution of omnichannel services offered by grocery retailers in the United States in 2018



- Order capture from all sources
- Inventory:
 - Visibility across all channels
 - Inventory forecasting
 - Item level logistics need to be considered
- Handling of replenishment / fulfilment:
 - Merged online / offline warehouse may work for certain sectors
- Delivery:
 - Taking into account shipping preferences and in-store customer pick up post online purchase
- Reverse logistics

Home Delivery



Collection Points



Reverse Logistics

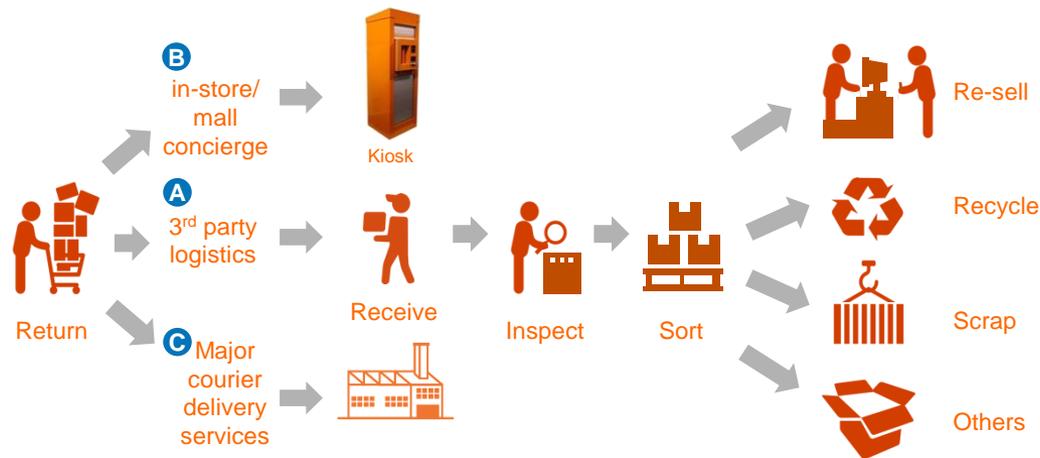
Retail returns outpacing growth in retail sales

- 11% returns vs. 3.6% sales⁽¹⁾ CAGR since 2011
- Retail returns amounted to \$351bn in 2017
- e-commerce returns represented \$105bn⁽²⁾
 - 20% of apparel and soft goods are returned with up to 50% returns for high value products
 - 30% of all ecommerce holiday season orders are returned
- Retailers spend up to 4% of total supply chain costs on return logistics
 - The cost of a return can be as high as \$15 (or 30% of the purchase price)
- Average manufacturer will spend 9-15% of total revenue on returns

Return policies are a key consideration for consumers

- 89% of online shoppers cited the return policy as a reason they would or would not buy from a company
- 92% of consumers will buy something again if returns are easy whereas
- 79% of consumers want free return shipping
- 62% of shoppers are more likely to shop online if they can return an item in-store
- 27% of shoppers would purchase an item that costs more than \$1,000 if offered free returns as compared to 10% who would purchase otherwise

Reverse logistics flows



Spotlight

A Newgistics	B Happy Returns	C UPS Fed Ex
Smart tag+	Concierge at mall	Direct to retailer / manufacturer
3 rd party	Return bars	Reliability
Benefits <ul style="list-style-type: none"> • Retailers cost reduced • Single source tracking • National network 	Benefits <ul style="list-style-type: none"> • High touch customer service • Integrated with retailer • Immediate refund 	Benefits <ul style="list-style-type: none"> • Lack of education • Ubiquitous

Source: National Retail Federation, UPS, BizRate, USPS, eMarketer, Forbes

1) US Census Bureau

2) Applied estimated 30% online return rate to total US ecommerce sales

Uberization of logistics is just beginning

An Uber-type model can promote cost and resource efficiency for shipping and warehousing

- Ecommerce has changed the dynamics of shipping and warehousing
 - B2C ecommerce shipping is largely small quantities to individual consumers
 - Time is critical, with same day, express shipping or specific day deliveries required by consumers
 - Highly variable demand influenced by social media and the internet



	Traditional trucking / shipping	Uber model
Advantages	<ul style="list-style-type: none"> ✓ Long track record of operations ✓ Certainty of drivers and delivery history 	<ul style="list-style-type: none"> ✓ Better capacity utilisation owing to real time data ✓ Reduced fixed costs ✓ Improved supply chain visibility
Disadvantages	<ul style="list-style-type: none"> × Inefficiencies owing to no real time data, hence higher share of empty return trucks × High operating costs × Driver shortage 	<ul style="list-style-type: none"> × Availability of truckers during peak demand × Trucker loyalty

Market Disruptors

TRANSFIX

CONVOY

LALAMOVE

NINJA VAN

Dynamic on-demand warehousing can be a partial or a complete warehousing strategy for a company



Traditional warehousing

- Ship from location
- Own warehouse/ distribution centre network
- Partial use of 3PL network
- 100% distribution outsourcing

Dynamic on-demand warehousing

- Pay-per-use model
- Less capital cost
- Renting of smaller capacities possible
- Electronic marketplaces available to find an ideal warehousing solution at short notice

Market Disruptors

FLEXE

Shipwire

STORD

Advanced technology is gaining traction

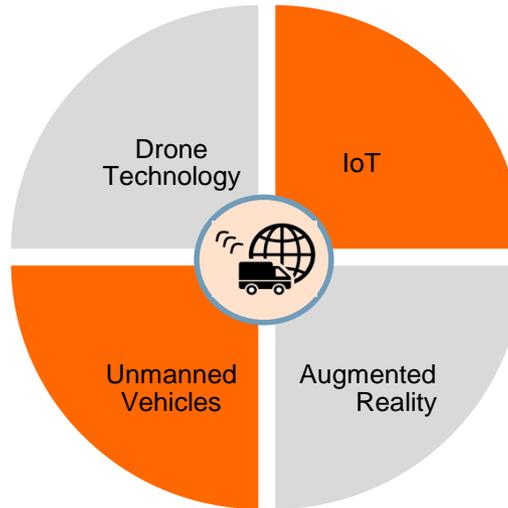
Augmented Reality (AR), Internet of Things (IoT), drones and unmanned vehicles have been tested for commercial use



