



the rise of the 21st century brand economy

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key takeaways

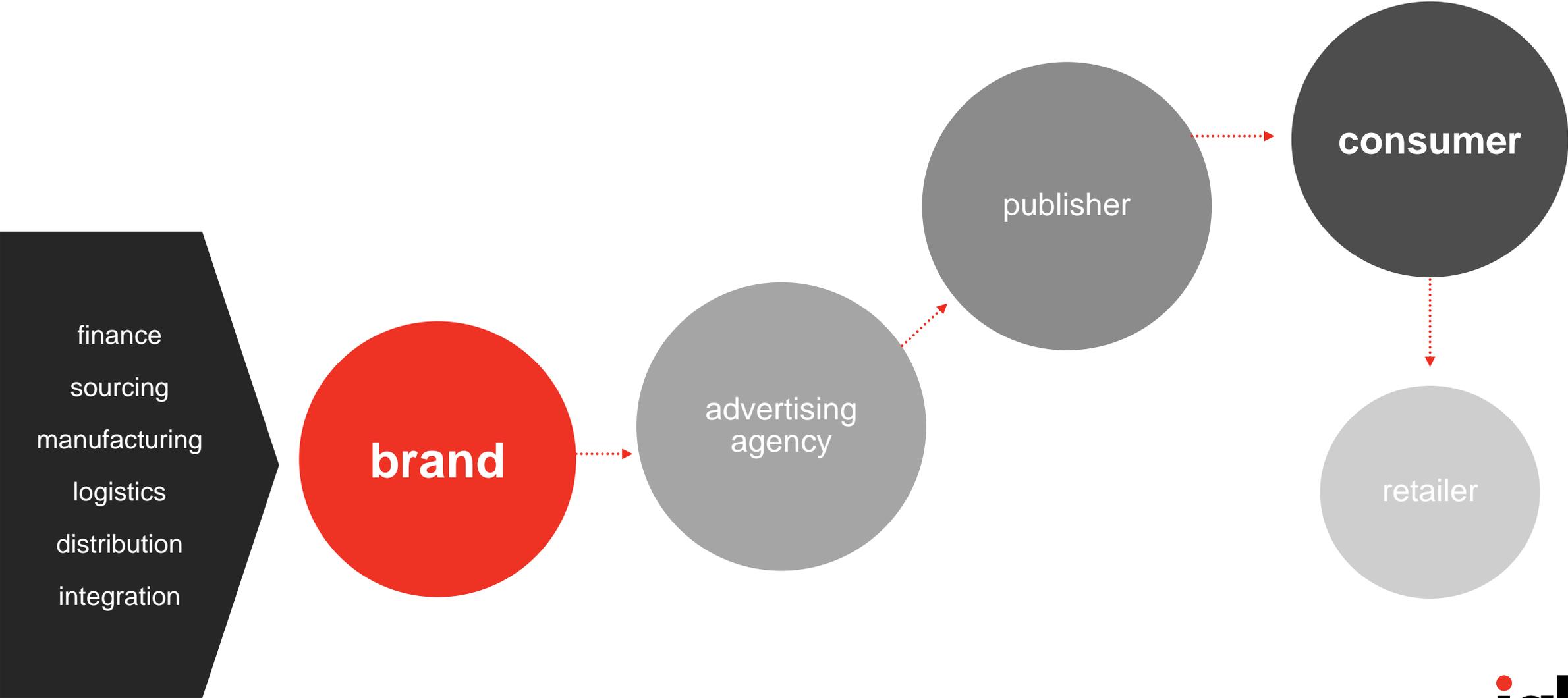
1. Permanent changes in industry supply chains are shifting the center of growth in the U.S. consumer economy.
2. Economic benefits are accruing to firms that create value by tapping into low-barrier-to-entry, capital-flexible, leased or rented supply chains. These include thousands of small firms in all major consumer-facing categories that sell their own branded goods entirely or primarily through their owned-and-operated digital channels.
3. The singular retail fulfillment experience has permanently changed to a variable experience, which in turn transforms all value-creation and –extraction activities before, during, and after the sale.
4. All retail sales growth is shifting from brick-and-mortar stores to digital, data-enriched channels.
5. First-party data relationships are important not for their marketing value independent of other functions, but because they fuel all significant functions of the enterprise, including product development, customer value analysis, and pricing.
6. An arms race for first-party data is influencing strategy, investment, and marketing strategies among major incumbent brands across all categories.



the 21st century brand economy

01. brand growth in crisis

the indirect brand economy, 1879 - 2010



historically, supply chain dominance = market dominance

First mover advantage?

| Brand | '23 | '83 | Brand | '23 | '83 |
|-------------------------|-----|-----|----------------------------|-----|-----|
| Swift's Premium Bacon | 1 | 1 | Sherwin-Williams Paint | 1 | 1 |
| Kellogg's Corn Flakes | 1 | 3 | Hammermill Paper | 1 | 1 |
| Eastman Kodak Cameras | 1 | 1 | Prince Albert Pipe Tobacco | 1 | 1 |
| Del Monte Canned Fruit | 1 | 1 | Gillette Razors | 1 | 1 |
| Hershey's Chocolates | 1 | 2 | Singer Sewing Machines | 1 | 1 |
| Crisco Shortening | 1 | 2 | Manhattan Shirts | 1 | 5 |
| Carnation Canned Milk | 1 | 1 | Coca-Cola Soft Drinks | 1 | 1 |
| Wrigley Chewing Gum | 1 | 1 | Campbell's Soup | 1 | 1 |
| Nabisco Biscuits | 1 | 1 | Ivory Soap | 1 | 1 |
| Eveready Batteries | 1 | 1 | Lipton Tea | 1 | 1 |
| Golden Medal Flour | 1 | 1 | Goodyear Tires | 1 | 1 |
| LifeSavers Mint Candies | 1 | 1 | Palmolive Soap | 1 | 2 |
| Colgate Toothpaste | 1 | 2 | | | |

growth slowing or stopping in much of the U.S. consumer economy

Fortune 500 – Growth rate by sector

Weighted revenue growth by sector (2014-16)

| Rank | Sector | Number of companies | Weighted growth |
|------|-----------------------------|---------------------|-----------------|
| 1 | Healthcare | 45 | 12.6% |
| 2 | Technology | 47 | 6.3% |
| 3 | Food & Drug Stores | 10 | 3.2% |
| 4 | Retail | 45 | 2.1% |
| 5 | Telecommunications | 11 | 2.0% |
| 6 | Transportation | 19 | 1.8% |
| 7 | Financial Services | 78 | 1.1% |
| 8 | Business Services | 19 | 0.5% |
| 9 | Defense & Aerospace | 12 | 0.4% |
| 10 | Engineering & Construction | 12 | 0.4% |
| 11 | Apparel | 5 | 0.3% |
| 12 | Automotives | 17 | 0.2% |
| 13 | Media | 11 | 0.0% |
| 14 | Restaurants and Leisure | 11 | -0.1% |
| 15 | Household Products | 15 | -0.3% |
| 16 | Materials | 20 | -0.6% |
| 17 | Chemicals | 14 | -0.8% |
| 18 | Industrials | 15 | -1.2% |
| 19 | Food, Beverages and Tobacco | 29 | -1.4% |
| 20 | Energy | 64 | -19.0% |

Source: <https://www.zerohedge.com/news/2017-04-05/fortune-500s-fastest-growing-and-shrinking-companies>

the old CPG machine is sputtering ...

US CPG In Store Retail Sales, by Store Type, 52 weeks ending Feb 19, 2017
Billions and % change vs. prior year

| | CPG in-store retail sales | % Change vs. Prior year |
|-------------------|---------------------------|-------------------------|
| Grocery* | \$314.4 | 0.1% |
| Club | \$83.1 | -0.6% |
| Drug | \$49.1 | -0.1% |
| Mass/supercenter* | \$32.0 | -3.0% |
| Dollar | \$15.7 | -0.3% |
| Hardware-home | \$5.0 | -2.0% |
| Health/vitamin | \$1.1 | -3.4% |
| Total** | \$759.5 | 0.5% |

Note: *excludes Walmart; **includes ecommerce
Source: IRI, "IRI Channel Performance Report," July 26, 2017

... and facing severe profit pressures

INDUSTRY OVERVIEW

THE FMCG (FAST-MOVING CONSUMER GOODS) INDUSTRY DECLINED BY \$3B IN 1Q'17, BUT WAS ABLE TO REBOUND TO FINISH +1% IN SALES VS. PRIOR YEAR. SLOW, SELECTIVE GROWTH IS EXPECTED AS DOLLARS SHIFT ACROSS THE STORE TO NEW CATEGORIES AND TO NEW CHANNELS

LEADING GLOBAL BRANDS: 2017 U.S. EARNINGS



(2017 YEAR TO DATE)
(+1%) → \$27.3B



(2017 YEAR TO DATE)
(-7%) → \$10.2B



3Q17
(+.06%) → \$3.3B
*marks the first quarter of growth
in over 2.5 years



(FIRST FISCAL HALF)
2017 (+5%) > \$7.1B



3Q'17
(-4%) → \$4.4B



3Q'17
(-3%) → \$2.7B



3Q'17
(-10%) → \$5.3B

a retail apocalypse ...

Clothing stores and entertainment chains lead store closing surge Q1-Q3 2017 data

6,752 announced store closings

| | |
|-------|--------------------|
| 2,502 | Apparel |
| 1,933 | Home entertainment |
| 735 | Footwear |
| 553 | Department stores |
| 415 | Misc. retail |
| 240 | Bookstores |
| 165 | Jewelry stores |
| 155 | Sporting goods |

- More than 8,600 U.S. retail stores shuttered in 2017
- The number of bankruptcy filings by U.S. retailers, with at least \$250 million in liabilities, nearly doubled in 2016.

Source: <https://www.bloomberg.com/graphics/2017-retail-debt/>

<http://time.com/4865957/death-and-life-shopping-mall/>
[file:///C:/Users/randall/Downloads/kp-pixlee-2017-digitally-native%20\(1\).pdf](file:///C:/Users/randall/Downloads/kp-pixlee-2017-digitally-native%20(1).pdf)

... is propelling sales away from brick-and-mortar stores...

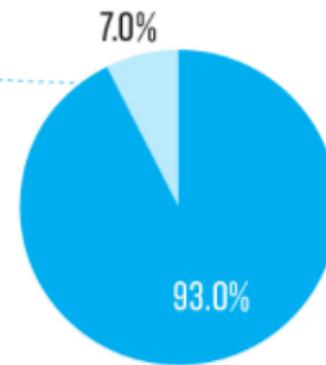
DOLLAR SALES GROWTH ACROSS CHANNELS

Online channels drove 90% of FMCG growth in the last year

TOTAL MARKET - \$ (BILLIONS)
+1.4% VS. YEARS-AGO



\$ SHARE



YEAR-AGO CURRENT

BRICK & MORTAR E-COMMERCE

Source: Nielsen

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... and towards digital channels

Table 1. Estimated Quarterly U.S. Retail Sales: Total and E-commerce¹

(Estimates are based on data from the Monthly Retail Trade Survey and administrative records.)

| Quarter | Retail Sales (millions of dollars) | | E-commerce as a Percent of Total | Percent Change From Prior Quarter | | Percent Change From Same Quarter A Year Ago | |
|-----------------------------|---------------------------------------|------------|---|--------------------------------------|------------|---|------------|
| | Total | E-commerce | | Total | E-commerce | Total | E-commerce |
| Adjusted² | | | | | | | |
| 3rd quarter 2017(p) | 1,268,887 | 115,345 | 9.1 | 1.1 | 3.6 | 4.3 | 15.5 |
| 2nd quarter 2017(r) | 1,254,819 | 111,369 | 8.9 | 0.4 | 4.7 | 4.0 | 16.0 |
| 1st quarter 2017 | 1,250,055 | 106,383 | 8.5 | 1.1 | 4.7 | 5.1 | 15.4 |
| 4th quarter 2016 | 1,236,638 | 101,606 | 8.2 | 1.6 | 1.7 | 3.7 | 14.2 |
| 3rd quarter 2016(r) | 1,217,100 | 99,875 | 8.2 | 0.9 | 4.0 | 2.1 | 15.4 |
| Not Adjusted | | | | | | | |
| 3rd quarter 2017(p) | 1,268,782 | 107,002 | 8.4 | -0.4 | 1.9 | 4.0 | 15.5 |
| 2nd quarter 2017(r) | 1,274,074 | 105,024 | 8.2 | 9.4 | 6.8 | 4.4 | 16.2 |
| 1st quarter 2017 | 1,164,228 | 98,292 | 8.4 | -10.4 | -19.8 | 3.7 | 15.1 |
| 4th quarter 2016 | 1,299,699 | 122,515 | 9.4 | 6.5 | 32.2 | 3.6 | 14.0 |
| 3rd quarter 2016 | 1,220,051 | 92,644 | 7.6 | -0.1 | 2.5 | 2.2 | 15.5 |

(p) Preliminary estimate. (r) Revised estimate.

¹ E-commerce sales are sales of goods and services where the buyer places an order, or the price and terms of the sale are negotiated over an Internet, mobile device (M-commerce), extranet, Electronic Data Interchange (EDI) network, electronic mail, or other comparable online system. Payment may or may not be made online.

² Estimates are adjusted for seasonal variation, but not for price changes. Total sales estimates are also adjusted for trading-day differences and moving holidays.

Note: Table 2 provides estimated measures of sampling variability. For information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions, see http://www.census.gov/retail/mrts/how_surveys_are_collected.html.

innovation-led growth is shifting to smaller DTC & boutique brands

Razors

Gillette's share of the U.S. men's-razors business fell to 54% in 2016, from 70% in 2010. Both Dollar Shave Club and Harry's combined U.S. share rose to 12.2%, from 7.2% in 2015.



innovation-led growth is shifting to smaller DTC & boutique brands

CPG

In 2016, small and medium-sized CPG manufacturers together represented 64% of sales, up from 39% in 2015.



innovation-led growth is shifting to smaller DTC & boutique brands

Contact Lenses

J&J's Acuvue: +8% YOY

Bausch & Lomb: +6% YOY

Hubble Contacts: +20% monthly



innovation-led growth is shifting to smaller DTC & boutique brands

Pet Food

Subscription service The Farmers Dog is averaging 40-50% revenue growth monthly, in a U.S. pet food market projected +4.4% in 2018.



innovation-led growth is shifting to smaller DTC & boutique brands

Mattresses

Dozens of mattress companies selling direct to consumers online garnered more than 5% of the market in 2016, and were projected to double share in 2017.



innovation-led growth is shifting to smaller DTC & boutique brands

Grocery

Grocery store revenue growth is projected to be ~1% annually through 2022. The market for Meal Kits is expected to grow by a factor of 10x over that period.



innovation-led growth is shifting to smaller DTC & boutique brands

Shoes

Sales at U.S. shoe stores in February 2017 fell 5.2%. Online-only players like Allbirds, Jack Erwin, and M.Gemi have gained nearly 15 percentage points of share over five years.

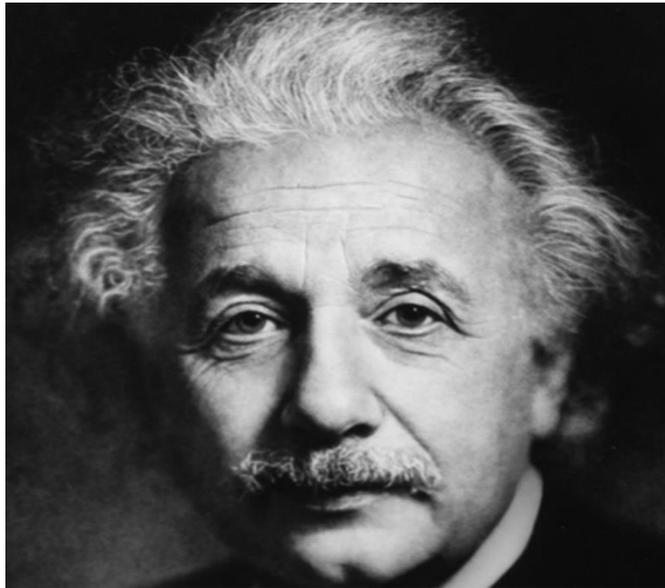


the 21st century brand economy

02. the three last miles

brands must traverse three last miles

TO THE HEAD



TO THE HEART

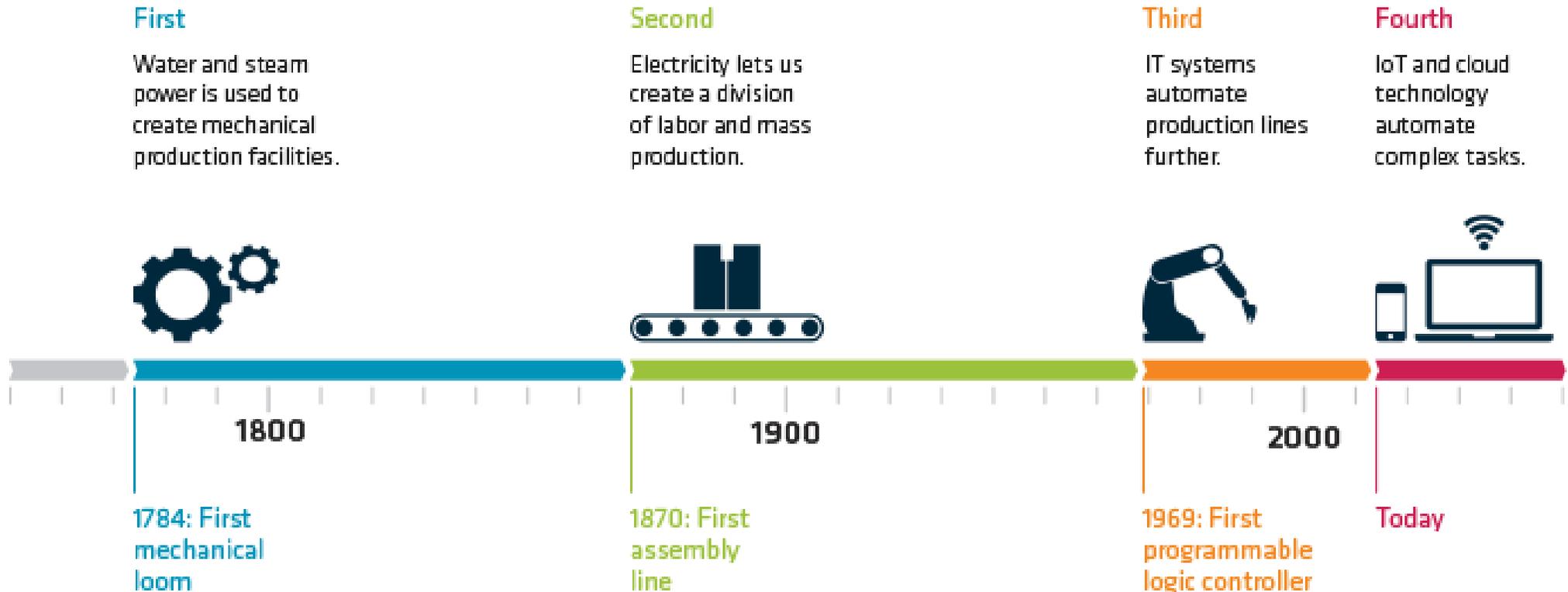


TO THE HOME

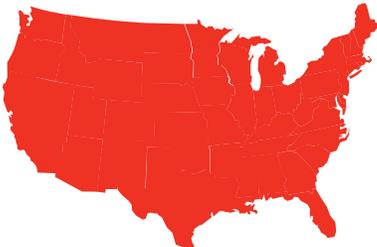


the cloud is closing all three gaps

Industrial Revolution Timeline



the cloud enables the “relocalization” of businesses ...

| Machine | Mechanical Loom | Electricity | IT | The Cloud |
|--------------|---|--|---|---|
| Scale | Local | National | Global | Relocal |
| Relationship | One size fits all | One size fits everywhere | One size fits everywhere greatly | One size fits one |
| |  |  |  |  |
| | 1 st Industrial Revolution | 2 nd Industrial Revolution | 3 rd Industrial Revolution | 4 th Industrial Revolution |

... forcing brands to connect directly with consumers

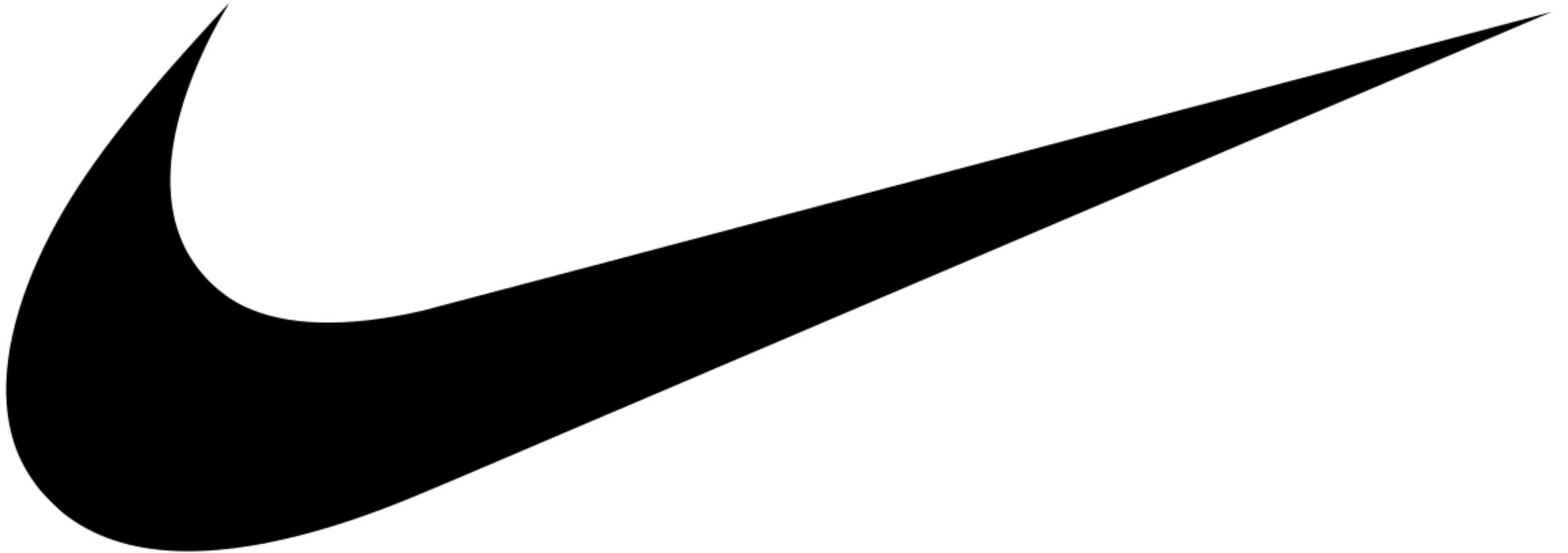
2/3

of consumers
expect direct
brand
connectivity

67%

of consumers have
used a company's
social media site for
servicing

1st party data fuels every enterprise function



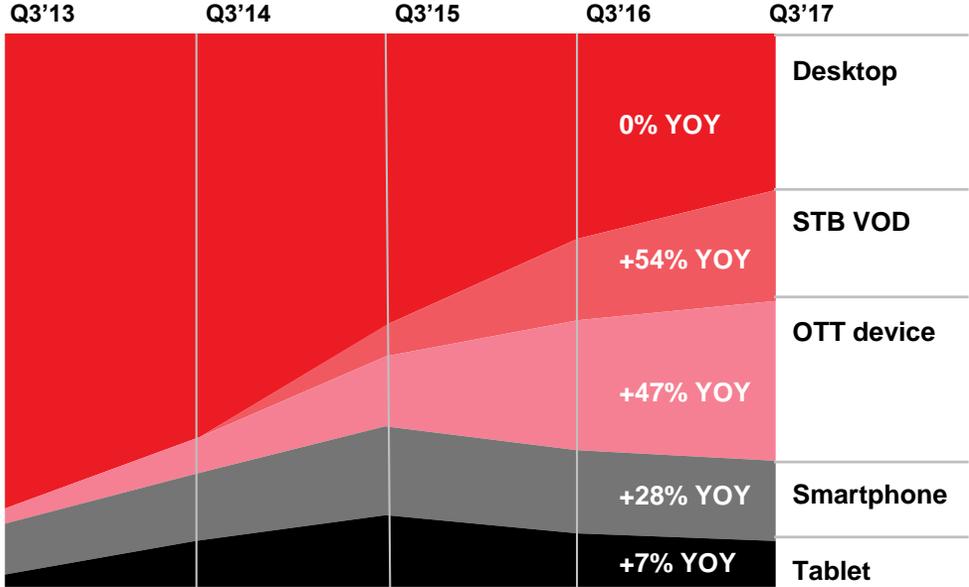
the cloud hosts the race to e-tail (and its richer trove of data)

“What CPGs lack more than anything is actionable consumer data,” says Brian Cohen, head of digital integration at marketing agency Catapult. “A DTC engine allows them to collect insights directly.”



the cloud turns media into data

Ad view composition and growth by device, US Q3 2013 – Q3 2017

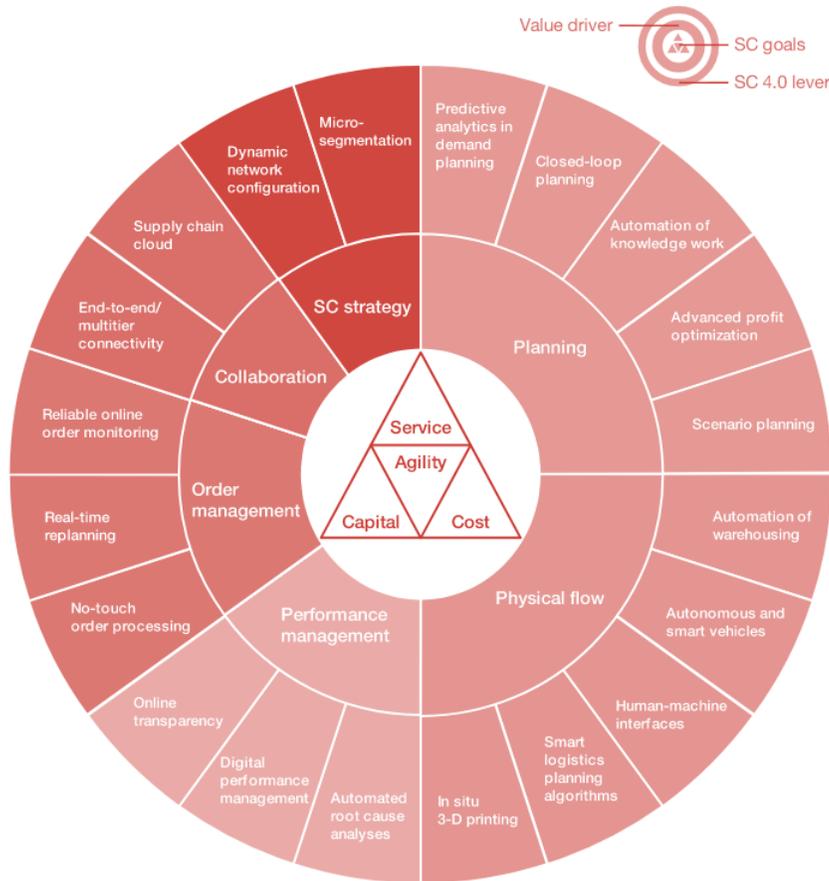


*FourFronts STB VOD and Canoe Phase III Integrations.

the cloud powers rentable, “stack your own” supply chains ...



known as “SCaaS” (supply chain as a service) in the field



“ Rather than maintaining resources and capabilities in-house, companies can buy individual supply-chain functions as a service on a by-usage basis. Service providers’ greater specialization creates economies of scale and scope, increasing the potential for attractive outsourcing opportunities.

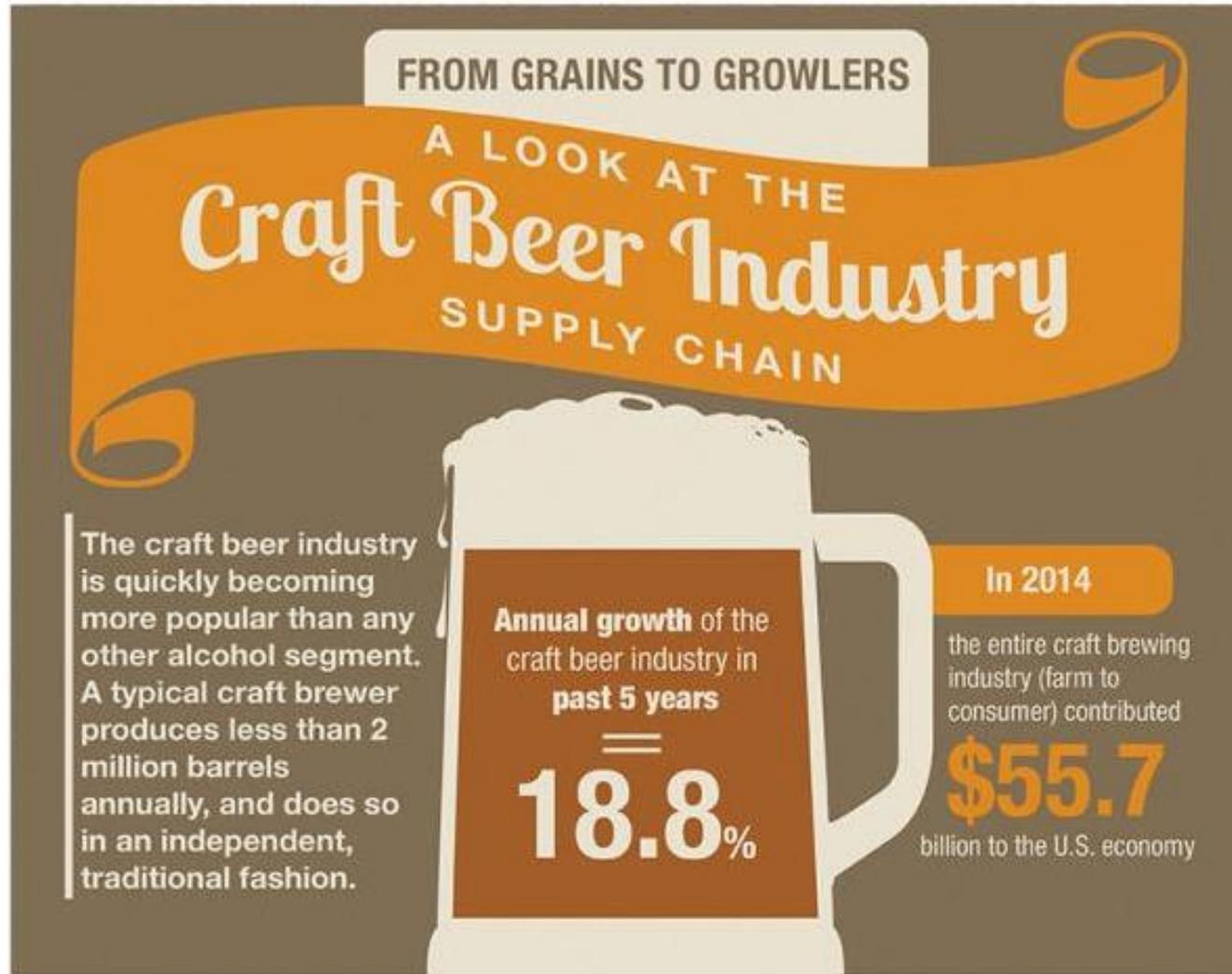
McKinsey

”

your better toothpastes, delivered



entry costs in consumer industries are plummeting



new fulfillment formats are proliferating ...

EMERGING BUSINESS MODELS

| Direct-to-Consumer | Subscription Commerce |
|--|---|
|         |     |
| On-Demand | Secondhand products |
|       |        |

Source: CB Insights

Source: CB Insights

@cbinsights #globalecomm

www.cbinsights.com

60

... with consumer fragmentation breeding even newer formats

Intentional consumption, "lean closet"