- Use expected in product delivery, internal shipping, product tracking
- Regulations will be key
- Amazon, Rakuten, DHL, Swiss Post, SingPost and many others are testing drone technology



- Driverless trucks can potentially reduce human error and costs
- Caution among 3PL players with respect to early trials



- IoT can empowered logistics companies to keep track of goods and items at all levels of the supply chain; help to prevent shipments from being delayed, or worse, going missing



- AR involves virtual content directly projected on top of the real-world image
- Stationary AR systems, spatial Augmented Reality systems, head mounted displays, smart glasses and smart lens are a few examples



Other technology: 3D printing, Localisation & Local Intelligence (insights into asset utilization), wearable tech, low cost sensor technology,

How DHL is transforming its logistics business through advanced technology



Distribution processes

- Mobile piece picking
- Automated inventory management
- Co-packing
- Exoskeletons

More flexible delivery and optimised routing

Collaborative robotics

Automated relief
from strenuous manual labour

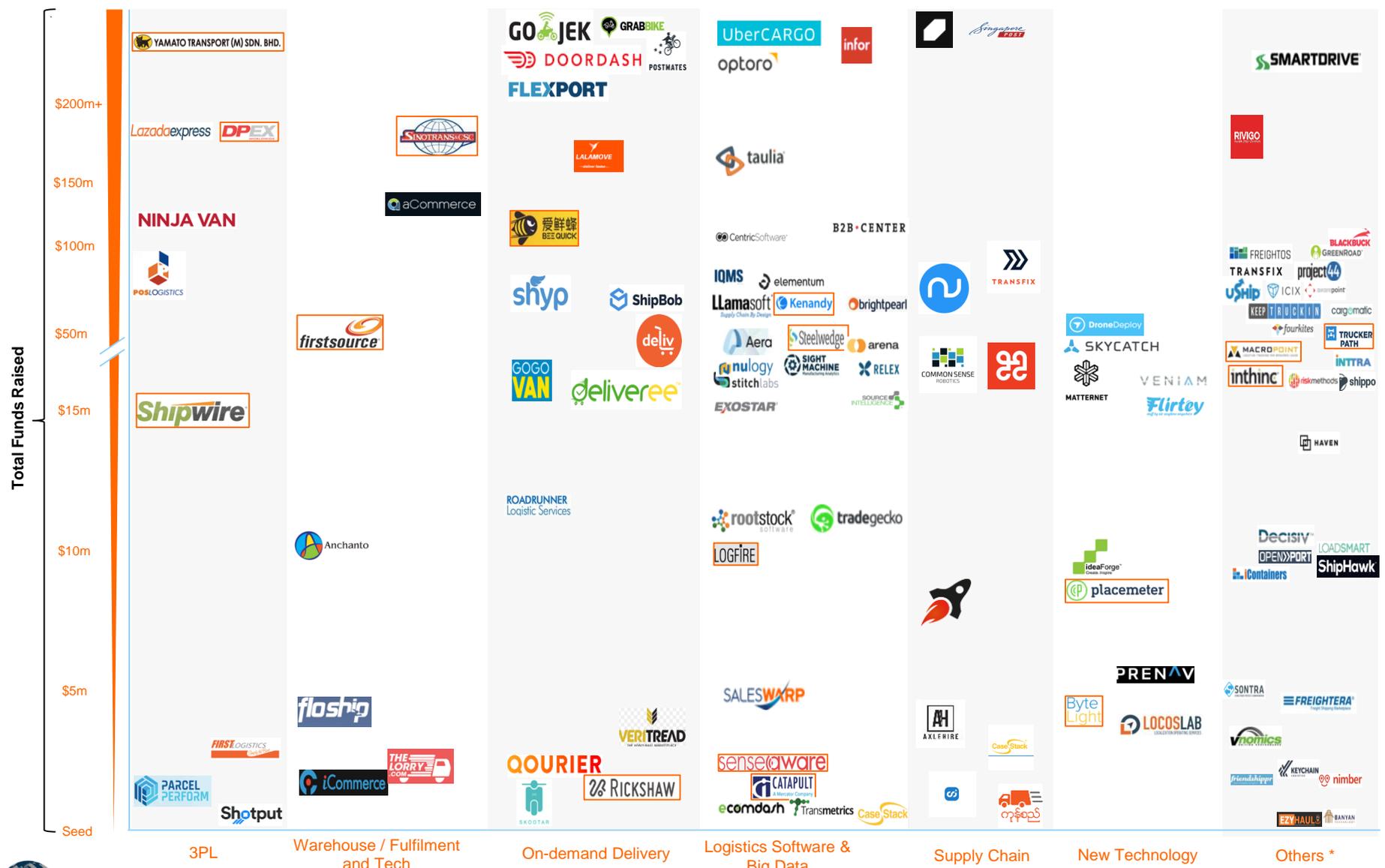
Chatbots

Smart glasses

- Pick and scan trolley
- Find, pick and scan items
- Place order items in correct trolley boxes

DHL Parcelcopter (drone technology)

Disruptors in the logistics space



Source: Capital IQ, and Crunchbase; * trucking, crowd shipping, freight services, platform services, moving; the above chart is not exhaustive and is an indicative set