Personal curation



VR stores



Shareable experiences

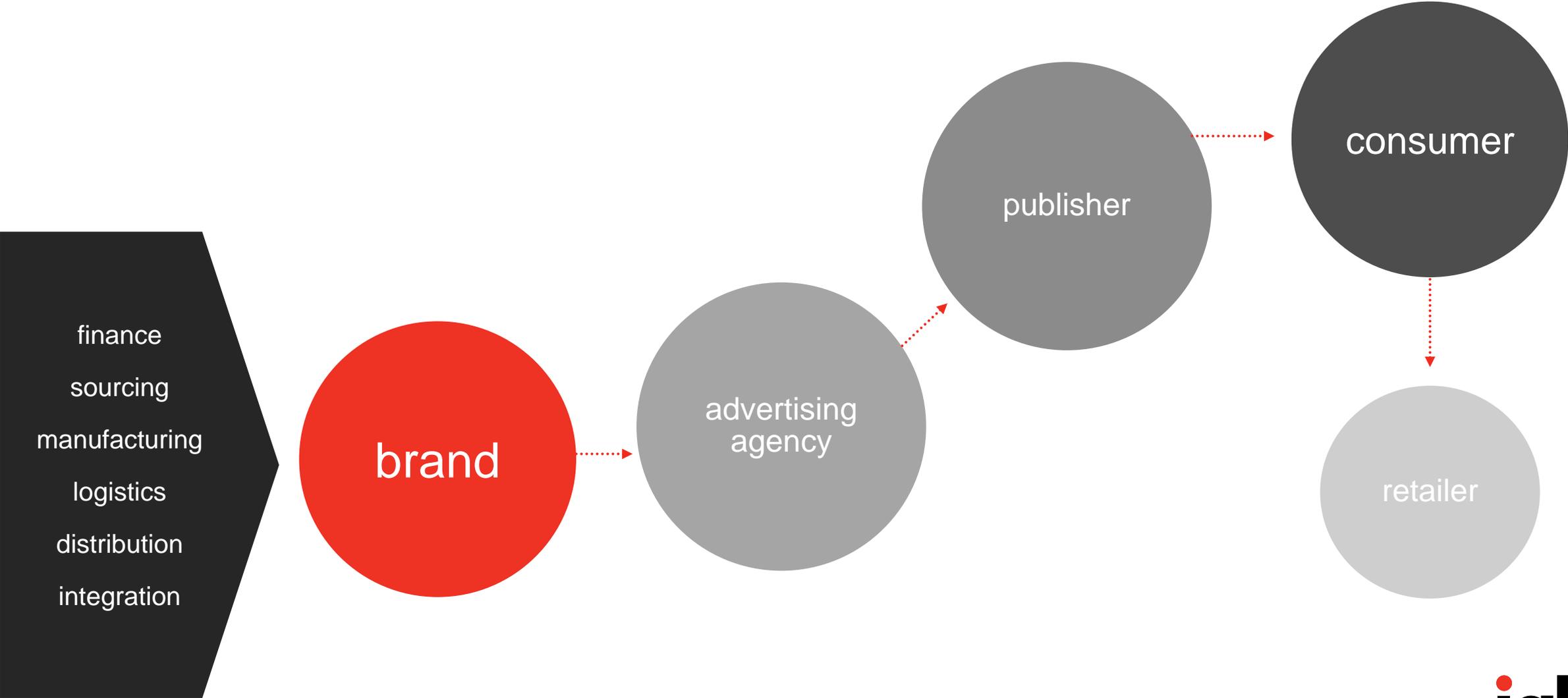


Premium platform partnerships

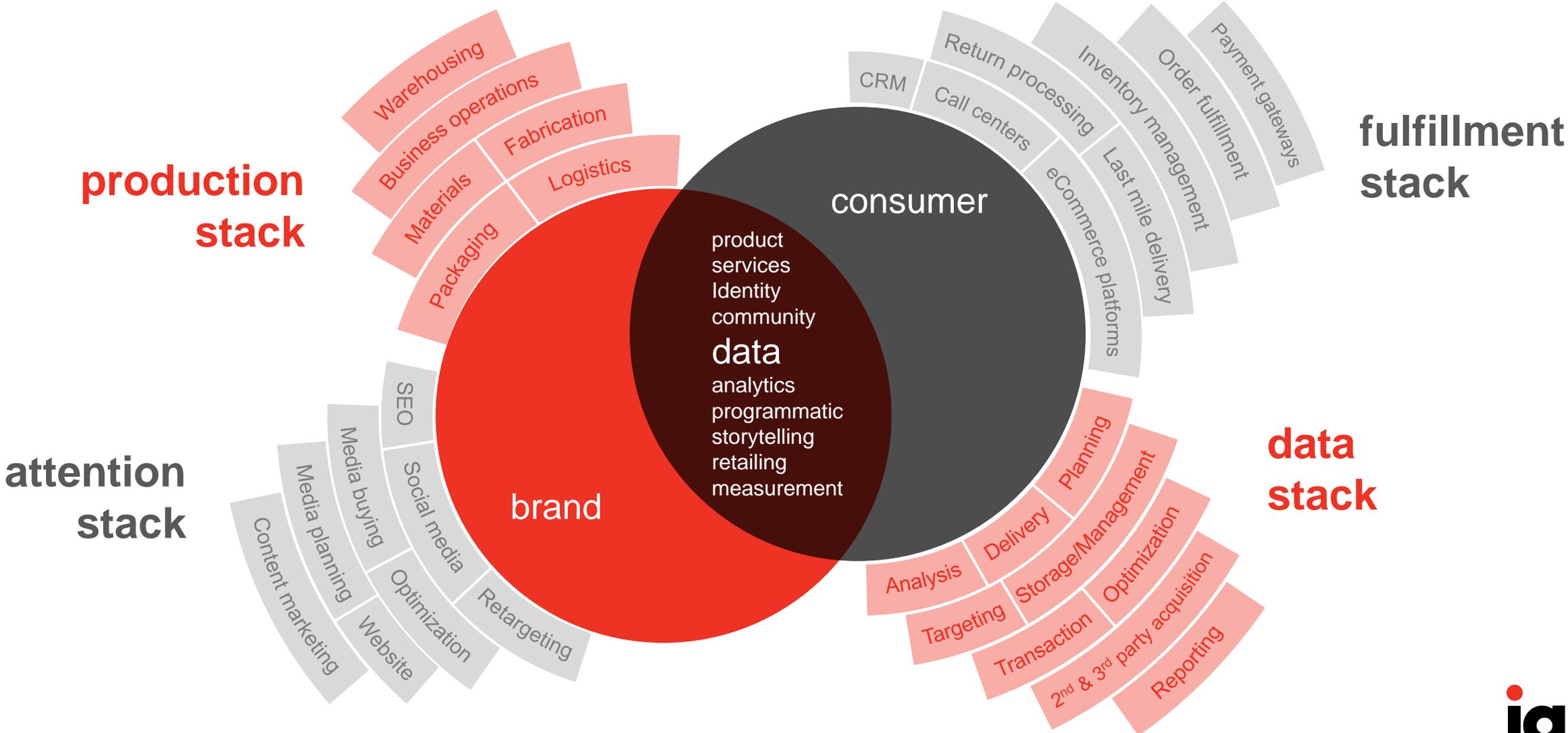
Flash selling



the indirect brand economy, 1879 - 2010



the direct brand economy, 2010 +



D2C companies keep emerging.



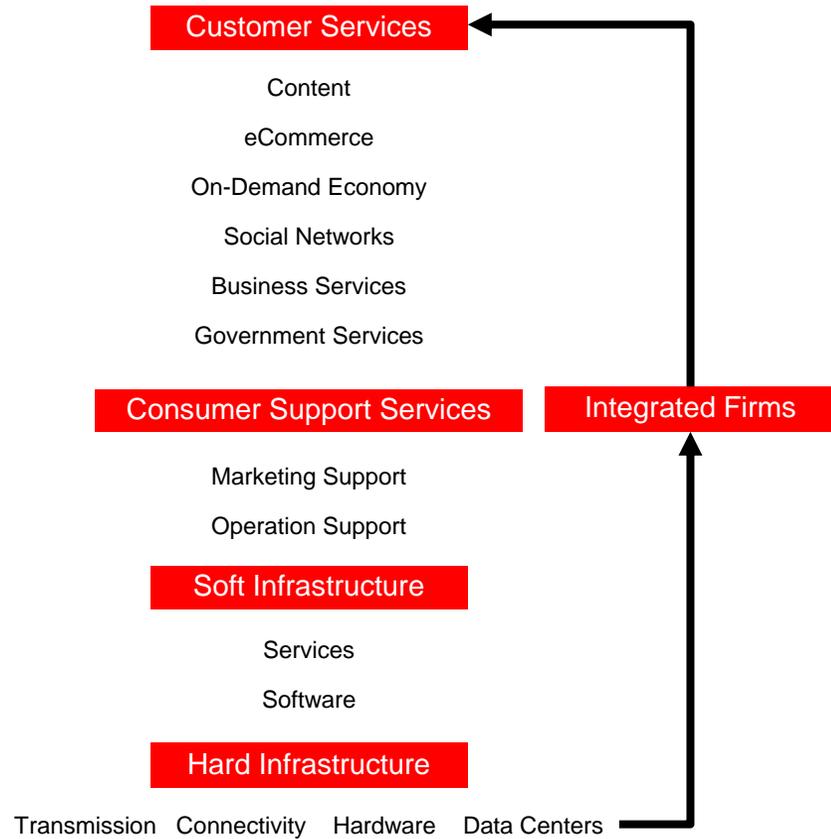
the direct brand revolution is already evident in GDP...

Contribution of the Internet Ecosystem to U.S. GDP

| | 2008 Report | 2012 Report | 2016 Report |
|--------------------------------------|---------------|---------------|-----------------|
| Direct employment due to internet | 1,015,000 | 1,999,000 | 4,097,001 |
| Direct and derived employment | 3,050,000 | 5,100,000 | 10,383,000 |
| Contribution of internet to GOP | \$300 billion | \$530 billion | \$1,121 billion |
| Growth in GDP (% per annum compound) | | 15.5% | 20.0% |
| Share of Total US GDP | 2.1% | 3.7% | 6.0% |

... and jobs

Structure of the Internet 2016



| Layer | 2008 U.S. Employment | 2012 U.S. Employment | 2016 U.S. Employment |
|---|----------------------|----------------------|----------------------|
| Infrastructure/Hard infrastructure | 140,000 | 420,000 | 304,393 |
| Infrastructure support/Soft infrastructure | 165,000 | 254,000 | 662,691 |
| Consumer services support | 190,000 | 435,000 | 1,068,364 |
| Consumer services | 520,000 | 885,000 | 1,619,335 |
| Integrated firms | | | 442,218 |
| Total | 1,015,000 | 1,999,000 | 4,097,001 |
| Growth in employment (% per annum compound) | | 18.5% | 19.6% |

VCs are targeting all consumer categories for DTC disruption

| Category | Global Market Size (\$) | Market Growth (CAGR) | Barriers to Entry | Repeat Rate/Retention | Purchase Frequency | Average Order Value* | Value to Weight Ratio* | Gross Margin* | Manufacturing Complexity | Market Concentration | Market Saturation | Existing Brand Activity | Innovation in the Category | Regulated Industry | Consumable | Good for Subscription | Startups | Large Incumbents |
|---------------------------|-------------------------|----------------------|-------------------|-----------------------|--------------------|----------------------|------------------------|---------------|--------------------------|----------------------|-------------------|-------------------------|----------------------------|--------------------|------------|-----------------------|---|---|
| Anti-Aging | \$140 | 7.5% | High | High | High | Medium | High | High | High | Low | Low | Medium | Yes | Yes | Yes | Yes | Unity Biotechnology, Elysium Health, Teadora | Pfizer, Eli Lilly & Co, Merck, Novartis, Bristol Myers Squibb, Roche, AbbVie, Amgen |
| Baby Care | \$66 | 7.0% | Low | High | High | Medium | Low | Low | Low | Medium | Medium | Low | Yes | No | Yes | Yes | Honest Company, Happiest Baby, Owlet, Giggle, 4Moms, Onuza, Nutrinia | P&G, J&J, Kimberly Clark, Nestle, MeadJohnson |
| Bedding | \$5 | 6.5% | Low | Low | Low | Medium | Medium | Medium | Low | Low | Medium | Low | No | No | No | No | Brookline, Parachute Home, Casper, Jill House Home, Revane | Steinhoff, Ashley Furniture, Serta |
| Beverages (Non-Alcoholic) | \$1,500 | 4.3% | Low | Medium | High | Low | Low | High | Medium | Low | High | High | Yes | Yes | Yes | Yes | Goylent, Dirty Lemon, Ripple, Juicero, Health Aids, Core Water, BulletProof Coffee, Sudden Coffee, Daily Harvest | Coca-Cola, PepsiCo, Nestle, Dr. Pepper Snapple, Danone |
| Cars | \$2,500 | 2.6% | High | Low | Low | High | High | Low | High | Low | High | High | Yes | Yes | No | No | Toyota, VW, GM, Hyundai/Kia, Ford, Nissan, Fiat | Karex, Church & Dwight, RecKit Benkiser |
| Contraceptive (Men's) | \$7 | 9.2% | Medium | Medium | Medium | Low | High | Medium | High | High | Low | Medium | No | Yes | Yes | Yes | L Brands | Pfizer, Merck, J&J, Teva |
| Contraceptive (Women's) | \$15 | 8.0% | High | High | High | Low | High | High | High | High | Medium | Medium | Yes | Yes | Yes | Yes | | J&J, Valiant, Novartis, The Cooper Companies |
| Contact Lenses | \$12 | 7.6% | High | High | High | Medium | High | High | High | High | Low | Low | No | Yes | Yes | Yes | Hubble | P&G, L'Oréal, Unilever, Avon, Beltsdorf, Estee Lauder, Ghiselleo, Kao, LVMH |
| Cosmetics | \$450 | 6.0% | Medium | High | High | Medium | High | High | Medium | High | High | Medium | No | No | Yes | No | Glossier, Memebox, Hush | Estee Lauder, Ghiselleo, Kao, LVMH |
| Eyewear | \$102 | 7.0% | Medium | Medium | Low | High | High | High | Medium | High | Medium | Medium | No | Yes | No | No | Warby Parker, Felix Grey, Zenni | Luxottica, Safilo |
| Feminine Care | \$19 | 6.0% | Low | High | High | Low | High | Medium | Low | High | Low | High | No | Yes | Yes | Yes | Lola, Thinx, LunaPads | P&G, Hanesbrands, Kimberly Clark |
| Food (Packaged) | \$2,400 | 6.4% | Low | Medium | High | Low | Medium | Low | High | Low | High | Medium | Yes | Yes | Yes | Yes | Blue Apron, Plated, Hello Fresh, Sun Basket, Freshly, Thrive Market, Sprig, Nature Box, Hungryroot, Green Chef, Home Chef | Tyson, Kraft, General Mills, Mondelez, Mars, Cargill, J&S |
| Footwear (Children's) | \$25 | 6.0% | Low | Medium | Low | Medium | Low | Medium | Low | Medium | High | Medium | No | No | No | No | Five | Nike, Adidas |
| Footwear (Men's) | \$82 | 2.0% | Low | Medium | Low | Medium | Medium | Medium | Medium | Low | High | High | No | No | No | No | Allbirds, Greats, M.Geml, Jack Erwin, Paul Evans | Nike, Adidas, Asics, Sketchers |
| Footwear (Women's) | \$82 | 1.3% | Medium | Medium | Low | High | Medium | Medium | Medium | Low | High | High | No | No | No | No | M.Geml, Tamara Mellon, Rothy's, Allbirds, Nobull, Shoes of Prey | Coach, Nike, Adidas |
| Furniture | \$250 | 5.8% | Low | Low | Low | High | Low | Medium | High | Medium | Low | Low | Yes | No | No | No | Burrow, Greycork, Tyko, Interior Define | IKEA, Ashley Furniture, Herman Miller, Copeland Furniture |
| Shaving | \$21 | 6.0% | High | High | High | Low | High | High | High | High | Medium | Medium | No | No | Yes | Yes | Dollar Shave Club, Harry's, Ella | Gillette, Schick (Energyizer) |
| Hair Care | \$80 | 3.0% | Medium | Medium | Medium | Low | Medium | High | Medium | Medium | Low | Low | No | No | Yes | Yes | Function of Beauty, Madison Reade, Nutrafol | P&G, Unilever, L'Oréal |
| Hair Loss | \$4 | 5.0% | Medium | High | High | Medium | High | Medium | Medium | High | Low | Low | No | Yes | Yes | Yes | | McNeil, Merck |
| Handbags | \$140 | 8.0% | Low | Medium | Low | High | High | Medium | High | Low | High | High | Yes | No | No | No | Cuyana, Mon Purse, Dagne Dover | Coach, Chanel, Michael Kors, Hermès |
| Hats | \$7 | 4.6% | Low | Low | Low | Medium | High | Medium | Low | High | High | Low | No | No | No | No | | New Era |
| Jewelry (Fashion) | \$25 | 7% | Low | Medium | Medium | Medium | Medium | Medium | Low | Low | High | Low | No | No | No | No | Baubie Bar, Stone & Strand, Mejuri, Wunderlust | Zara, H&M, Swarovski Group |
| Jewelry (Luxury) | \$166 | 5.0% | Medium | Low | Low | High | High | High | High | High | Low | Medium | No | No | No | No | Zale Corp, Tiffany & Co, Kar Scheufé, Richemont, LVMH, Stuller, Van Cleef & Arpels | Meyer |
| Kitchenware | \$15 | 4.0% | Low | Low | Low | High | Low | High | Low | High | Medium | Low | No | No | No | No | Snowie | |
| Luggage | \$34 | 11.5% | Low | Low | Low | High | Low | High | Low | High | Low | Low | No | No | No | No | Away, Raden, BlueSmart, Linjer | Damsonite, Delsey, LVMH, Rimowa |
| Mattresses | \$24 | 6.5% | Low | Low | Low | High | High | High | Low | High | High | Low | No | No | No | No | Casper, Purple, Tuft & Needle, Loom & Leaf, Saatva, Helix Sleep, Boll & Branch, Yogabed | Sealy, Tempurpedic, Serta, Simmons |
| Oral Care | \$10 | 6.8% | Low | Medium | Medium | Low | Medium | Medium | Low | Medium | Medium | Medium | No | No | Yes | No | Quip, Goby, Kolibree | Colgate-Palmolive, Unilever, P&G |
| Pet Food | \$60 | 4.0% | Low | High | High | Medium | Medium | Medium | Medium | High | Low | Medium | No | No | Yes | Yes | NomNomNow, Farmer's Dog, Ollie | Pedigree & Blue Buffalo (Mars) |
| Sexual Wellness | \$20 | 7.0% | Low | Medium | Low | Medium | Medium | Medium | Low | Medium | Low | Low | Yes | No | No | No | Crave, Unbound, Nuelle | Doc Johnson, JimmyJane |
| Skincare | \$121 | 4.9% | Medium | Medium | Medium | Medium | Medium | High | Medium | High | Medium | Medium | Yes | Yes | Yes | Yes | Oars & Alps, Curology, Cane + Austin | Nestle, L'Oréal, J&J, Benefit Cosmetics, Unilever |
| Socks | \$7 | 8.0% | Low | High | Medium | Low | Low | Medium | Low | Low | Low | Low | No | No | No | No | Stance, Nice Laundry, Bombas | Hanesbrands, Fruit of the Loom (Berkshire Hathaway), Glidan |
| Underwear (Men's) | \$9 | 6.0% | Low | Medium | Medium | Low | High | Medium | Low | Low | Low | Low | No | No | No | No | MeUndies, Mack Weldon, Tommy John | Hanesbrands, Fruit of the Loom (Berkshire Hathaway), Glidan |
| Underwear (Women's) | \$28 | 18.0% | Low | High | Medium | Medium | High | Medium | High | Medium | Medium | High | No | No | No | No | Livety, Third Love, Adore Me, True & Co, YellowBerry | Victoria's Secret, The Gap |
| Vitamins & Supplements | \$162 | 6.5% | Low | Medium | High | Low | High | High | Medium | Low | Medium | Medium | Yes | Yes | Yes | Yes | Ritual, Care/of, Elysium | USANA, Pfizer, Otsuka |
| Watches | \$70 | 7.7% | Medium | Medium | Low | High | High | High | High | Low | Medium | High | Yes | No | No | No | Shinola, Leonard & Church, M/MT | Swatch Group, Richemont, LVMH, Rolex |

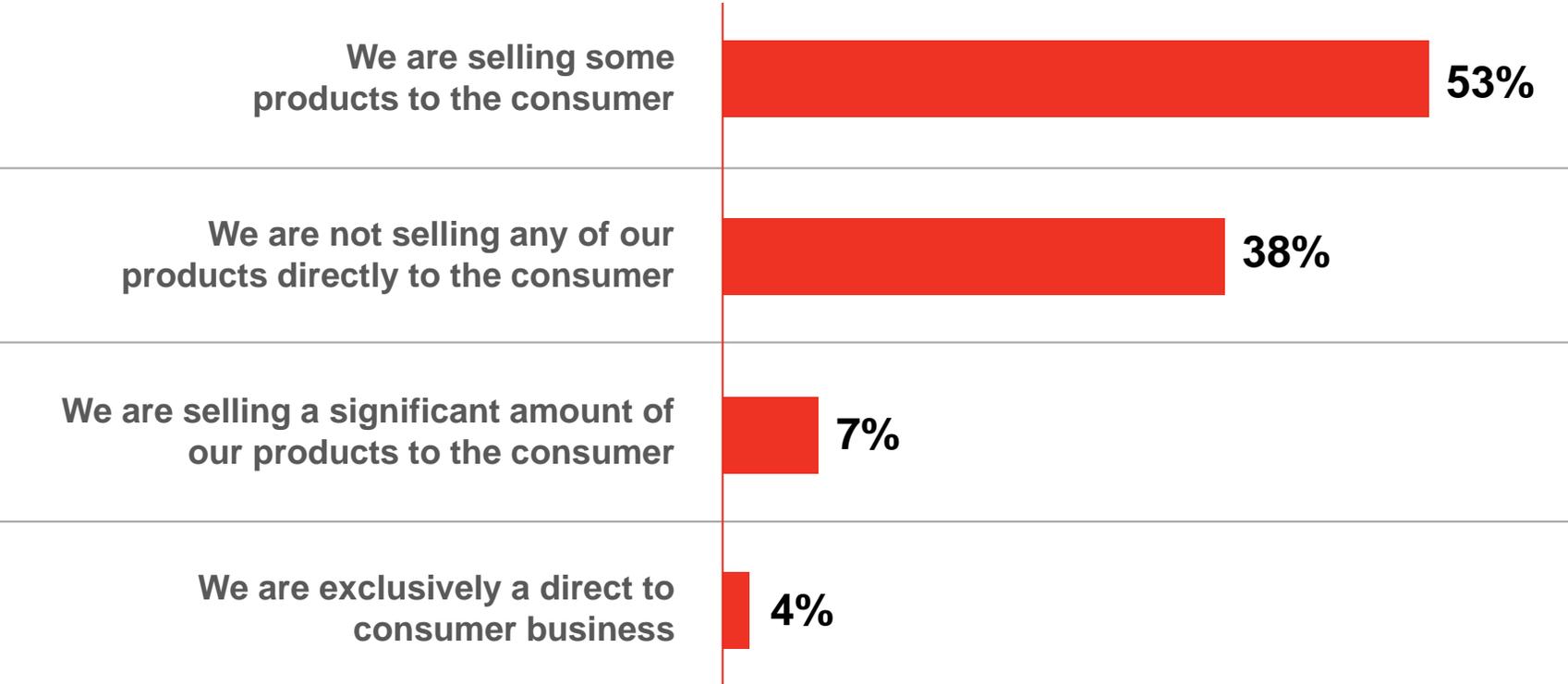
Source: <https://medium.com/@tcitrin/the-direct-to-consumer-landscape-96fd03c563b4>

big brands are being nibbled to death ...



most incumbents lag the direct brand revolution

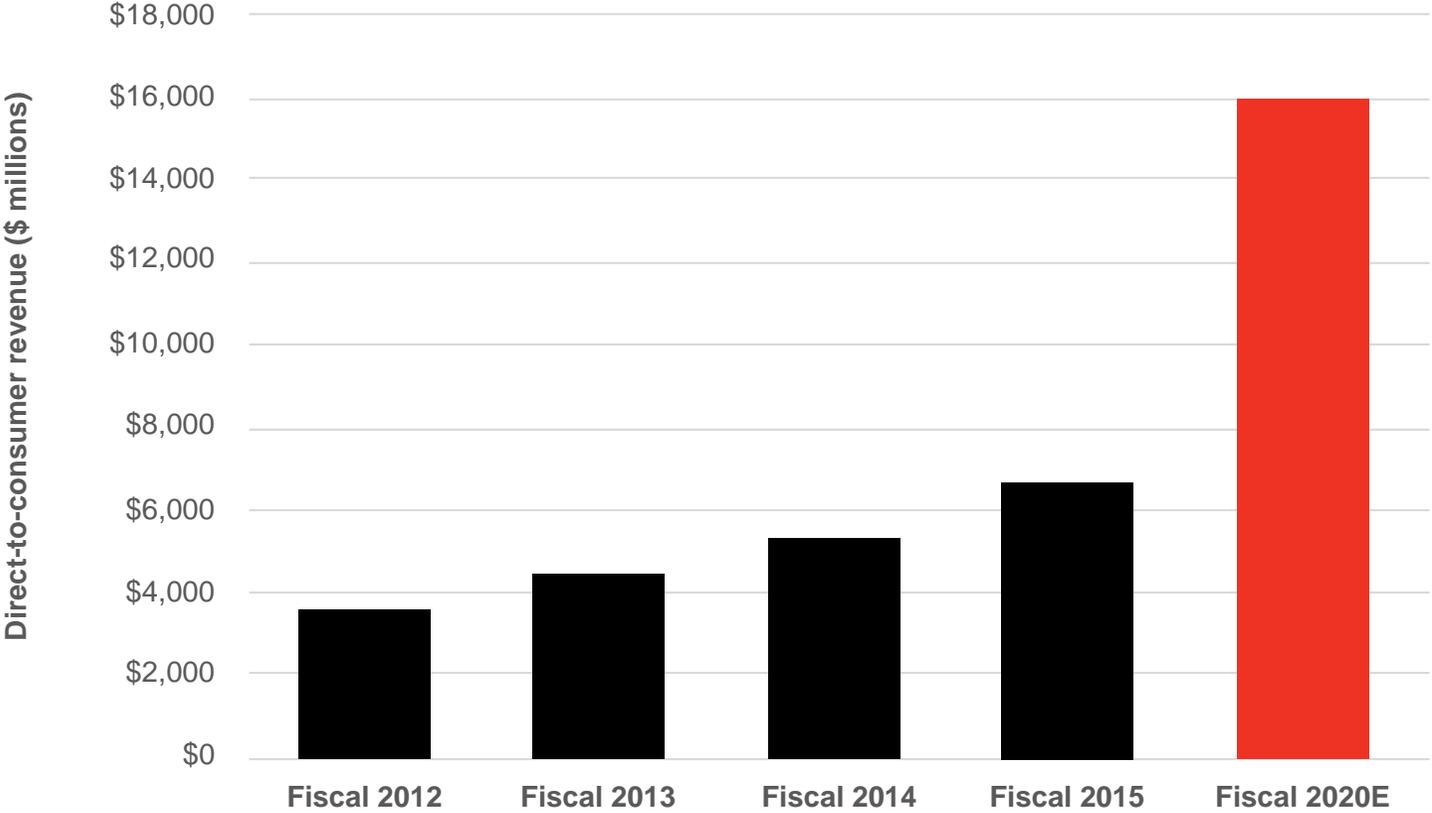
Direct-to-consumer selling



Source: IDC/CGT Sales & Marketing Survey, 2016

some have been adapting for years

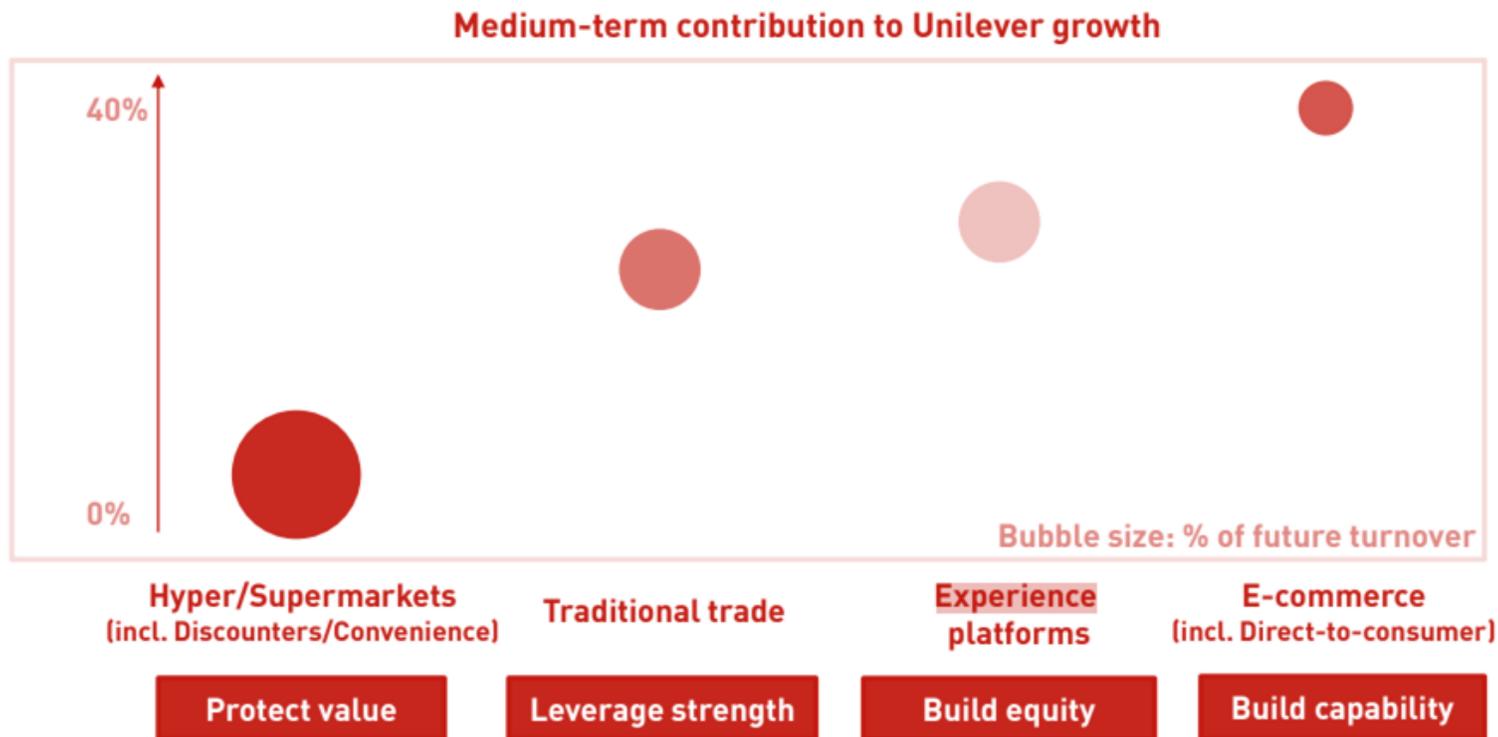
Nike's Direct-to-consumer sales projections



Source: https://marketrealist.com/2016/03/nikes-focusing-higher-dtc-channel-growth?utm_source=market-watch-headline&utm_medium=feed&utm_content=main_permalink&utm_campaign=nikes-focusing-higher-dtc-channel-growth

some are acquiring their way in

Differentiated channel strategies



“ The acquisition brings expertise and technology in direct-to-consumer sales we can use internationally and in other parts of our business. ”

Paul Polman, CEO, Unilever, on acquisition of Dollar Shave Club

the 21st century brand economy

03. direct brands - drivers and characteristics

“dunn’s rules”



“

1. Its primary means of interacting, transacting, and story-telling to consumers is via the web.
2. The DNVB requires the commercialization of an e-commerce channel, but that channel is an enablement layer—it’s not the core asset.
3. The profit losing nature and small scale of the DNVBs leads most traditional retailers to ignore or underestimate these little tadpoles.
4. Some big companies now believe they can make these brands themselves.
5. It is not e-commerce, it’s vertical commerce. The product gross margins are at least double that of e-commerce (e.g. 65% versus 30%). The contribution margins can be 4–5x higher (e.g. 40–50% versus 10%).
6. The digitally-native vertical brand is maniacally focused on the customer experience.
7. The digitally-native vertical brand drives a lot more customer intimacy than it’s competition. The data is better because every transaction and interaction is captured. It’s one CRM. It’s one store, where everybody knows your name.
8. Deeper data on the consumer drives enables the DNVB to stay closer to the customer than its brick and mortar driven peers, and the ownership of the brand end-to-end fuels more affinity for a vertical commerce brand than even the best e-commerce experiences.
9. While born digitally, the DNVB need not end up digital-only.

”

Andy Dunn, founder, Bonobos

direct brands are Web native



WARBY PARKER
eyewear

“By circumventing traditional channels, designing glasses in-house, and engaging with customers directly, we’re able to provide higher-quality, better-looking prescription eyewear at a fraction of the going price.”

*Neil Blumenthal & David Gilboa,
co-founders and co-CEOs, Warby Parker*

direct brands are closer to the customer



“ We think every woman should have the ability to be connected through her beauty knowledge, opinions, products, and routine. ”

Emily Weiss, founder, Glossier

they are “maniacally focused” on customer experience

BIRCHBOX◆

“

The industry has historically focused on its most passionate and avid customers, who drive the majority of sales. Our customers were different. beauty was a part of her life, but not a passion of hers....We saw untapped potential to change her relationship with the category.

”

Katia Beauchamp, co-founder, Birchbox

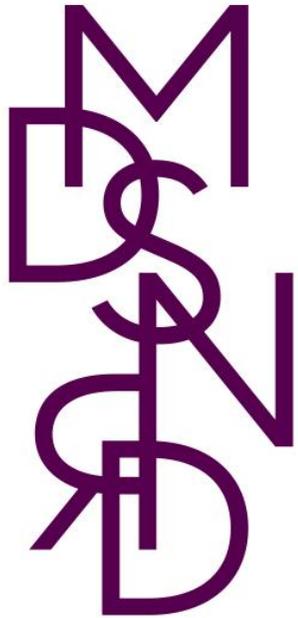
direct brands use content as a differentiator ...



“ Storytelling is a central part of our marketing. We think about what stories we can feed to the press and to social media - things that make people take notice, things people want to share and talk about. ”

Steph Korey, co-founder, Away Travel

... and define content in different ways



MADISONREED™

“ We’re all about content. In fact, all our customer support people are licensed cosmeticians. ”

Amy Errett, founder, Madison Reed

community binds direct brands to their customers

BRANDLESS

TM

“Building a true community means you put people first, are authentic and real with the people you serve, and can connect them to other members with shared affinities.”

Tina Sharkey, co-founder & CEO, Brandless

their mission is their story

EVERLANE

WWW.EVERLANE.COM

“It's really an opportunity to bring the mission to life... the ethics, the transparency. We tell you the cost of everything we make and then what you're paying so you can see that markup and we tell you the stories of our factories, and we want people to have a space where we can actually tell those stories in real life, not just online.”

Michael Preysman, founder, Everlane

direct brands are data-cored



DOLLAR SHAVE CLUB



- Offer highly-differentiated products with high product margins
- Invest only in zero-sum markets (A customer buying your product means they stop buying your competitor's products)
- Choose categories where incumbents sell only through retailers and have no direct relationship with their actual customers
- Choose categories where incumbents overly depend on broadcast advertising
- Look for products and services which gather usage data and utilize machine learning to improve over time



David B. Pakman, partner, Venrock, on the VC firm's investment in Dollar Shave Club

they are becoming multi-channel



“ The main reason a customer wouldn't buy our product online was because they wanted to be able to feel it themselves. We are remedying that with our physical location. ”

Scott Tannen, co-founder and CEO of Boll & Branch

women founders abound



Emily Weiss, *Glossier*



Steph Korey & Jen Rubio, *Away Travel*



Alexandra Wilkis Wilson, *Glamsquad*



Katrina Lake, *Stitch Fix*



Katia Beauchamp, *Birchbox*



Amy Errett, *Madison Reed*



Meaghan Rose & Maia Bittner, *Rockxbox*



Tina Sharkey, *Brandless*

still more women founders



Rachel Blumenthal, *Rockets of Awesome*



Dolly Singh, *Thesis Couture*



Claire Burke, *Goby*



Gauri Nanda & Audry Hill, *Toymail*



Jordana Kier & Alex Friedman, *Lola*



Shane Reilly, *Guildery*

the 21st century brand economy

04. brand strategy for revolutionary times

become

direct

Disney

a two-way
relationship

> a one-way
impression

MAJOR MEDIA AND MARKETING SERVICES

Spending forecast for 2018 and 2017. Spending for 2016.

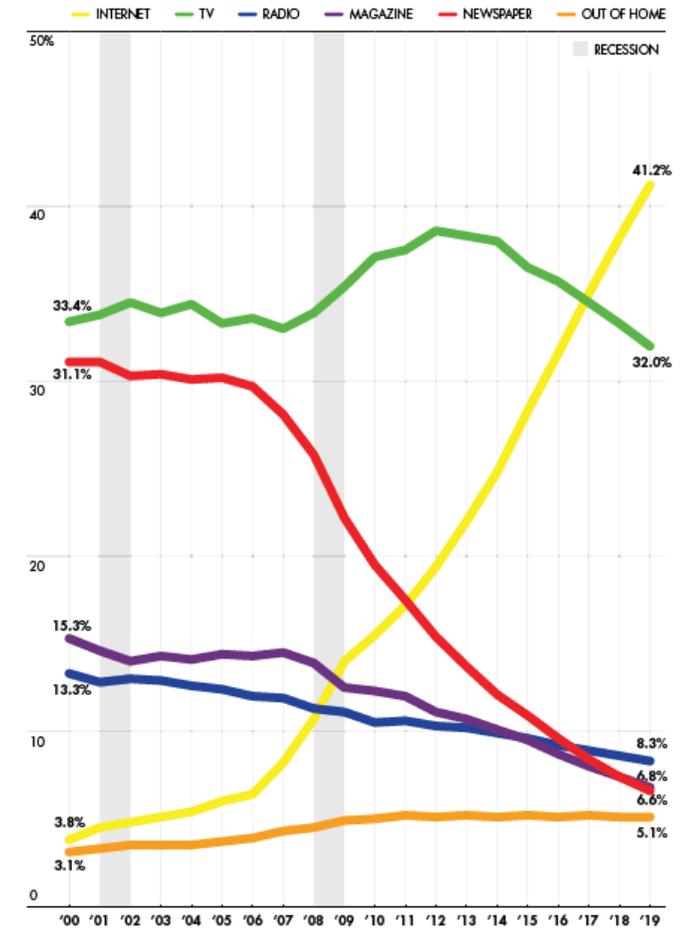
| | Spending (dollars in billions) | | | Year-to-year percent change | | |
|--|--------------------------------|----------------|----------------|-----------------------------|---------------|---------------|
| | 2018 | 2017 | 2016 | 2018 vs. 2017 | 2017 vs. 2016 | 2016 vs. 2015 |
| MAJOR MEDIA | | | | | | |
| Internet | \$78.3 | \$69.2 | \$60.4 | 13.1% | 14.6% | 16.9% |
| TV | 68.1 | 68.4 | 68.1 | -0.3 | 0.3 | 2.1 |
| Radio | 17.6 | 17.6 | 17.6 | 0.0 | 0.0 | 0.0 |
| Magazine | 15.1 | 15.9 | 16.6 | -4.7 | -4.5 | -4.5 |
| Newspaper | 15.1 | 16.6 | 18.3 | -9.0 | -9.0 | -8.0 |
| Outdoor | 9.6 | 9.3 | 8.9 | 3.0 | 4.0 | 4.0 |
| Cinema | 1.0 | 0.9 | 0.9 | 5.0 | 5.0 | 5.0 |
| Total: Major media | 204.8 | 197.9 | 190.8 | 3.5 | 3.7 | 4.5 |
| MARKETING SERVICES | | | | | | |
| Sales promotion | 82.7 | 79.9 | 77.2 | 3.5 | 3.5 | 3.5 |
| Telemarketing | 59.6 | 57.9 | 56.2 | 3.0 | 3.0 | 3.0 |
| Direct mail | 47.6 | 48.5 | 49.2 | -2.0 | -1.4 | -1.1 |
| Event sponsorship | 39.9 | 37.4 | 35.0 | 6.8 | 6.8 | 7.4 |
| Directories | 8.0 | 8.0 | 8.1 | -0.4 | -0.4 | -0.6 |
| Public relations | 5.7 | 5.3 | 5.0 | 7.0 | 7.0 | 7.4 |
| Total: Marketing services | 243.5 | 237.1 | 230.7 | 2.7 | 2.8 | 2.8 |
| Total: Major media and marketing services | \$448.3 | \$435.0 | \$421.5 | 3.1% | 3.2% | 3.6% |

SOURCE: Zenith (Advertising Expenditure Forecasts, March 2017). More info: zenithmedia.com. Numbers rounded. Internet including Internet display, online video (including rich media), classified, paid search, Internet radio, podcasts and social media for desktop and mobile.