Select Logistics Fundraising Recipients

Company	Country	Description	Total Amount Raised	Notable Investors
 GOGOVAN		Mobile application-based platform that provides deliver services for customers in Asia	\$276.5 Million	InnoVision Capital, New Horizon Capital, Russia-China Investment Fund, Renren Inc.
 ninjaninja van		Specializes in next day deliveries for ecommerce companies	\$117.5 Million	DPD Group, B Capital Group, Abraaj Group, Monk's Hill Ventures, YJ Capital, Monk's Hill Ventures
 Singapore POST		Provides mail, logistics, and retail solutions in Singapore	\$455.9 Million	Alibaba (Post-IPO Equity Round)
 FREIGHTOS <small>Smooth shipping</small>		Serves as an online freight marketplace with routing/pricing technology	\$92.7 Million	Aleph, ICV, Singapore Exchange, GE Ventures, OurCrowd, Gold Lion Holdings, ICV Capital Partners
 arena		Serves as a product development platform that delivers a cloud platform to optimize supply chains	\$50 Million	SMI Equity, Scale Venture Partners, BA Venture Partners, Otter Capital, IDEO
 BRINGG		Offers a mobile SaaS platform that enables businesses to conveniently manage deliveries	\$29.5 Million	Salesforce Ventures, OG Tech Ventures, Pereg Ventures, Aleph, Cambridge Capital, The Coca-Cola Company
 SMARTDRIVE		Fuel management and driver safety solutions for logistics customers	\$221.2 Million	Michelin North America Inc, WABCO Holdings Inc., Stanford Management Company, NEA, Founders Fund
 INTELLIGENT AUDIT		Supply chain technology service that focuses on reducing transportation costs	NA	NA
 SNOWFALL Technologies		Develops an ecommerce AI platform to enhance operations, order management, and warehouse management	NA	NA
 h. Happy Returns		Provides in-person return services such as immediate refunds for online shoppers	\$14.0 Million	US Venture Partners, Upfront Ventures, Maveron, Lowercase Capital, R/GA Accelerator

Select End-to-end Provider Fundraising Recipients

Company	Country	Description	Total Amount Raised	Notable Investors
		Provides omni-channel commerce solutions including distribution facilities and infrastructure, facility operations and management	\$136.3M mkt. cap	Transcosmos Inc., Renaissance Technologies Corp., AWM Investments, Wellington Trust Co., Privet Fund Management, Engine Capital Management
YNAP		Operates multiple online stores and also provides Web marketing, Web design, consulting, and other Web marketing services	\$118.7 Million	Alabbar Enterprises, Balderton Capital, Francesco Clarelli, 360 Capital Partners
		Provides end-to-end ecommerce solutions in china including T infrastructure setup and integration, warehousing, and order fulfillment.	\$46.8 Million	Alibaba Capital Partners, Goldman Sachs Investment Partners
		Offers end-to-end ecommerce services, such as backoffice integration, digital marketing, logistics and delivery etc.	\$30.3 Million	Transcosmos Inc., eVentures, Inc., Flybridge Capital Partners, e.Bricks Ventures, Deltalpha Capital SA
		Manages end-to-end ecommerce platform, website creation, web marketing, logistics, and customer relationship management	NA	BNP Paribas Développement SA, SCR, Insign
		Provides end-to-end ecommerce services including WMS Logistics solutions	NA	Earnest & Associates, LLC
		Provides end-to-end ecommerce solutions including a strong logistic network, warehousing, customers service and branding	NA	Mitashi Group, E-commerce wing

Unsurprisingly, logistics software players command premiums compared to their industry sub-vertical peers

Revenue multiples¹



■ CY17 ■ CY18

Note: (1) Median revenue multiples as of 10/04/18; applicable for larger and more mature companies globally; multiples may be significantly different for smaller companies in high growth stage

Source: Capital IQ

Select logistics M&A activity

Target	Buyer	Date Announced	Consideration	Deal Commentary
 Cloud Logistics <small>INFINITE INNOVATION™</small>	 E2OPEN	October 1, 2018	Undisclosed	<ul style="list-style-type: none"> Cloud Logistics has set a new standard in transportation management with their innovative technology and rapid deployments. The combination of this technology with the logistics ecosystem on E2open's network will further accelerate time-to-value for existing E2open customers.
 ILG	 Yusen Logistics	August 1, 2018	Undisclosed	<ul style="list-style-type: none"> Yusen Logistics is reinforcing its commitment to continued investment in the UK, and their businesses compliment each other by connecting Yusen's services with ILG's specialist knowledge, people, and infrastructure to deliver full end-to-end B2B and B2C supply chain solutions
 GLOBALTRANZ	 THE JORDAN COMPANY	June 7, 2018	~US\$400 Million	<ul style="list-style-type: none"> GlobalTranz has strong synergies with The Jordan Company's existing portfolio companies The plan is to create one of the leading global software logistics groups and provide the best solution to our customer.
 MXD GROUP	 Ryder	April 3, 2018	~US\$120 Million	<ul style="list-style-type: none"> Provides Ryder the opportunity to tap into an established network in the U.S. and Canada serving manufacturers, retailers, and their customers, who have come to expect rapid deliveries Ryder is focused on e-fulfillment, bettering turnkey solutions including warehousing, distribution, transportation management, home delivery, and glove installation
 P2P <small>covering every corner</small>	 FedEx Express	March 27, 2018	~US\$106.6m (0.9x LTM revenue)	<ul style="list-style-type: none"> P2P's capabilities complement and expand the FedEx portfolio of offerings important to the rapidly growing global e-commerce marketplace. Its industry-leading technology and processes provide plug-and-play options with carrier networks and customer systems.



Fall 2018

Rise of commerce in digital transformation increases technology players' need for agency capabilities

Systems Integrators are evolving into full-service agencies

Evolution of the platform and the partnership:

Traditional systems integration is the process of creating a complex information system that may include designing or building a customized architecture or application, and integrating it with new or existing hardware, packaged or custom software, and communications.

- Rapid commerce innovation and the increasing complexity of consumer demands means retailers must take a holistic approach to compete with giants like Amazon
 - To do this they must partner with best-in-class commerce enablers who provide a full suite of services: technology integration, tailored ecommerce platforms, intuitive user experiences, and engaging, informative content

These modern platforms can no longer be engaged on a project by project basis. Rather, they must be thought of as strategic partners who are consistently involved in delivering value to customers.

SIs with digital agency capabilities are moving away from project-based revenue to a re-occurring revenue model

- Rather than an end project goal, there is constant engagement and product and experience delivery and paired with technology upgrades.