200 LEADING NATIONAL ADVERTISERS 2017

SHARE OF U.S. AD SPENDING BY MEDIUM

From Zenith. The internet in 2017 will pass TV to become the largest U.S. ad medium, according to the media agency's forecast.



SOURCE: Zenith (Advertising Expenditure Forecasts, March 2017). More info: zenithmedia.com. Numbers rounded. Internet including Internet display, online video (including rich media), classified, paid search, Internet radio, podcasts and social media for desktop and mobile. Out of home including outdoor and cinema.

brand safety

is not optional

find your next

5,000 customers

“de-risk”

the buy

S U N
D A Y
S K Y

- Platform
- Industries
- Solutions
- Customers
- Company
- Resources
- Blog
- Contact Us

SmartVideo Platform

Captivating the audience of one at enterprise scale with SundaySky's proprietary personalized video technology.

 [See how SmartVideo works](#)



More powerful personalized video

Create one-to-one connections with your customers through the emotional storytelling and compelling nature of [personalized video](#). SundaySky crafts videos tailored to an audience of one with information relevant and specific to each customer, through its unique ability to leverage and synthesize real-time data. The result? A million unique videos for a million customers, creating strong bonds with each and every one of them.

Advertising and CRM solutions built on robust platform capabilities

| | | | | | |
|-----------------|------------------------|------------------------------|---------------------------|------------------------|--------------------------|
| DATA ACTIVATION | STRATEGIC STORYTELLING | PROGRAMMATIC PERSONALIZATION | MULTICHANNEL DISTRIBUTION | MEASUREMENT & INSIGHTS | INTELLIGENT OPTIMIZATION |
|-----------------|------------------------|------------------------------|---------------------------|------------------------|--------------------------|

story

matters



Gimlet
CREATIVE

Blue
Apron

help brands

hybridize



mastercard.
+
marie claire
THE NEXT
Big
THING
CONCEPT
SHOP/

bring brands a
3D view of
their 1D
customer

2017 NBCU PARTNERSHIPS

A LOOK AT CPG PARTNERSHIPS LEVERAGING
SIMILAR THEMES ACROSS NBCU



BRANDED CONTENT



CROSS PLATFORM



TODAY SHOW PLAZA
EXPERIENCE



SPORTS SPONSORSHIP



CULTURAL RELEVANCE

IAB Direct Brands Conference

October 30-31, 2018

IAB 250 2.0

Direct Brands Benchmarking Study

Q4 2018

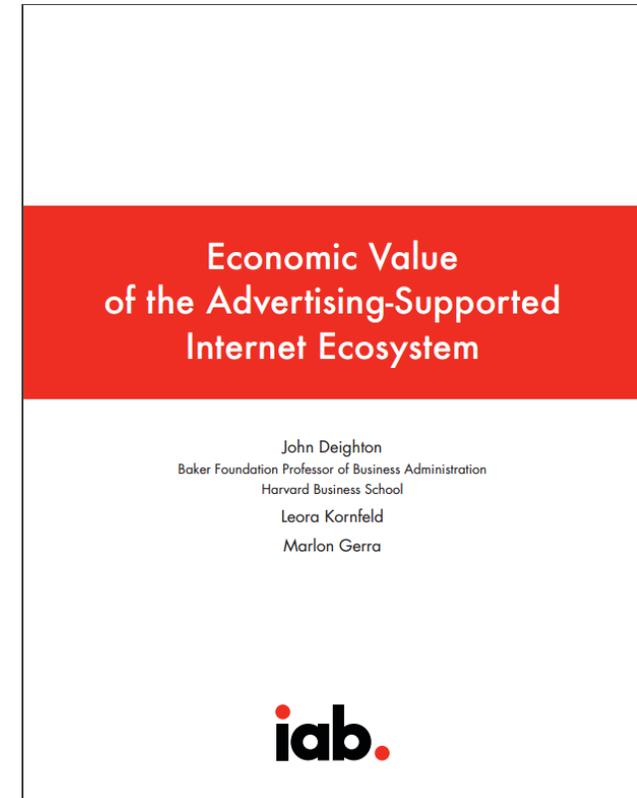
Best Cases

the 21st century brand economy

05. direct brands and the U.S. economy

research background

- IAB has conducted the study “Economic Value of Advertising-Supported Internet Ecosystem” every four years since 2008. The most recent study was released in March 2017.
- The study has been designed to understand the contribution of the industry to employment and GDP and explore the internet’s many advertising benefits and non-business benefits.
- The main author is John Deighton, the Baker Foundation Professor of Business Administration at Harvard Business School, the founding editor of Journal of Interactive Marketing, and a two-term editor of Journal of Consumer Research



For more detail, visit iab.com/economicvalue

research methodology

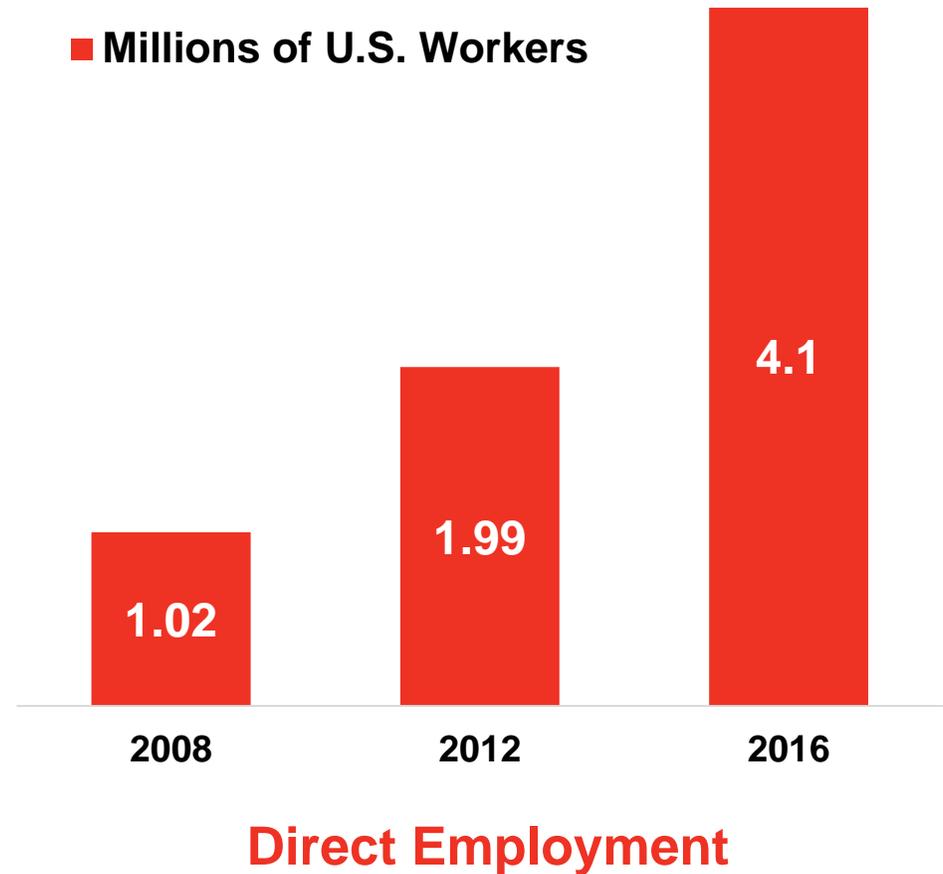
An employment-based methodology by identifying large firms in each layer of the internet and using a range of public and private sources to estimate each firm's revenue and employment as well as estimates of aggregates of small firms and self-employed people.

In addition, the report also uses **a top-down method** based on the U.S. Census Bureau's databases to decide how to allocate the employment to geographies at the state and congressional district level.

The study was conducted during the second half of 2016.

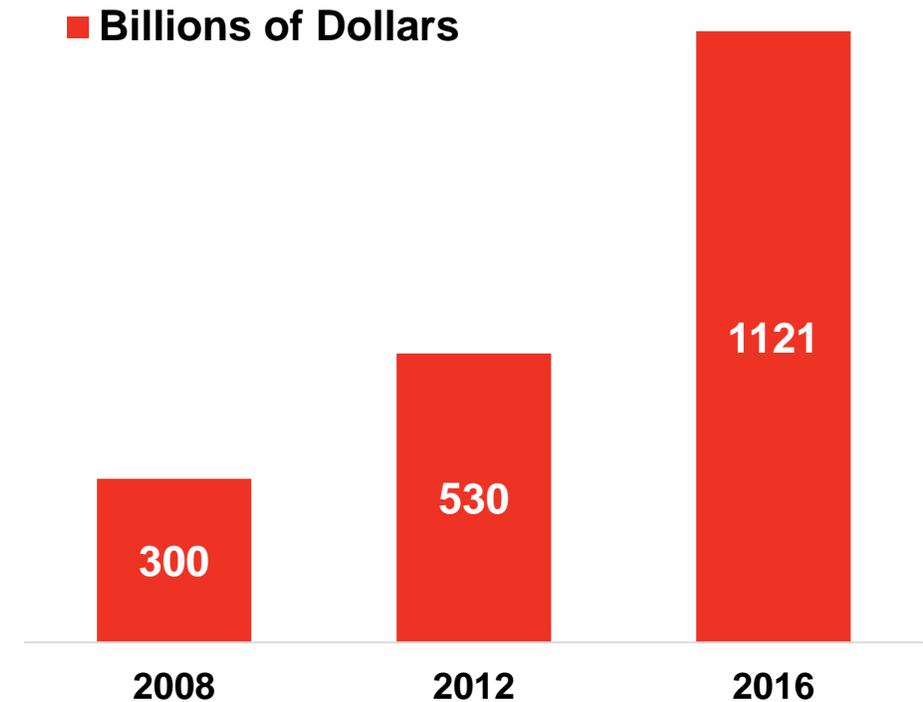
the U.S. already runs on the internet

- The U.S. economy is increasingly an information economy, its fuel is data, and the internet carries the traffic.
- Across three studies at four-year intervals, we find that internet-related employment doubled, and then doubled again.
- Directly and indirectly over 10 million jobs rely on it, and that number is growing at an accelerating rate.



GDP contribution over \$1 trillion

- \$1.12 trillion contribution for the U.S. economy in 2016, more than double its previous contribution to the U.S. GDP.
- The industry currently accounts for 6% of the U.S. GDP, markedly higher than 3.7% in 2012.
- This growth represents a 20% compound annual growth rate from 2012 to 2016 - far outpacing the overall U.S. GDP average of 4% over the same four years.



GDP Contribution

yet the internet is still in its take-off phase

**The rate of
job growth is
greater each
year than the
year before**

**Contribution
to GDP
grows faster
each year**

**New sectors
are becoming
internet-reliant**

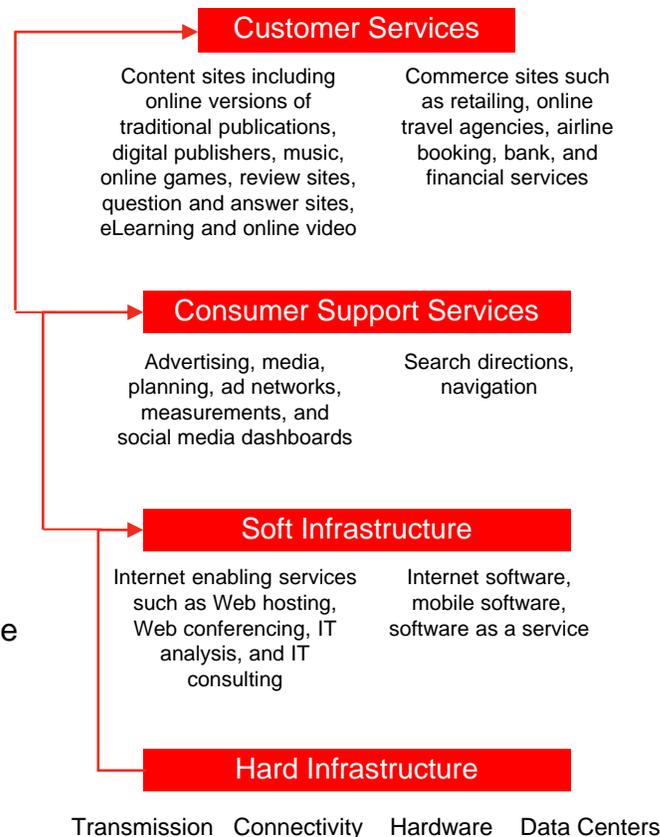
shifting internet infrastructure enables new brands, products, services

Mobile, video, e-commerce, on-demand platforms, user-generated content, music.

Verticals such as financial, e-learning, travel, healthcare, shipping, e-government, programmatic marketing, attribution.

Enterprise IT is giving way to cloud and network services. Video and mobile place new demands on the supply chain.

The infrastructure is evolving from backbone-branches to edge providers.



Examples

Online Video

Most significant new source of internet traffic. Over-the-top transmission gives consumers unprecedented control over what video to watch and when.

New Marketplace

Entrepreneurs have been building out a market-making infrastructure, including advertising tech and marketing tech.

Cloud Computing

Software as a service allows tech to be consumed more flexibly and without substantial fixed cost. Digital startups and mature businesses can tailor information technology costs to needs.

New Infrastructure

Much of the internet's data no longer travels on the backbone. Instead it moves on the edge of the network, from data suppliers to distribution nodes and on to homes.

massive employment changes highlight direct brands' centrality

| Employment by Layer | 2008 Report | 2012 Report | 2016 Report |
|---|------------------|------------------|-------------------|
| <i>Infrastructure/Hard infrastructure</i> | 140,000 | 420,000 | 304,393 |
| <i>Infrastructure Support/Soft Infrastructure</i> | 165,000 | 254,000 | 662,691 |
| <i>Consumer Services Support</i> | 190,000 | 435,000 | 1,068,364 |
| <i>Consumer Services</i> | 520,000 | 885,000 | 1,619,335 |
| <i>Integrated Firms</i> | | | 442,218 |
| Direct employment due to internet | 1,015,000 | 1,999,000 | 4,097,001 |
| Total (Direct and derived) employment | 3,050,000 | 5,100,000 | 10,383,000 |

| GDP Contribution | 2008 Report | 2012 Report | 2016 Report |
|--------------------------------------|---------------|---------------|-----------------|
| Contribution of internet to GDP | \$300 billion | \$530 billion | \$1,121 billion |
| Share of Total US GDP | 2.1% | 3.7% | 6.0% |
| Growth in GDP (% per annum compound) | | 15.5% | 20.0% |

hard Infrastructure: 2x+ growth

Hard Infrastructure

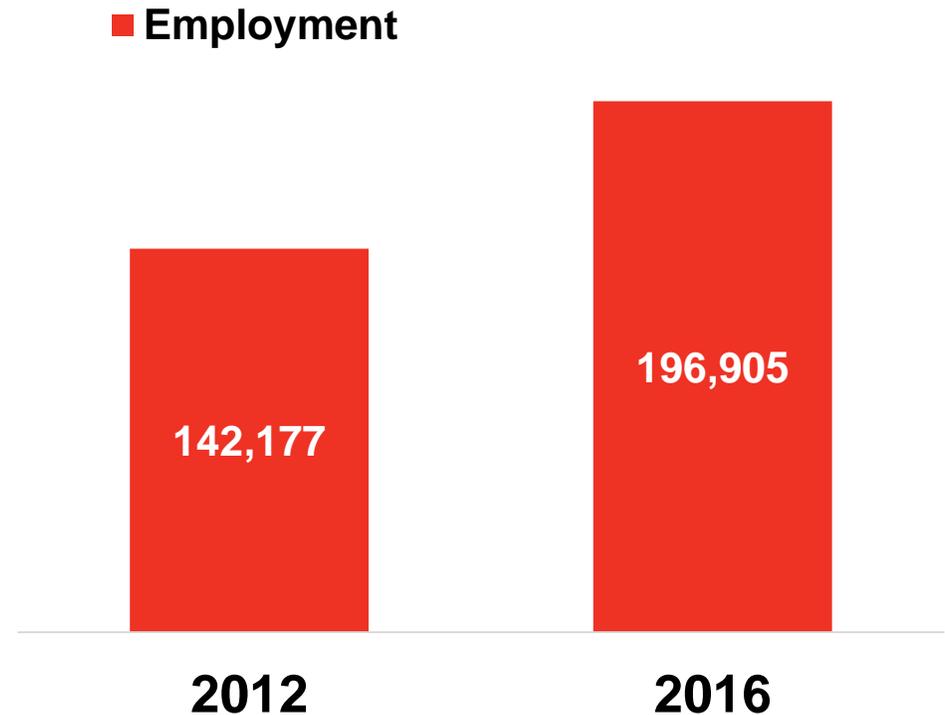
(Four functions required to operate the internet):

1. Manufacture of hardware
2. Long range transmission of data
3. Shorter range connectivity between data generators or transmitters and data stores or consumers
4. Storage and routing of data in data centers

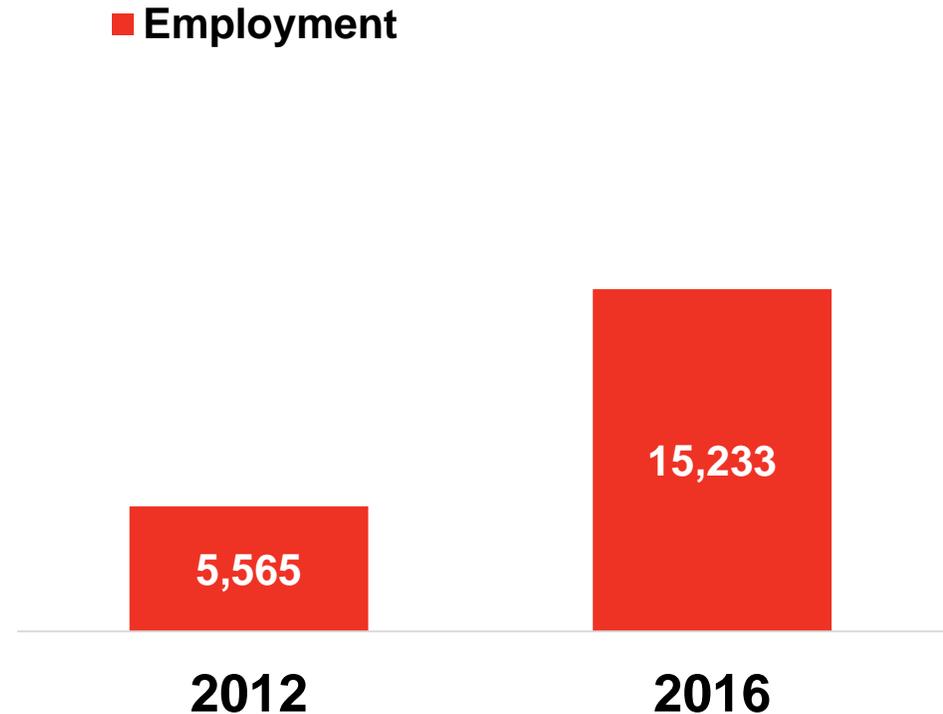
| Employment | 2008 Report | 2012 Report | 2016 Report |
|--|----------------|----------------|----------------|
| Infrastructure/ Hard infrastructure | 140,000 | 420,000 | 304,393 |

Infrastructure employment is declining not because the infrastructure is shrinking, but because firms that were classified as infrastructure just four years ago have changed their business models. Some have integrated into more profitable superstructure businesses, hoping to capitalize on proprietary claims on the internet traffic carriers. Others have exploited a new pattern to the internet's infrastructure, one that depends on software and services more than hardware.

- Manufacturing employment has held up well overall in the last four years of the evolution of the internet ecosystem.
- Personal access to the internet has migrated rapidly from machines configured for computing to mobile devices configured for communication.
- This shift has favored mobile equipment manufacturers like Apple and Qualcomm and those like Cisco that have benefited from growth in server sales, not mainframe computers.



- Data centers are fundamental to the internet's infrastructure as the physical expression of the idea of the cloud.
- The infrastructure of the internet is gradually migrating from a linear data flow pattern to a networked pattern, where data travels as much among firms on the periphery of the internet as on the backbone.
- The backbone-and-branch pattern of the last two decades gives way to the more fluid pattern of the cloud.
- The change shows up in employment of nearly 3x increase from 2012 to 2016.



soft Infrastructure: up 4x

Soft Infrastructure refers to software and services built on the Hard Infrastructure to make it technologically feasible to perform commerce online.

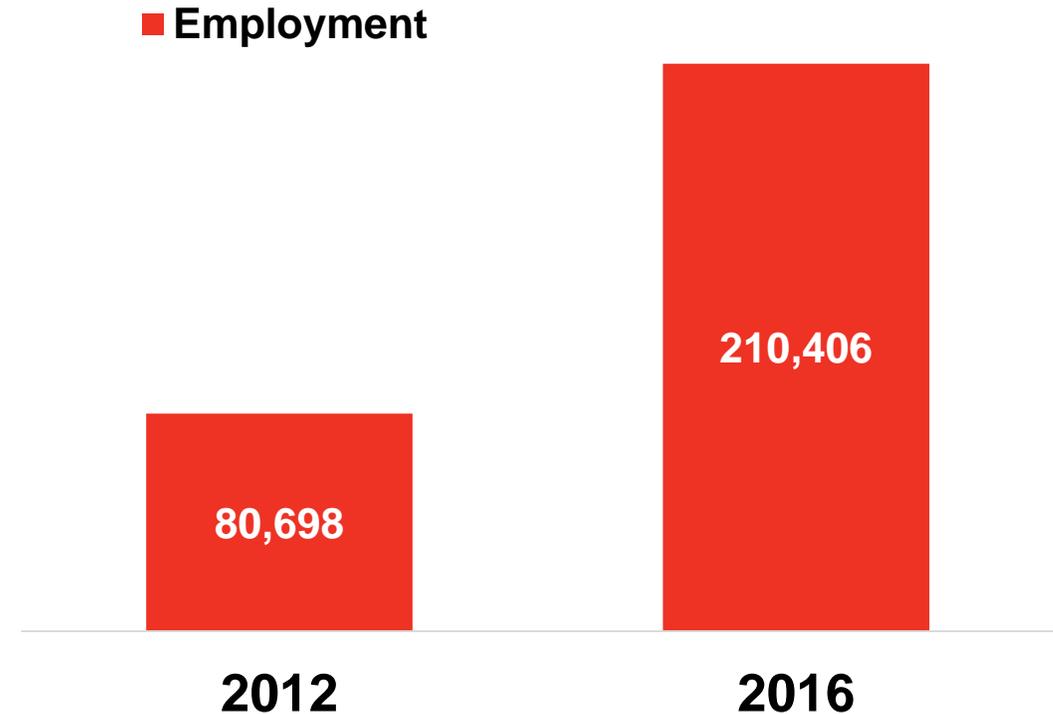
Soft Infrastructure firms are either predominantly service providers or software vendors.

1. Service providers, including IT consulting, researchers, domain registry services
2. Software vendors including analytics software, CRM, network security, video software, etc.

| Employment | 2008 Report | 2012 Report | 2016 Report |
|--|----------------|----------------|----------------|
| <i>Infrastructure Support/ Soft Infrastructure</i> | 165,000 | 254,000 | 662,691 |

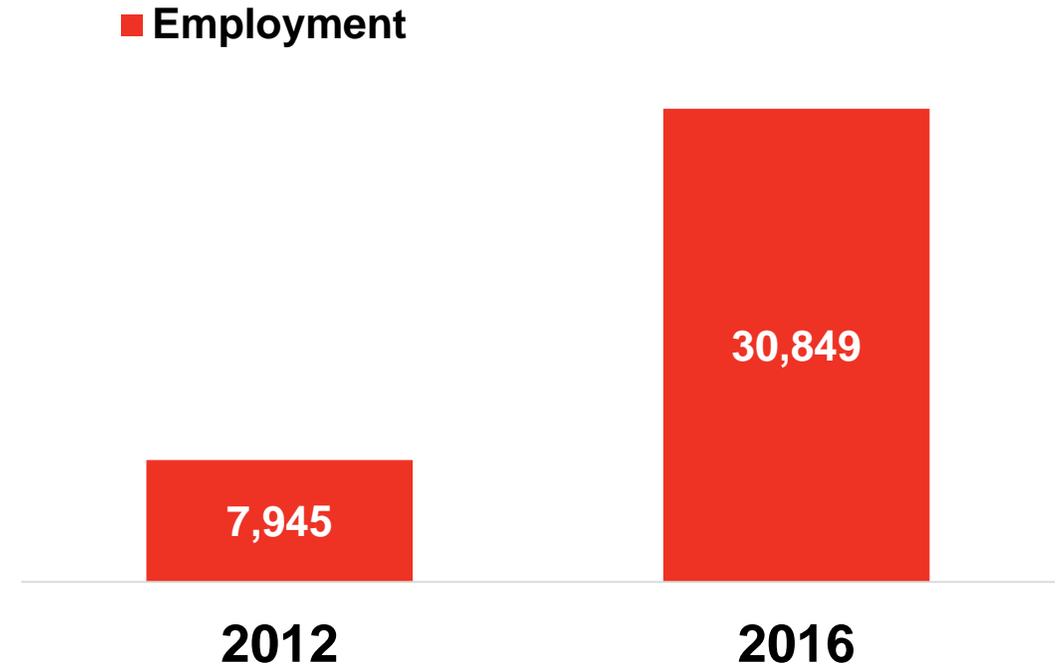
repositioning enterprise IT consulting

- Enterprise IT consultants reposition as marketing and operations consultants.
- Oracle acquired Datalogix and BlueKai (small startups in the 2012 study) and created the Oracle Data Cloud and Marketing Cloud, broadening its consulting authority to include marketing analytics and programmatic advertising.
- IBM—by internal development of the Watson analytic engine and by acquisition of data suppliers such as the Weather Channel—has so evolved the nature of its consulting services.



domain registry services add 23,000 jobs

- Previously two discrete lines of business, domain registry and web hosting services are now often provided by a single entity.
- Notable changes in this industry include the launch of firms such as Squarespace, Weebly, and Wix, which combine domain registry and hosting with build-your-own website services, providing one stop shopping for individual proprietors and small to medium sized businesses setting up a web presence.
- Domain registry is estimated to be a \$1.8 billion annual business in the U.S. Web hosting is estimated to be responsible for about \$6 billion in annual revenues in the U.S.



5x growth for consumer services support

Firms in the Consumer Services Support layer perform services that must be tailored to particular clients in the Consumer Services sector. They have increasingly delivered their solutions through the Software as a Service (SaaS) model, in which the software is only accessible through the cloud.

1. Marketing Support: firms that help facilitate and promote the flow of commerce, entertainment, information and social interaction over the internet.
2. Operation Support: firms that provide solutions that enhance customer productivity or enable them to deliver a good or service they could not otherwise do efficiently.
3. General Enterprise Activity: estimated internet-dependent employment in general enterprises.

| Employment | 2008 Report | 2012 Report | 2016 Report |
|----------------------------------|----------------|----------------|------------------|
| Consumer Services Support | 190,000 | 435,000 | 1,068,364 |

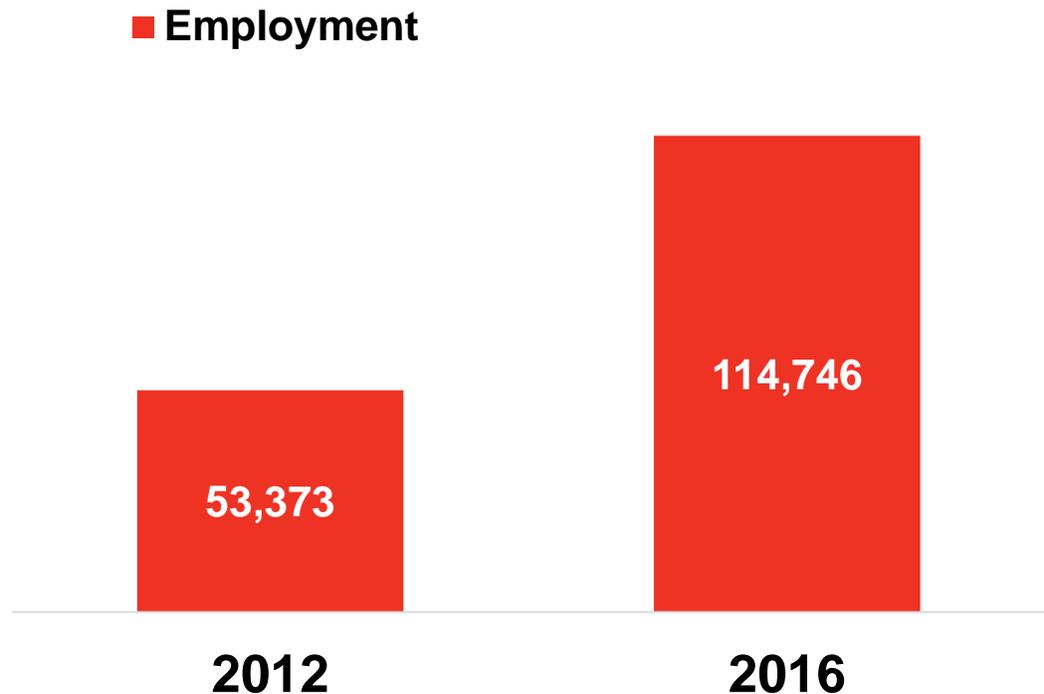
The consumer services support layer is the unsung hero over the years of innovation. Employment more than doubled every four years.

Consumers get the benefits of the Internet at low cost, and often for free, because entrepreneurs are building out analytical tools and support services to run them leaner, and to create new revenue sources that let even free services be profitable.

marketing support more than doubles

The firms and technologies that make advertising services available—advertising agencies, ad networks and exchanges, data and analytics companies, and measurement firms.

1. Full Service Advertising Agencies: 52,953 jobs
2. Digital & CRM Vendors: 53,733 job
3. Online Ad Networks & Exchanges: 3,788 jobs
4. Measurement & Analytics: 4,272 jobs



operation support: new category of customer services support

Operation support is a new category within the consumer services support layer in 2016. This speaks to the increasing demand from the direct consumer-facing brands and services to facilitate their business operations.

| Sub-categories within Operation Support | Employment |
|---|------------|
| Financial services support | 7,569 |
| E-learning Support | 4,656 |
| Travel Services Support | 1,906 |
| Healthcare Information Solutions | 11,783 |
| Shipping enabled by e-commerce | 353,315 |
| E-government Support | 2,105 |
| Other Web enabling services | 182,284 |

Shipping

Particularly relevant to the fulfillment stack of the DTC brands, a large package shipping industry has developed to support the steady growth of e-commerce. In 2015 about 11.6 billion packages were moved in the U.S., About 4.6 billion of these packages were e-commerce packages.

consumer services layer: seems mature, but tripled in size

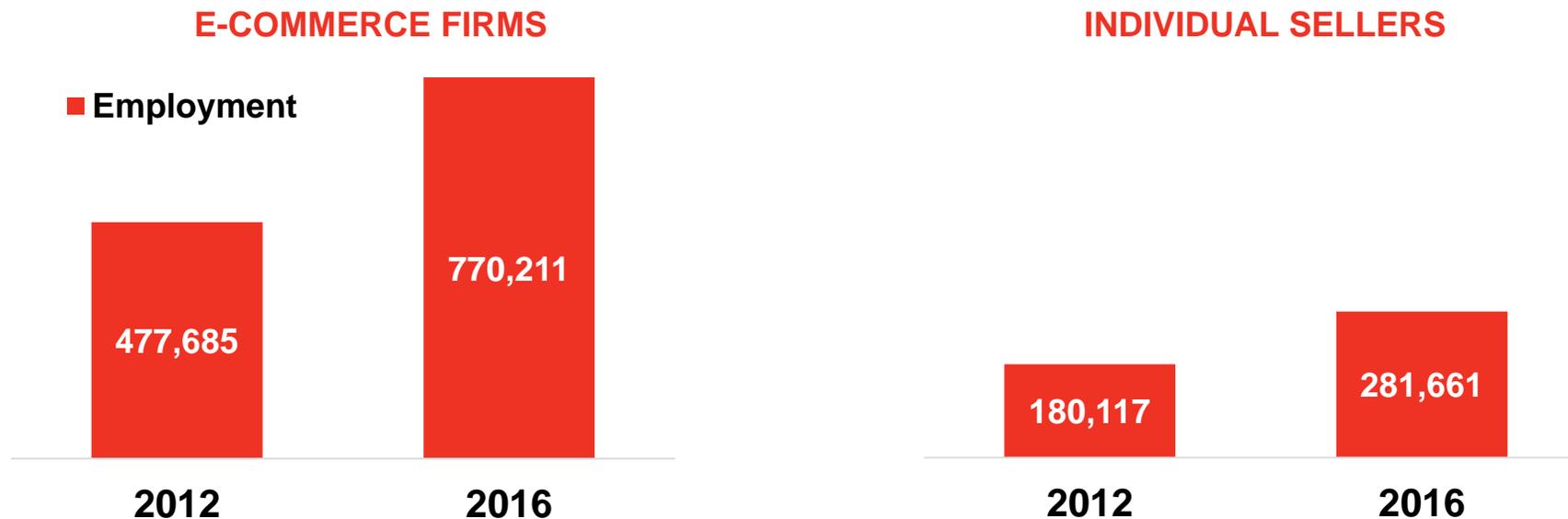
- The internet as a consumer-facing experience is now over 20 years old.
- These consumer touchpoints include websites, apps, and messaging services. The content ranges from news to information, music, audio, photos, and video to services, and is accessed on phones, tablets, laptops, desktops, and living room screens.
- In the 2016 report, the following categories were included within the consumer services layer.

| Employment | 2008 Report | 2012 Report | 2016 Report |
|--------------------------|----------------|----------------|------------------|
| Consumer Services | 520,000 | 885,000 | 1,619,335 |

Over time, new consumer-facing internet dependent platforms, devices, features, and use cases have emerged and more subcategories are now included in this layer, which illustrates the ever expanding capabilities of the internet. Consistently, the internet dependent employment in the consumer services layer has tripled from 2008 to 2016.

online retailing growth is exponential

- Retail e-commerce powers both internet-dependent employment within these e-commerce firms, as well as individual sellers that make a full or partial living out of selling products on these e-commerce platforms.
- This thriving community of workers illustrates the economic opportunity created by the internet, not just to mobilize individuals, but to build the software structures they rely on for trading, payment, and fulfillment.