Full service platforms are winning:

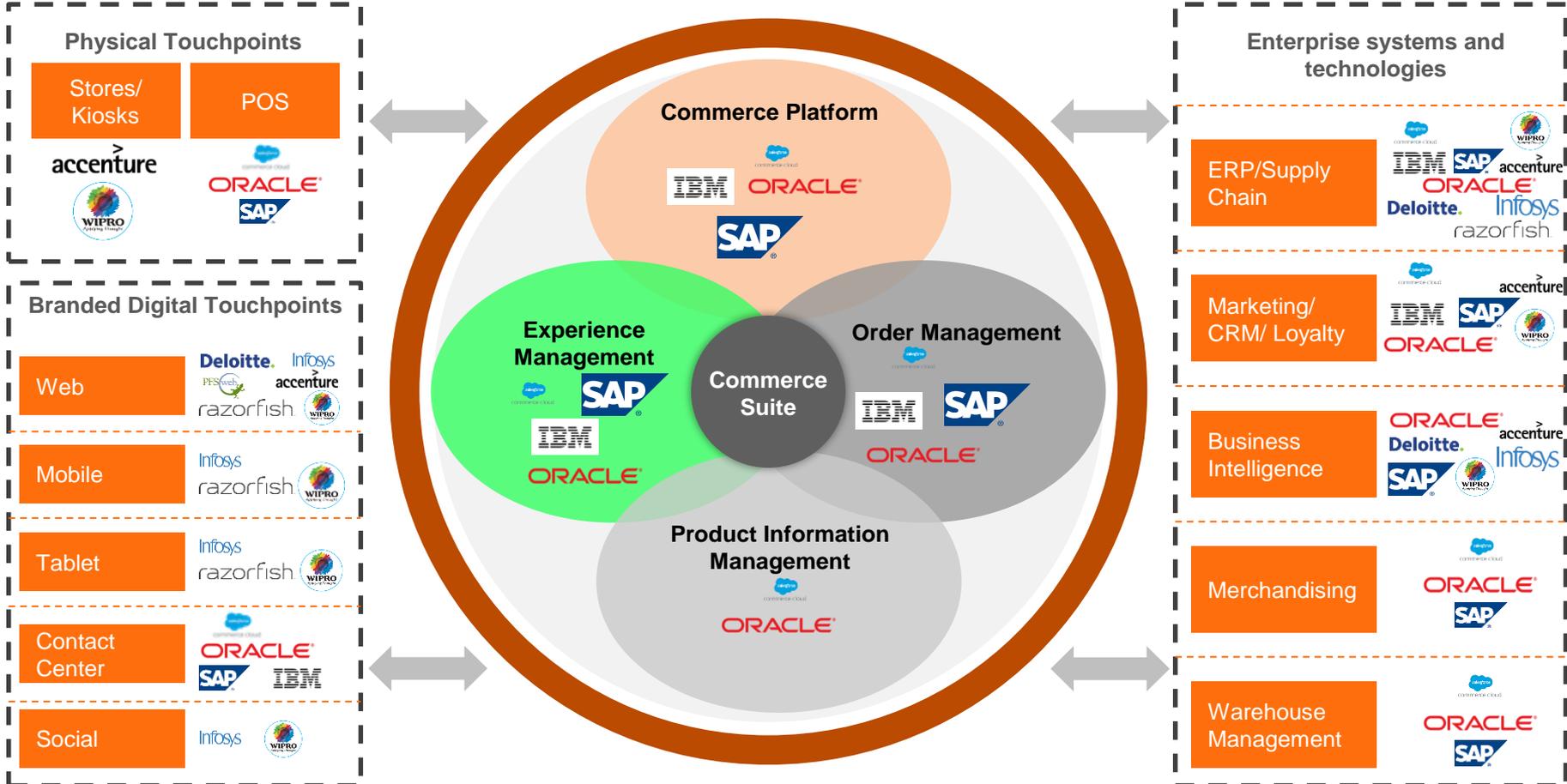
As full service companies, vendors aim to provide digital design, consulting and engagement marketing, along with technical expertise and global reach required to stand out in the crowded ecommerce landscape.

As ecommerce platforms and marketing suites continue to consolidate, such as Salesforce-Demandware and Adobe-Magento, Systems Integrators with Digital Agency capabilities become increasingly valuable.

These combined capabilities in turn make modern Systems Integrators strategic acquisition targets themselves.

The vast complexity of the digital retail ecosystem necessitates SI partners

Top vendors and SIs are rapidly gaining capabilities to service the full ecommerce suite ecosystem



Systems integrators are being challenged to build complete practices capable of implementing and supporting a diverse set of components

Key independent systems integrators and digital agencies

Company	Country	Description	Key Facts
		<ul style="list-style-type: none"> Delivers ecommerce solutions to create and deliver flexible, customizable and high traffic volume solutions for retail and ecommerce businesses Has a network of 800 qualified professionals working for renowned clients such as Adidas, Versace, Men's Wearhouse, Tommy Hilfiger, Hugo Boss, Crocs and Avenue 	<ul style="list-style-type: none"> Has successful partnerships with leading players like IBM, Netsuite, KIBO, Magento, SAP and Salesforce In March 2018, merged with Fluid, a leading digital customer experience and software solutions company, to create a next generation commerce-led digital experience agency. The company aims to benefit from Fluid's customer experience, design, UX, digital marketing and strategy services
		<ul style="list-style-type: none"> Develops and offers ecommerce solutions on the Magento platform It offers ecommerce strategy development, design, optimization, and managed services 	<ul style="list-style-type: none"> On Oct 19, 2017 raised an undisclosed sum from Transcosmos Inc. via private placement Has already delivered tailored commerce solutions to more than 400 B2B and B2C brands and merchants globally
		<ul style="list-style-type: none"> Delivers ecommerce solutions to retail clients via online-platforms such as Magento, SAP and Shopify Plus. The company creates luxury commerce experiences for customers Has offices in New York, Los Angeles, and London 	<ul style="list-style-type: none"> Corra offers retailers omnichannel strategy guidance, digital data analysis, visual strategies, and data-driven designs Two of its trusted personalization partners, Dynamic Yield and Monetate, were named leaders in the 2018 Gartner Magic Quadrant for Personalization Engines
		<ul style="list-style-type: none"> Develops comprehensive end-to-end ecommerce solutions for Fortune 1000, Global 2000, and brand name companies Key clients include P&G, LEGO, AAFES, Riverbed, InfoPrint Solutions Co., Hawker Beechcraft Corp. and Xerox 	<ul style="list-style-type: none"> The company is listed on Nasdaq with a market cap of ~\$141 Million and raised ~\$15 Million in its last private placement funding round from Transcosmos Inc. in 2013
		<ul style="list-style-type: none"> Offers customer-centric commerce solutions for manufacturers and merchants in B2C and B2B markets Services include conversion rate optimization, acceleration, and flexible cloud solutions 	<ul style="list-style-type: none"> Key clients include Foot Locker, Relax the Back, Hyundai, and Bentley Prince Street Has successful partnerships with leading players like Magento, Salesforce commerce cloud, Shopify, and EPR.

Influential SI and agency transactions shaping the landscape

Many large transactions highlight value of capability and service expansion

Target	Buyer	Date	Consideration	Multiples	Deal Rationale
		Announced: Aug 8, 2018	NA	NA	<ul style="list-style-type: none"> ▪ Wider coverage: Will give Wunderman commerce a wider footprint across North America to provide brands and retailers with a best-in-class experience-driven commerce offering
		Closed: Mar 05, 2018	NA	NA	<ul style="list-style-type: none"> ▪ An integrated company: The merger will double Astound Commerce's US operations and adds a presence in New York to expand on the company's global presence
		Announced: Sep 20, 2017	NA	NA	<ul style="list-style-type: none"> ▪ Strengthen of position: Will accelerate Capgemini's growth strategy focused on enhancing digital customer experience, notably in North America
		Closed: Apr 12, 2017	NA	NA	<ul style="list-style-type: none"> ▪ Expansion of services: S4 Capital acquired MediaMonks as part of growth strategy to create a new era media solution embracing data, content and technology. Will also increase its global presence and worldwide client base
		Closed: Apr 12, 2017	\$97.8m	LTM Rev \$51.6m: 1.9x LTM EBITDA \$5.6m: 17.0x NTM Revenue: 1.7x NTM EBITDA: 14.0x	<ul style="list-style-type: none"> ▪ Expansion of services offered: Accenture acquired 62% in SinnerSchrader to expand customer experience offering in Germany. Also to drive expansion of its digital agency, Accenture Interactive's presence in Germany, Austria and Switzerland

Fall 2018

D2C customization driving business model innovation

New consumer demands are fueling customization & on-demand supply chains

- After decades of growth through new store development, retailers are investing more in innovation and are thinking differently about how to respond to changing consumer preferences.
 - In order to meet the needs of their customers, the marketplace for personalized goods & platforms that allows brands to create custom products is driving the creation of new business models, distinctly different from traditional retail.
- Unlike the classical B2C relationship which goes one way, customization allows customers to add value to the company by harnessing their insights. If the product fails, it can be withdrawn fast, and if it works, it can scale up.
 - These new models create businesses with lighter or even negative working capital that can help fund their own growth. This new model, Print-on-Demand, bears none of the inventory, capital or other working capital requirement for product fulfilment, greatly reducing inventory risk.
 - Gen Z continues to fuel this trend with interests in actively sharing their opinions, collaborating and co-creating with brands.
- Gen Zers want direct value that is tailored to them individually and the ability to co-create an experience that is uniquely their own, according to an IBM survey.
 - By 2020 there will be over 2.56 billion people born after 1995, creating one of the largest groups of purchasers

Customer Data



Capture more online data

Use engaging content, such as entertainment and live shows, to keep consumers online

Translate data into actionable insights

Integrate data from the entire value chain (including customer feedback, transaction data, and social media) into a single customer view

Access to distribution



Launch products through a rapid, asset-light approach

Distribute products through e-commerce channels only

Pilot tests limit launches to specific business units, customer segments, or geographic markets

Flexible manufacturing



Use shorter production runs with faster turnaround time

Develop an agile supply chain in order to react quickly to changes in consumer demand and to economically produce a greater variety of products

Agile Product Develop



Focus on speed

Get products out quickly, capture feedback, shutdown unsuccessful launches, and scale up the winners

The rise of customization makes agile supply chains key to modern retail strategy

On demand customization funding landscape



On demand is in prime focus for consumers: a statistical approach

50%

Consumers feel that customized products can make great gifts

25%

Consumers are willing to pay more to receive a personalized product or service

50%

More consumers expressed interest in purchasing a graphic customized products or services in some categories

70%

More retailers are trying to personalize their store experience for consumers

48%

Gen Z prefers to use tools that allow them to customize products

55%

Gen Z prefers to have the ability to design products that nobody else owns

22%

Consumers are happy to share some data in return for a more personalized customer product or service

"We are investing in VIDA because of its innovative and fast-moving approach to disrupting the large market for retail-grade consumer products via mass customization."

-Cimpress CEO, Robert Keane

"Digital transformation is no longer optional. It is required for brands to improve customer experiences and remain competitive. The research findings are further evidence that bringing together customer intelligence and customer experience to drive personalization has a direct impact on a brand's bottom line."

-Epsilon Research

Etsy TAM ~ \$155B

RB TAM ~ \$60B

cimpress™ TAM ~ \$100B

Select on demand customization fundraising recipients

Company	Country	Description	Total Amount Raised	Notable Investors
 ETSY		Online marketplace for buying and selling handmade and vintage items	\$97.3 Million (Mkt.Cap: \$5,317.1m)	Union Square Ventures, Manatt Venture Fund, Mosaic Ventures, Index Ventures, Accel, Glynn Cap. Mgmt., Breyer Capital
 REDBUBBLE		An online marketplace for print on demand products based on user-submitted artwork	\$55.8 Million	Piton Capital, Acom Capital, Blackbird Ventures (Australia)
 zazzle		An American online marketplace that allows designers and customers to create their own products	\$46.0 Million	Transcosmos, Kleiner Perkins, Sherpalo Ventures
 CustomInk		An online retail company that makes custom apparel such as T-shirts and sweatshirts	\$40.6 Million	Revolution Growth, ORIX Ventures
 cafe press		A retailer of personalized products that offers gifts and accessories	\$15.5 Million (Mkt. Cap.: \$21.6m)	Stenberg Venture Partners, PacRim Venture Partners, New Millenium Partners, Sequoia Capital
 spread shirt		Provides an ecommerce platform for on-demand printing of clothing & accessories	\$12.7 Million	Kennet Partners, Accel
 THE STUDIO		An on-demand manufacturing platform specializing in apparels and accessories	\$11.0 Million	Ignition Partners, VTF Capital
 GEARLAUNCH		Provides an E2E commerce platform that enables online retailers to build online businesses	\$4.8 Million	Hunt Technology Ventures
 VIDA		An ecommerce platform that bridges the gap between designers and consumers to provide apparels	\$0.12 Million	Google Ventures, YCombinator, Halogen Ventures, Azure Capital Partners, The Valley Fund, Slow Ventures
TAYLOR STITCH		Apparel company selling crowd-funded products on their workshop platform	NA	NA