Note: Amazon, Apple, and Dell are not recorded here because they have other lines of business. Amazon is treated as an Integrated Firm, and Apple and Dell are included in the Hard Infrastructure layer.

e-commerce = ¼ of direct internet employment

E-commerce accounts for 976,000 jobs, almost a quarter of the entire direct employment base of the ad-supported internet ecosystem.

Online
retailing

Online
travel services

Online
financial services

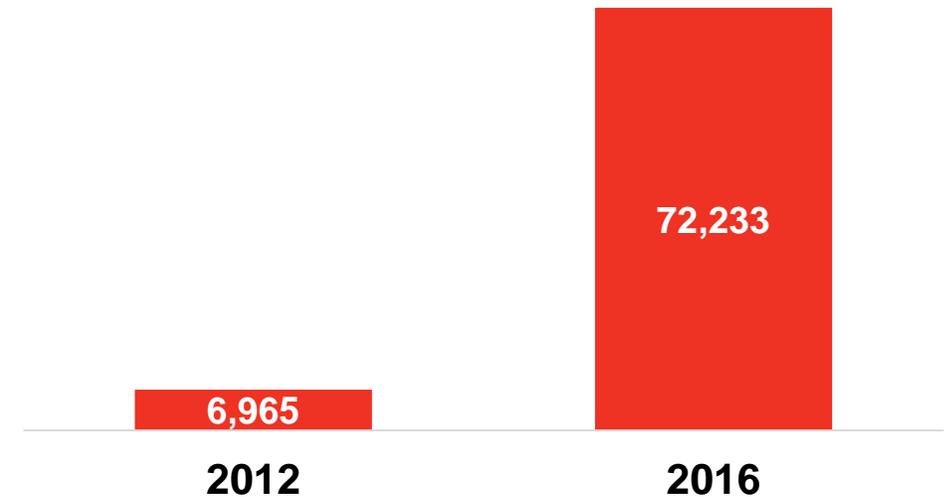
- In 2016, **retail e-commerce** accounted for just **7.1%** of all retail sales. However it was where over **60% of retail growth** took place.
- **Amazon** has shifted from being primarily a platform for traditional retail conducted in the online environment to a platform for **small online sellers as third party merchants**.
- **Shopify**, an e-commerce platform company for small businesses, had **over 500,000 customers** as of Aug. 1, 2017, which is up **more than 50%** from September 2016.

This thriving community of workers illustrates the economic opportunity created by the internet, not just to mobilize individuals, but to **build the software structures they rely on for trading, payment, and fulfillment**

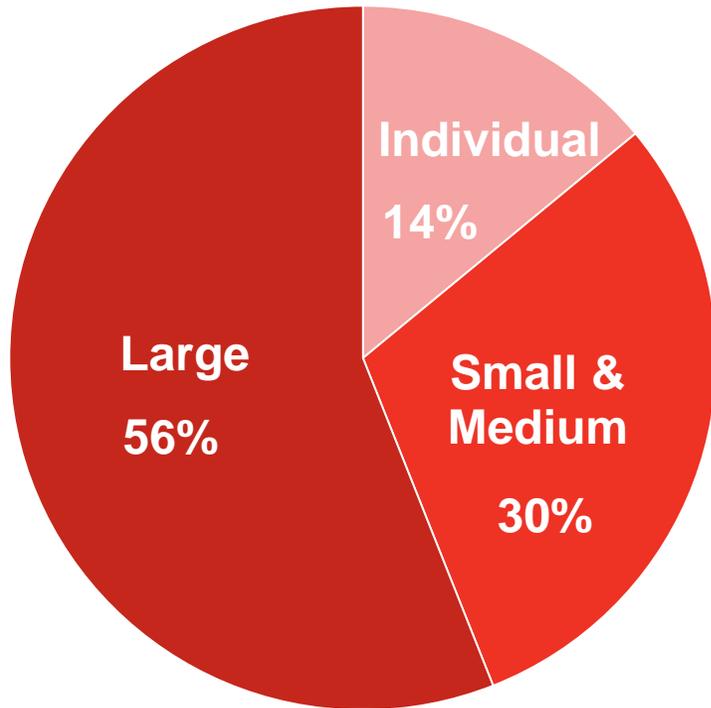
From 2012 to 2016, online financial services industry has experienced significant shifts with a broadened definition from online banking to a wide range of services including day-to-day-banking, investment, digital payments and currencies, and the new sector of FinTech, or financial technology.

Major shifts since 2012 include:

- The eclipsing of the opening of financial products in the online vs. the branch environment.
- The top five banking activities—bill payment, viewing balances, viewing statements, retrieving transaction histories, and transferring funds—took place primarily online, increasingly on mobile.
- New in the 2016 reporting, the FinTech sector has attracted vigorous venture capital funding and experienced exponential growth in consumer uptake and revenues, ranging from ‘robo-advisors’, peer-to-peer lending, digital payment systems, micropayments, and crowdfunding platforms.

■ Employment

smb's and self-employed workers = 44% of the internet employment base



Large firms made up a little over half of the internet's employment base in 2016.

Mid-sized and small firms accounted for 30%.

Self-employed workers such as sellers on Etsy, individuals trading on eBay, Craigslist sellers, on-demand economy workers, and freelance individuals doing coding, content creation, and other services for web sites made up 14%.

on-demand economy = \$6 billion economic contribution

Characteristics of the on-demand economy include:

- Access over ownership (consumer point of view)
- Flexibility over fixed hours (worker point of view)
- Options and modularity of choice – e.g. a spare room instead of hotel, a shared ride instead of a cab

These platforms match workers to employers in a range of industries. People who drive for ride-hailing services, and part-time workers in the so-called gig economy, are in aggregate a full-time equivalent workforce of **147,000 people** and likely to grow much larger.

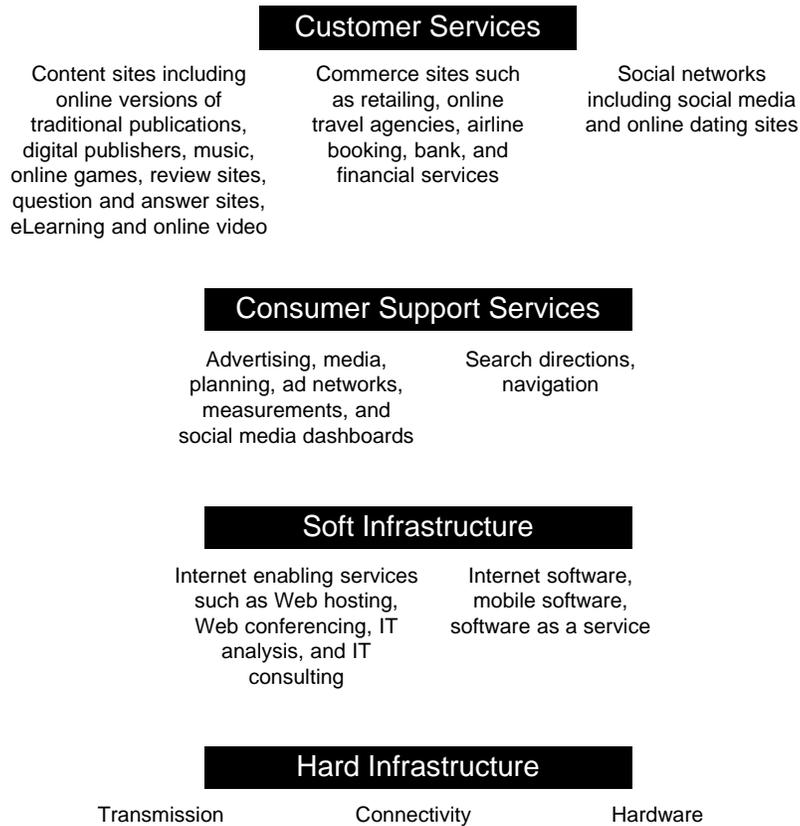
Our estimate for **Platforms & Services** is **\$2.4 billion** and **12,803 jobs**.

Our estimate for **On-Demand Economy Worker** is **\$6.04 billion** and **134,160 jobs**.

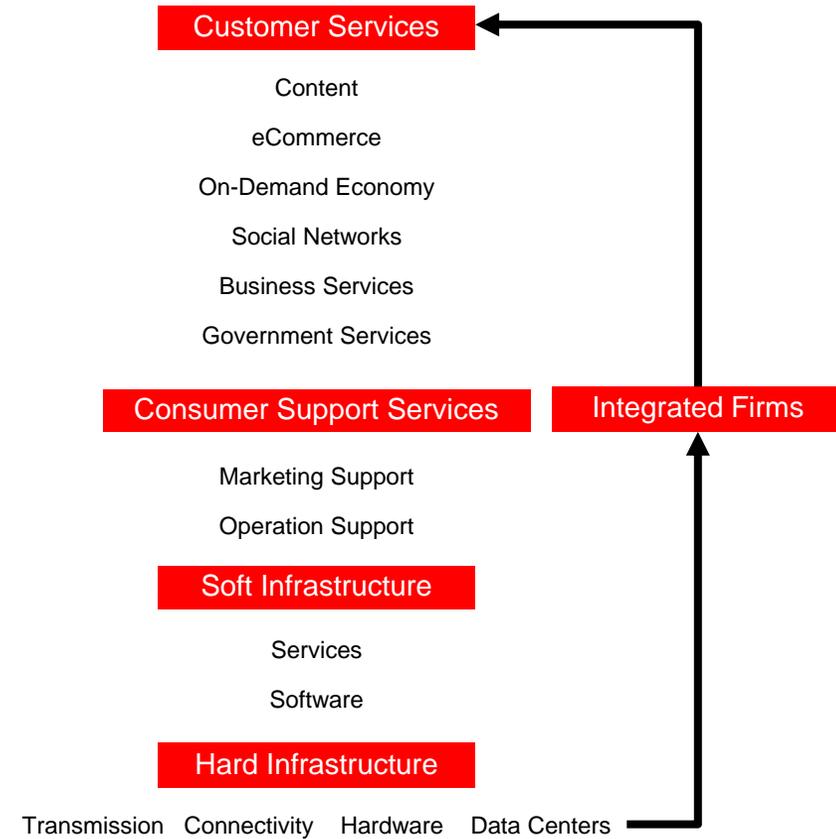


shifting structure of the internet and emergence of integrated firms

2012



2016

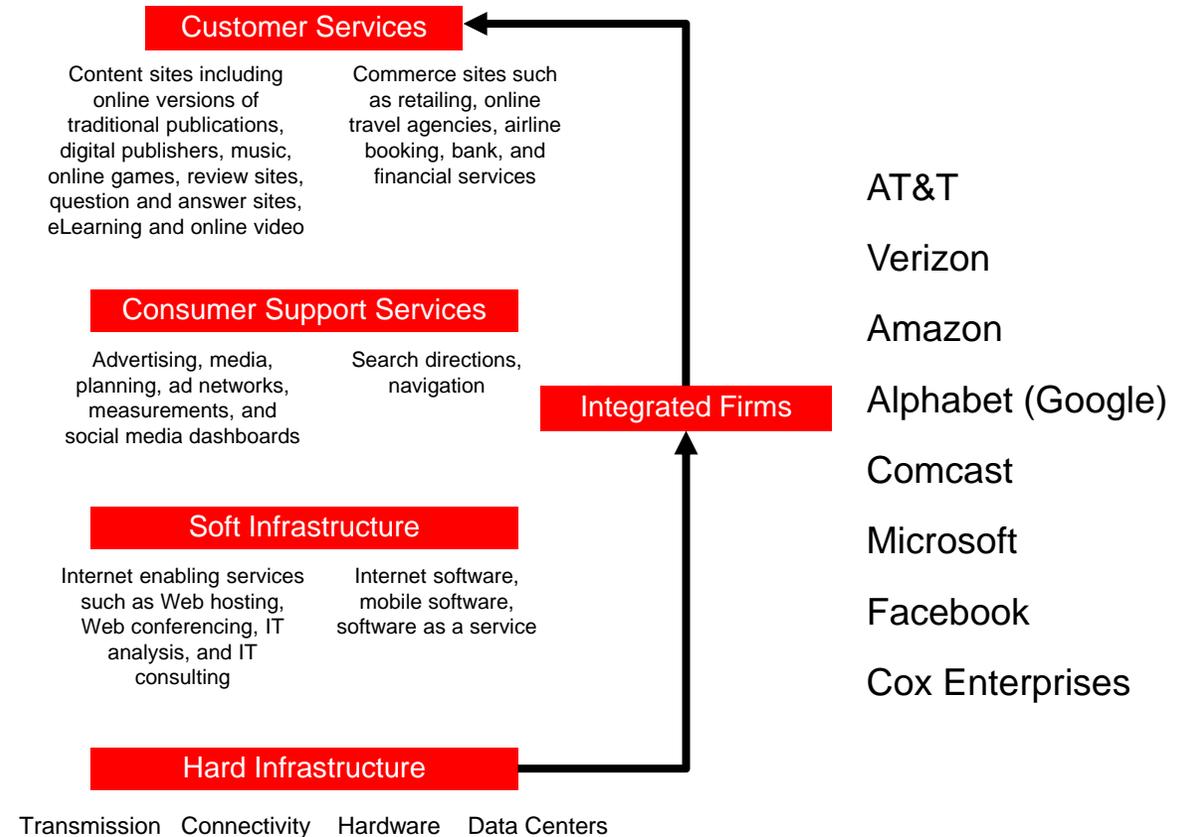


platforms = the new vertical integration

Integrated firms are vertically integrated firms that did not fit tidily into one layer of the internet or another and have highly intertwined internet-dependent revenues among discrete layers. This is a newly classified layer in the internet ecosystem.

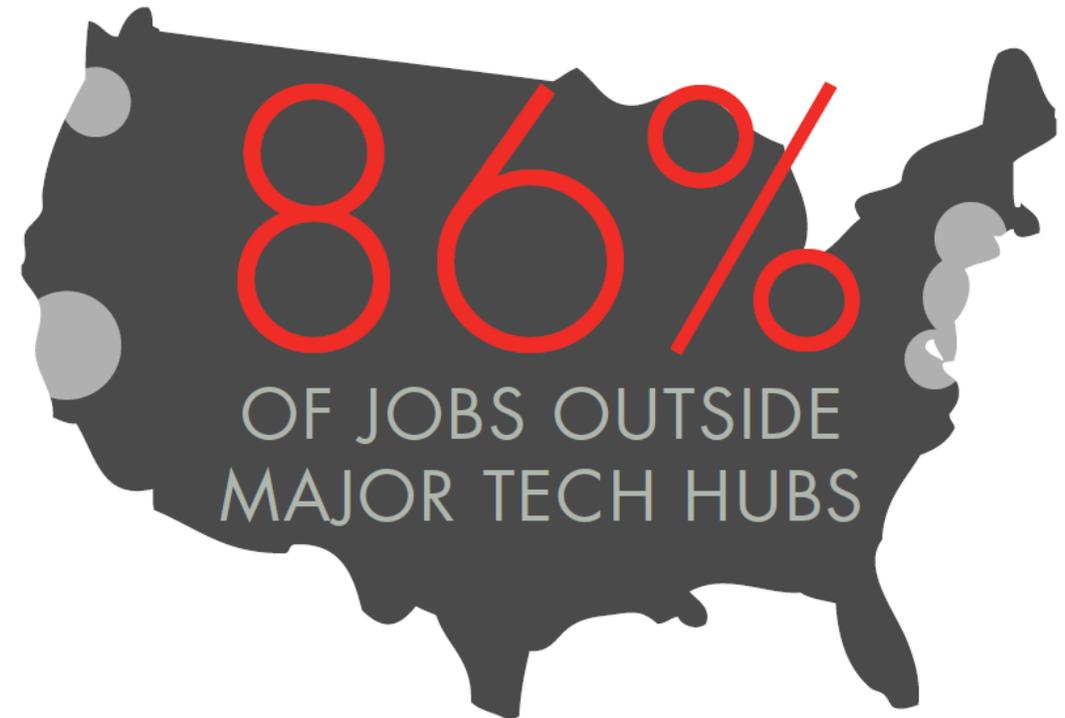
The patterns of integration are not identical, there are three main groupings:

- Content marketers integrating into transmission – Facebook, Google
- Transmission companies acquiring content – AT&T, Verizon, Comcast, Cox
- Integrating Vertically into Cloud Transmission and Data Services – Amazon, Microsoft