Fall 2018

Farfetch IPO as a case study for strong growth in digital retail platforms

Key Highlights of the IPO

Overview of the transaction

- On August 20, 2018, Farfetch filed Form F-1 with the U.S. Securities & Exchange Commission (SEC) through an IPO to facilitate sale of shares by some existing investors. As such the Company will not receive any funds from the IPO proceeds.
- Farfetch plans to have a dual class stock structure with Class A and Class B shares. Both class will have equal financial rights, but different voting rights. Class A shares will have 1:1 votes, while Class B shares (held by the CEO Jose Neves) will have 1:20 votes.
- The Company plans to list its shares on the NYSE. The number of shares to be sold in the IPO and their price is yet to be decided.
- JD.com, the major shareholder in the Company would maintain its stake post the IPO by buying fresh Class A ordinary shares from the Company.
- The global market for personal luxury goods was estimated to be worth \$307bn in 2017 and is expected to reach \$446bn by 2025, according to Bain, and is largely characterized by family-controlled companies, brand integrity, longstanding relationships and fragmented supply

Significance of the transaction

- The Farfetch IPO has been anticipated for a while considering the strong growth in the luxury fashion e-commerce sales, and several companies.
- The industry has seen significant investment demand reflected in several new investments in the recent times such as:
 - ❑ In Sep 2017, acquisition of Matchesfashion.com by Apax Partners for \$1bn+
 - ❑ In Dec 2017, Moda Operandi raised \$165m in venture funding, led by Apax Partners
 - ❑ In 2015, Yoox, Net-a-Porter acquired by Richemont, the Swiss luxury goods company, was taken private earlier this year by a total buyout.
 - ❑ In 2017, Farfetch too attracted ~\$400m in strategic investment from JD.com



Farfetch Overview

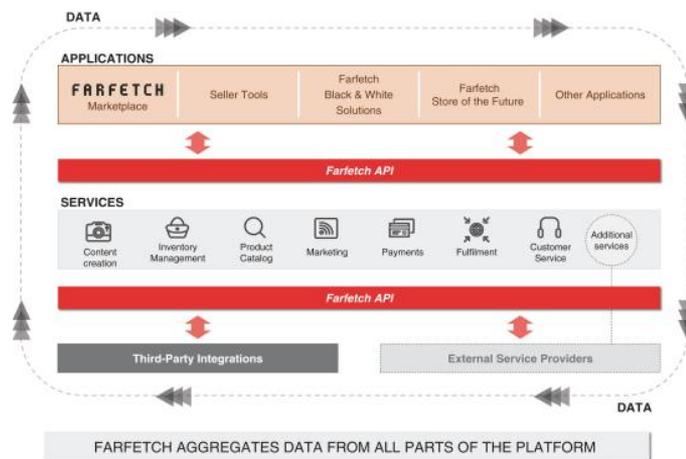
Company Overview

FARFETCH

Founder, Co-chairman and CEO José Neves
Headquarters London, UK
Founded 2007
Employees 3,009 (June 2018)

- Farfetch is a technology platform for the global luxury fashion industry
- It offer merchandise across multiple categories, including womenswear, menswear, kidswear, vintage, fine watches and fine jewelry
- **The Farfetch Marketplace** is the first and largest application built on its platform. As of June 30, 2018, it has connected over 2.3 million Marketplace consumers in 190 countries to over 980 luxury sellers
- The company operates on a revenue-share model where it retains commissions and related income from these transactions
- Reported by December 31, 2017, the company had over 935K active customers and GMV of \$909.8m
- In May 2015, the company acquired Browns, an iconic British fashion and luxury goods boutique
- It has 13 offices across 9 countries

Platform Overview



- Operates a modular end-to-end technology platform purpose built to connect the luxury fashion ecosystem worldwide
- It is built on an API-enabled proprietary technology stack
- Comprised of three main components: applications, services and data:
 - **Applications:** consists of Farfetch Marketplace, Farfetch Black & White solutions, Farfetch Store for the Future and Seller Tools
 - **Services:** Offers consumers with a localized experience, including after-care in the form of multilingual customer service and free returns processing
 - **Data:** The data science capabilities automate decision making through the application of machine learning to guide merchandizing, targeting, curation and feedback

Farfetch's Growth Strategy

Farfetch plans to focus on the following efforts to continue to attract new customers, to retain existing customers and increase its market share

Improving customer economics and growing customer base

- **Increasing the lifetime value of existing consumers:** Plans to refine its approach to data analytics, allowing it to further optimize and improve its marketing approach and consumer experience
- **Attracting new consumers:** Plans to increase its customer base on emerging markets including China, the Middle East, Latin America and Eastern Europe. The expansion strategy includes offering consumers global access to luxury products that are tailored to local market trends and tastes

Increasing product supply and luxury seller base

- **Increasing supply from existing luxury sellers:** it aims to further increase the depth of its supply from its existing luxury seller base
- **Adding brands, boutiques, department stores and other partners:** plan to further increase the number of luxury sellers in order to expand the assortment and availability of merchandise on marketplace
- **Expanding into new categories and offerings:** plans to create additional opportunities across other luxury categories

Investing in new technologies and innovation

- The company will invest in invest in people, product and infrastructure to drive technological innovation in the luxury industry
- It will also expand Farfetch Black & White and further develop & monetize Farfetch Store of the Future
- It will supplement the growth of its internal service offerings with external third-party providers that can build on its platform to offer complementary services to its consumers and luxury sellers

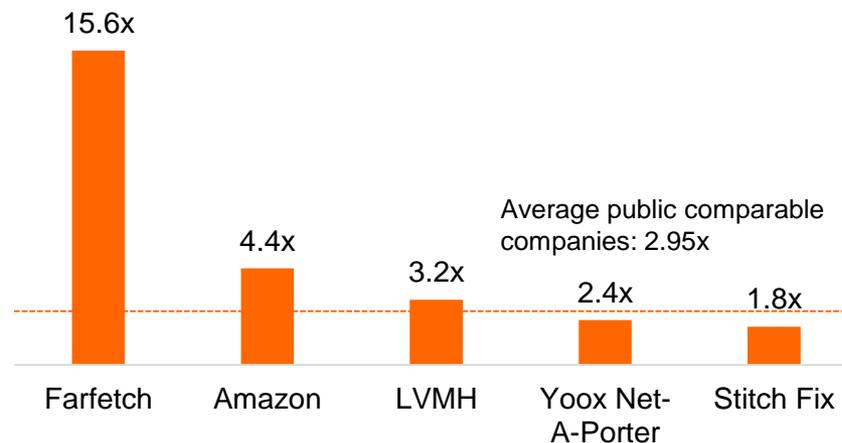
Building the Farfetch brand

- The company has established a significant position in the fashion industry, and plans to grab the opportunity to increase market share by growing its brand awareness.
- The company plans to make continued investment in brand marketing, data-led insights and effective consumer targeting, so that it can expand and strengthen its reach.

Farfetch trading at high multiples relative to its peers

- Just Like Stitch Fix did for its Nov 2017 IPO, Farfetch pitched itself as a tech company to justify its valuation-to-sales multiple
- Notably, Farfetch listed in the US, the largest equity market for tech companies, instead of the UK where it is based
- Based on a TEV of \$7.5b and estimated LTM revenue of \$481m, Farfetch would be valued at a 15.6x sales multiple
 - Farfetch would need to generate sales of \$2.5bn to justify a \$7.5bn valuation, based on the average 2.95x price/sales ratio of its peers
 - In fact, even if the company was valued on par with Amazon, it would still need to generate over \$1.7bn in sales to achieve a \$7.5bn valuation, representing a massive 353% growth rate YoY
 - For context, Farfetch is projected to grow 40.7% in YoY sales at the end of 2018

TEV / Revenue multiples: FarFetch is outpacing Amazon



Note: Public comparable companies, using last 12 month sales, as of 10/18/18

Investors are betting on the future of ecommerce as digital retailers such as Farfetch are reaping the benefits

Fall 2018

d.Lux presents: Investing in and building 3.0 digitally native vertical consumer brands (DNVBs)

DTC: Investing in and building 3.0 digitally native vertical consumer brands (DNVBs)



d.Luxury Brands, in partnership with private equity, is investing in, and actively supporting at an operational level, disruptive digitally native luxury lifestyle brands which are reshaping the retail and consumer experience. In partnership with H.I.G Capital, d.Luxury recently invested \$25 million into leading premium homewares brand, [Parachute Home](#), and is actively assisting the company scale its omni-channel growth strategy, among other initiatives. Of the 1,000+ DNVB's d.Luxury is now tracking, less than 5% are at scale (\$50MM+ revenue). However, over the next few years this number will grow significantly as these now young brands scale and mature.

The great consumer brands of tomorrow, are being created now

- ❖ Many of the greatest future heritage consumer brands, are being created now and in the past 5 years as DNVB's.
- ❖ Digitally native millennials will become the largest generation with the highest spending power in the next few years. Seismic disruption, not just in business models, but in brand relevance to younger Gen X, Y and Z - causing an accelerating shift in market share from traditional brands to DNVBs
- ❖ Digital first business models, platform and mindset will hyper evolve the way consumers and brands interact - online / offline, and products are developed. Exponentially increasing the gap between legacy and DNVBs.

“New luxury” DNVB brands very sustainable

- ❖ The “New luxury” ethos is to live a better quality of life. Wellness, home, experiences are better than a legacy luxury product Consumers are rapidly investing more in new luxury categories.
- ❖ New luxury products are driven less by price vs performance evaluation, and are more highly brand oriented. Therefore less easily disrupted by a better, cheaper product or retailer (eg Amazon)
- ❖ Emotional connection to a lifestyle brand becomes highly valuable in driving sustained customer relationships.
- ❖ New luxury brands typically have higher AOV's, LTV's, and more sustainable customer acquisition economics.

d.Luxury “new luxury” markets for digitally natives



Wellness

Consumers are shifting away from luxury goods in favor of splurging on wellness as a luxury. [72% of millennials](#) would rather spend money on experiences than materials goods. Wellness is a daily active pursuit. Millennials and Gen Z'ers account for 69% of all fitness wearables.



Home

Social media enabled millennials see their home as a creative outlet. Online tools such as augmented reality, social media, online design services such as [Modsy](#) have created a much more relevant and personal buying experience.



Lifestyle apparel and travel accessories

A shift toward “less is more” is occurring. Purchasing is more intentional, with a focus on fewer, better things. Focusing on experience - traveling through daily life better by investing in every day carry items. [Cuyana](#) is a good example of re-inventing this category for a millennial consumer.

Inflection point: DNVB 3.0 key challenges

As we move into 3.0 of the DNVB evolution, brands are facing challenges requiring more advanced operating skills and resources.

Customer acquisition	The digital only customer acquisition model is stalling as digital media costs skyrocket. Multimedia (digital + out of home, TV, etc) marketing becomes a crucial model to solve in order to continue scaling.
Omni-channel	In part driven by rising digital media costs, digital first brands are rapidly adopting a significant physical retail roll out strategy. Integrating online and in store becomes key in ensuring the benefits of being “digital first” aren't lost
International	Many traditional lifestyle brands derive a significant portion of sales from international markets (~40%+). DNVB's will soon need to navigate growing their brand in foreign markets as their home market becomes penetrated.
Operational scaling & value optimization	Not only do the traditional challenges exist (eg people, technology, processes, demand planning, product development), but optimizing the business's value becomes more important now as many DNVB's are already highly valued. Solid exits are needed. All valuation drivers need to be addressed.

The Omnichannel Opportunity



While online sales are growing faster than total retail sales, the ~90% of retail dollars spent on branded consumer products in 'offline' physical stores are the next opportunity for digitally native vertical brands (DNVB's). By 2020, physical stores will still represent [80% of retail spend](#). Even Amazon, the only digitally native retailer in the [top 10](#) retailers by sales volume, is pushing further into the physical world with its acquisition of Wholefoods and new "local" stores helping Amazon jump from number 7 to the number 3 retailer by volume this year.

It's clear that retail is far from dead. But boring, disconnected retail is on life support. New York's Soho district is ground central for the DNVB to Omnichannel evolution. Brands such as Cuyana, Warby Parker, Away, Bonobos, Allbirds, Outdoor Voices, Parachute Home, Everlane and M.Gemi who promoted their digital only credentials, are now established tenants.

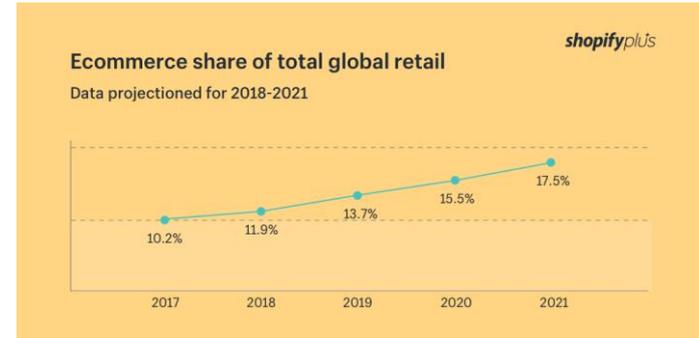
Many factors are contributing to the migration of DNVB's to physical retail

- ❖ Rising online customer acquisition costs
- ❖ Recognition of physical retail as ecommerce acquisition channel
- ❖ Strong unit and customer economics for in-store sales
- ❖ Attractive site opportunities and negotiable landlords
- ❖ Ability to collect detailed customer data
- ❖ The surge in innovation of store technology
- ❖ The influence of digital touchpoints in the purchasing decision - [81% of shoppers](#) conduct online research before big purchases



REBECCA MINKOFF

The trove of customer data acquired by online retailers allows for pin-point accuracy in locating physical stores. Overlaying order history heatmaps with demographic and geographic data allows for considered and confident planning of new locations. The lines between online and offline and traditional vs new retail continue to blur. Data focused and enabled 'traditional' brands (such as [Rebecca Minkoff](#)) who embrace technology will gain market share via constant testing of new ideas. Retailers who look to augment experience and bridge the online-offline worlds will also make gains - Kate Spade and Nordstrom are investing heavily in digitally enabled stores and IoT technology and seeing sales uplifts of up to 30% in some categories.



Customer Experience

For some customers, touch, feel and fit are essential factors in the buying decision. In this way, physical retail can be thought of as an adjacent channel and an opportunity to engage with customers in their preferred arena. Experiential retail further allows for enhanced brand engagement, storytelling and customer satisfaction.

Bridging the advertising gap

Google and Facebook recognize the importance of the 90% of retail happening 'offline' and are racing to capture market share. By targeting local shoppers Google's local inventory ads allowed Adidas to increase store visits by 42% and reduce cost per visit by 52%. Meanwhile out of home advertising (billboard, subway, radio) is an emerging battleground for new retailers.

The Omnichannel Opportunity



The digital-first mindset of DNVB's makes retail expansion a data-centric exercise. Data collection and customer attribution advances have allowed brands to rapidly advance their customer view, adding to improvements in gross revenue, margins and developing customer relationships.

- ❖ [Parachute Home](#) is expanding from 4 stores today to 20 stores by 2020 and is improving the customer journey
- ❖ [Bonobos](#) was an early pioneer of the guideshop model, now with 54 stores which are core to the brand
- ❖ [Casper](#) is growing their 19 stores with an additional 200 this year - as Mattress Firm files for bankruptcy
- ❖ [AdoreMe](#) wants to open 200+ stores to give customers a better bra fitting experience
- ❖ Jewelry brand [AuRate](#) improved a major DMA from 8th best by revenue to 5th by opening a physical location
- ❖ [Chubbies](#) utilizes a lean pop-up model to test and develop new markets
- ❖ [Warby Parker](#) is on track to have 100 stores by the end of 2018
- ❖ [Away](#) is rapidly deploying new locations, and now has a London location making 6 in total
- ❖ [Indochino](#) uses the in-store experience to fuel their customized apparel model
- ❖ [Interior Define](#) gives customers the ability to experience the product first hand and emotionally engage

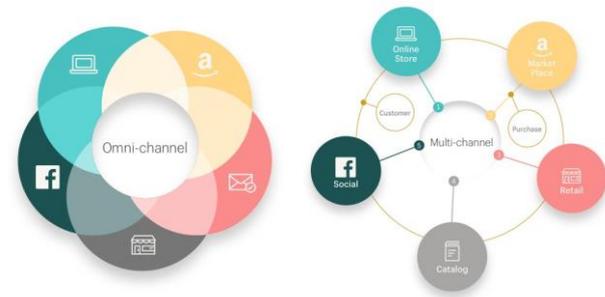


Image via [The Enterprise Guide to Multi-Channel Ecommerce](#)

PARACHUTE **BONOBOS** Casper **AWAY**



Allbirds: Flying into retail

Key to their recent \$1.4b valuation has been the opportunity unlocked by Allbirds' retail expansion. With 3 permanent stores now (NYC, SF, London), they plan to open 8 U.S. stores next year, and 2 internationally. Recent activations for the brand have seen pop-ups and exclusive product with ShakeShack, Nordstrom and Outdoor Voices as well as visits to New Zealand and Canada. Pitched as the 'world's most comfortable shoe' providing customers with the opportunity to feel product is key to the brand's storytelling. With some of the highest product returns of any category, footwear stands to benefit from the in-store try-on experience.

Brick and Mortar Benefits for DNVB's

- ✓ Drives much higher Customer Lifetime Revenue - 2x is the benchmark
- ✓ Opportunity for cross-selling and higher order values
- ✓ Local customer service and convenience
- ✓ Data gathering
- ✓ New market testing and development
- ✓ Mobile device recognition for unified customer view and attribution
- ✓ Retargeting / remarketing
- ✓ Understanding and identifying the customer
- ✓ Develop and activate community with events, VIP outreach and exclusive product
- ✓ Lower product return rates
- ✓ Source of local inventory for quick, last mile low cost delivery