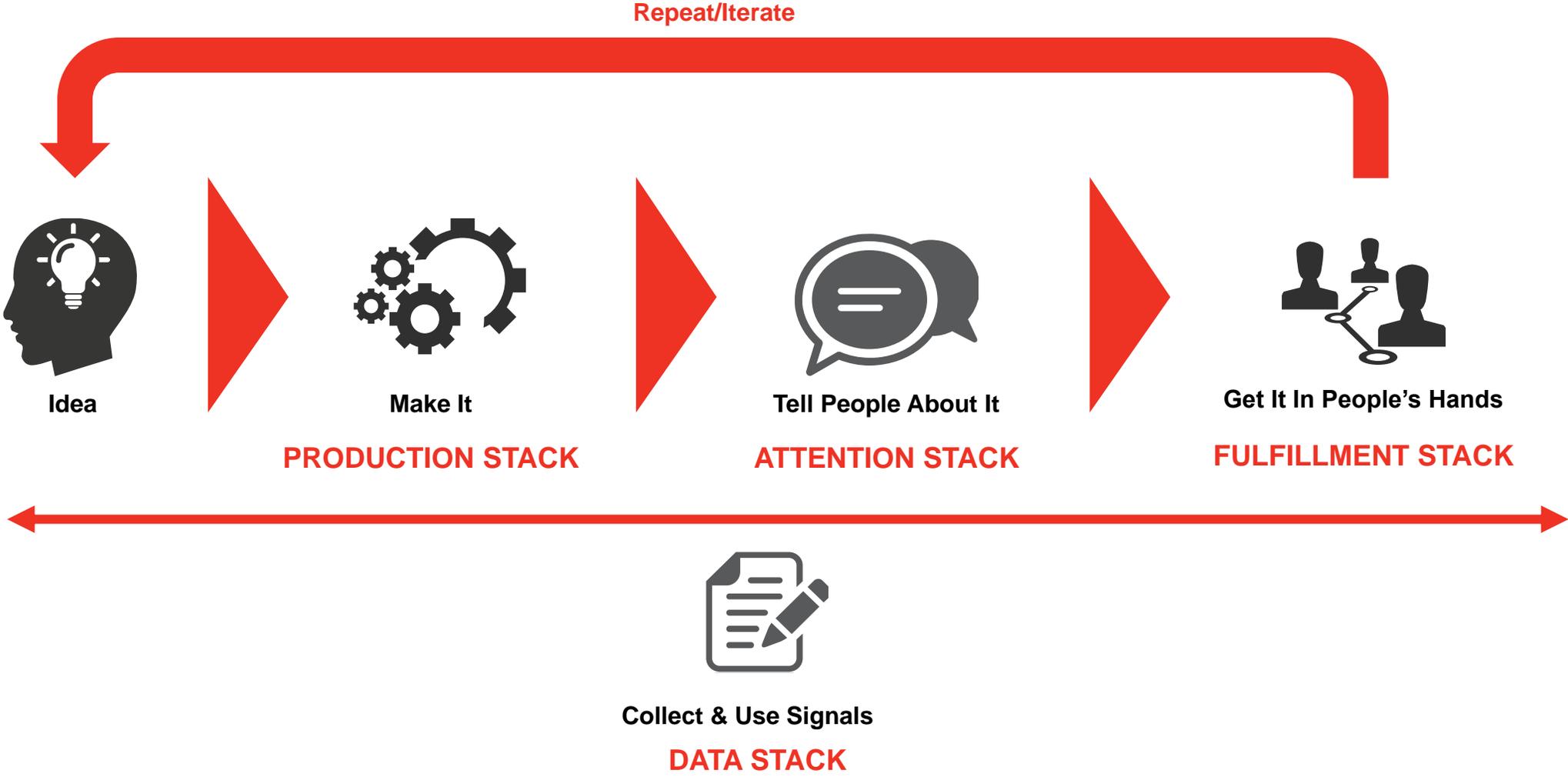


Geography: internet employment is spread across the entire U.S.

- The **Bay Area** of California accounted for **4%** of 2016 jobs.
- **Other tech centers** – Manhattan, Seattle, Virginia, Boston – accounted for another **10%**.
- But **86%** of the jobs are found **spread across every state** and county of the nation.



the stack-your-own supply chain: an overview



the 21st century brand economy

06. understanding the production stack

activities included in this stack ...

MANUFACTURING

make the product

LOGISTICS

move the product

WAREHOUSING

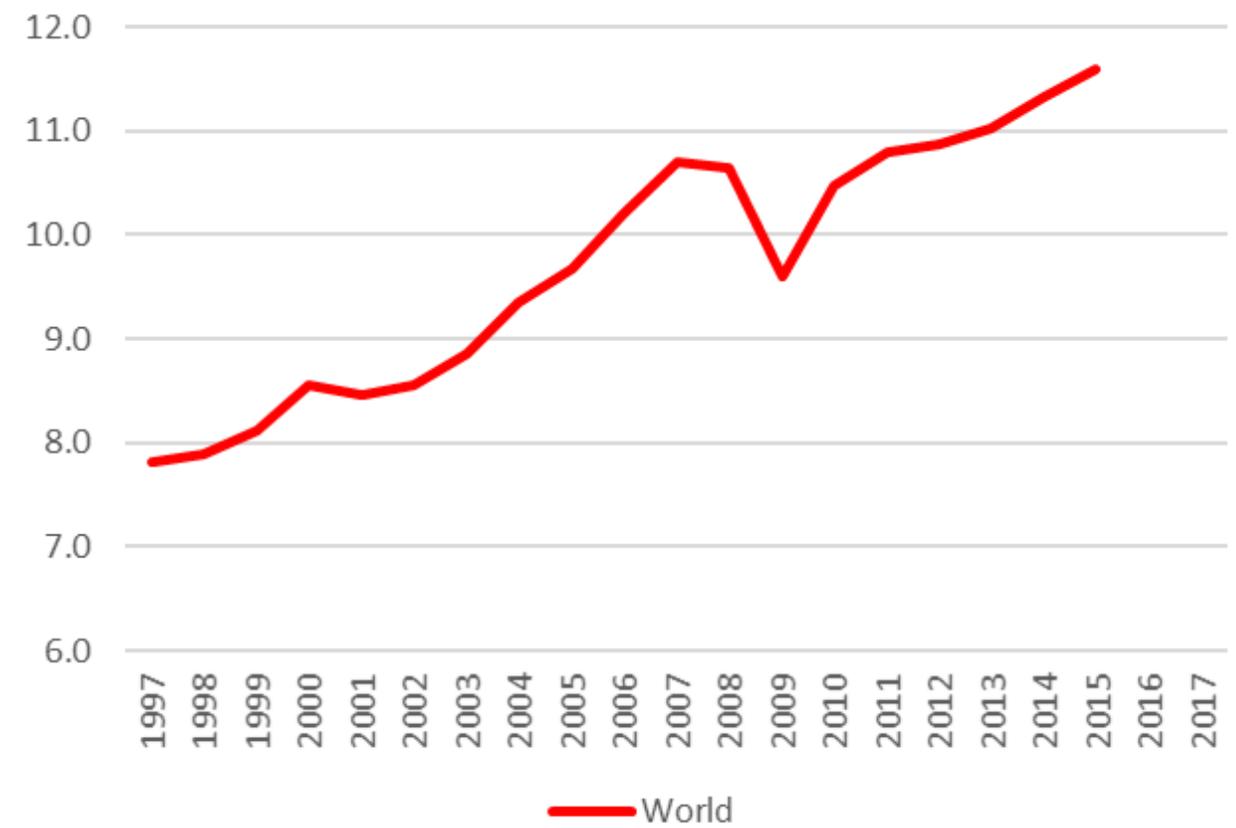
queue the product
for sale

the production stack



manufacturing: global output has been increasing steadily this century

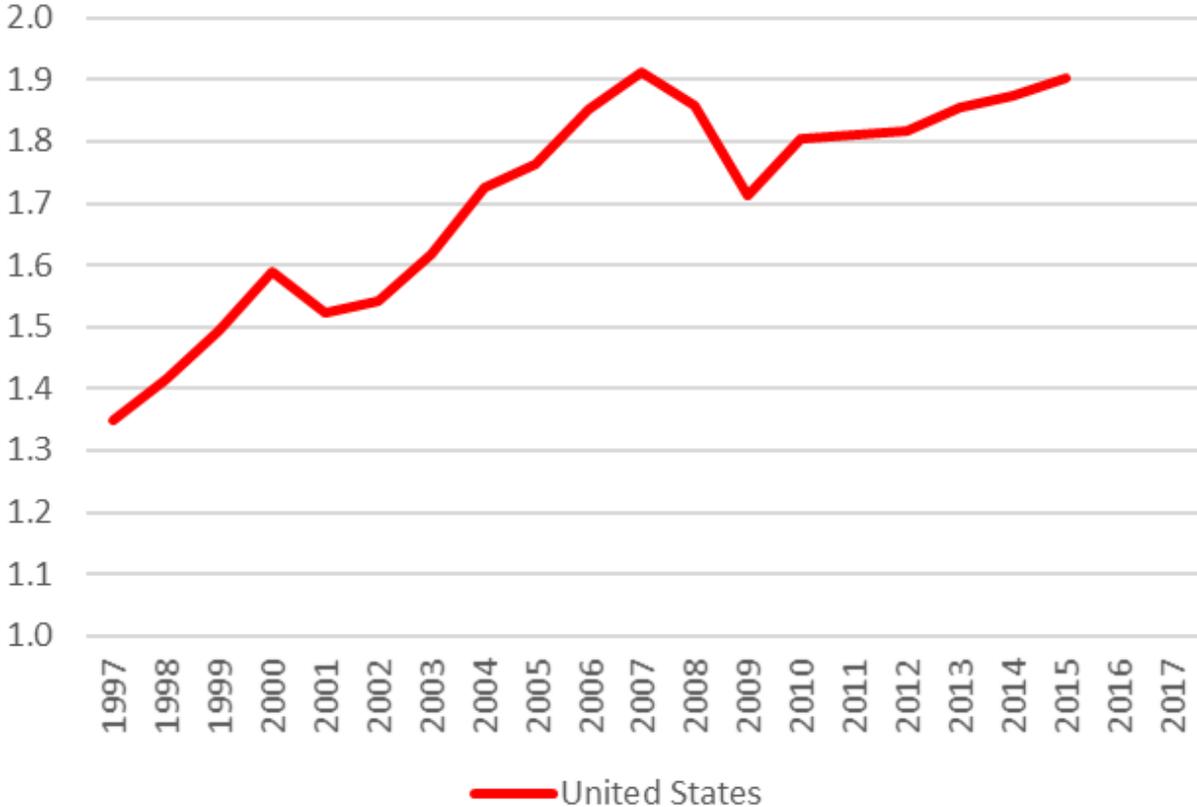
Manufacturing, value added (trillions US\$)



Source: <http://api.worldbank.org/v2/en/indicator/NV.IND.MANF.KD?downloadformat=excel> ; data in constant 2010 US\$

manufacturing: U.S. domestic output also has been growing

Manufacturing, value added (trillions US\$)

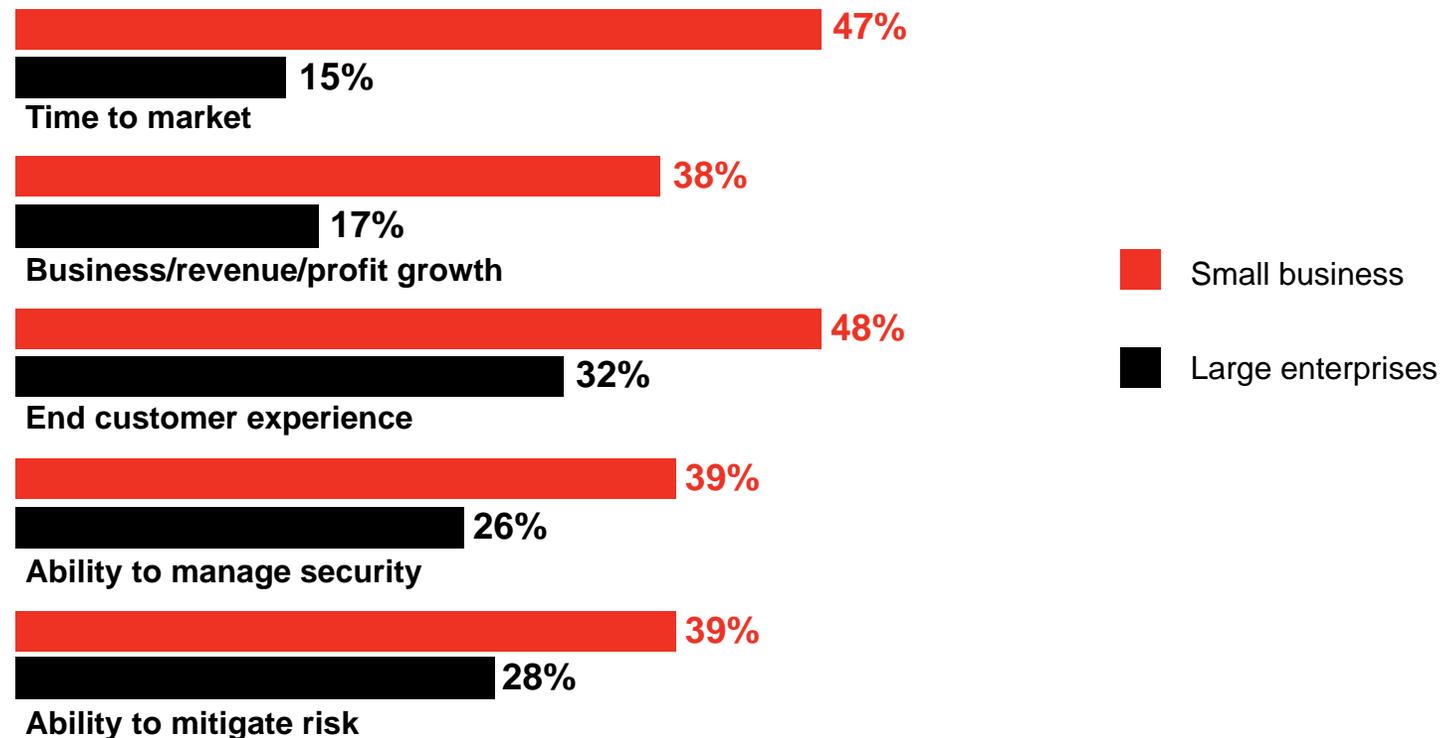


Source: <http://api.worldbank.org/v2/en/indicator/NV.IND.MANF.KD?downloadformat=excel> ; data in constant 2010 US\$

the smaller the business, the bigger the tech payoff

cloud solutions even more important for smaller companies

Percentage of SMB and large-enterprise respondents who say the adoption of cloud/hybrid cloud system has significantly improved company performance in the following areas



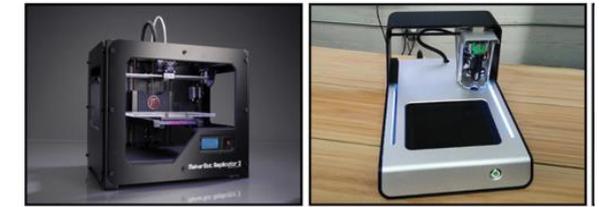
manufacturing: is evolving toward flexibility and scalability



Manufacturing Ecosystems



Distributed Local Manufacturing



Makerbot 3D printer

Voltera circuit printer



Othermill CNC machine

uArm miniature industrial robot

Hyper-Local Manufacturing

manufacturing: aggregated industrial ecosystems concentrate resources

- Special Economic Zones (like Shenzhen) have achieved a critical density of infrastructure and talent.
- Networks of smaller manufacturers (many started by former workers of large mega-factories) are sufficiently nimble and interconnected to allow for rapid prototyping, iterating, and scaling.
- Even giant Foxconn has launched a microfactory targeting initial product runs of 1K-10K units in order to compete for this segment of business.
- Each SEZ has a specialty, be it electronics (Shenzhen), footwear (Fujian), or motorcycles (Chongqing).



manufacturing: local industry centers let startups bootstrap production

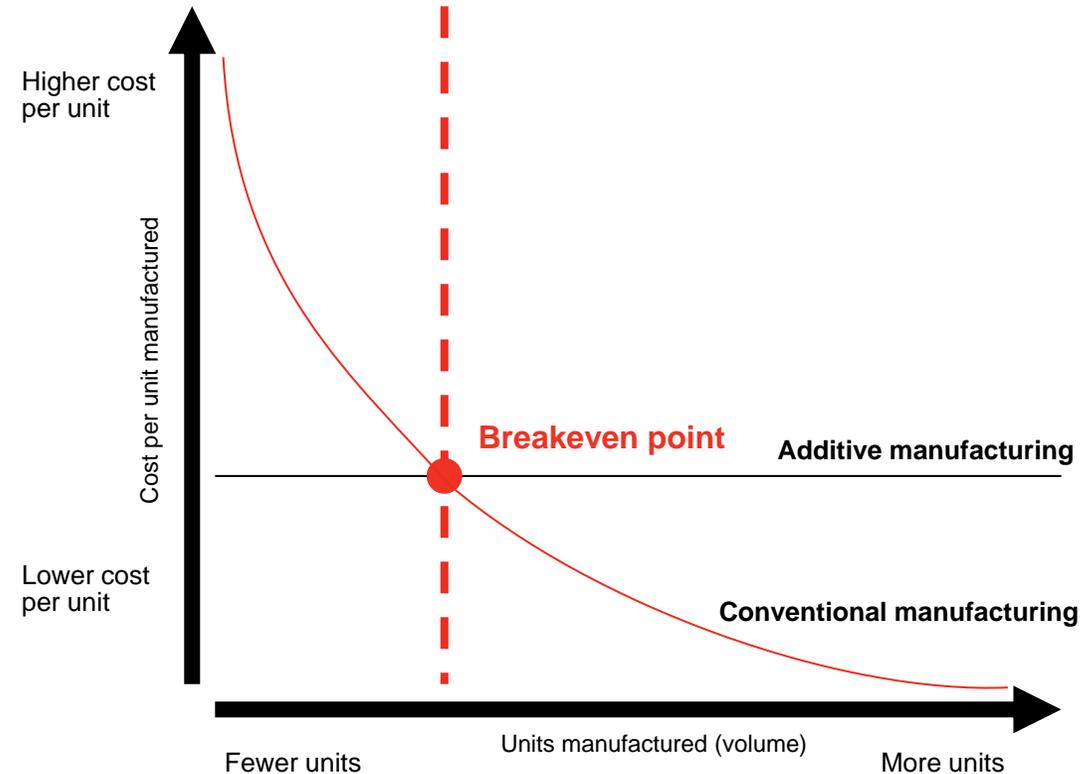
- Local manufacturing typically leverages both technology and community to keep costs down.
- At the same time, manufacturing tools have become both smaller and less expensive, allowing for small shops to have the same basic toolkit as larger, more capital-intensive facilities.
- This combination of immediate proximity to local markets, and technological flexibility, allow for rapid response to consumer needs.
- Platforms like OpenDesk allow for multiple facilities to share tools and talent, further reducing overall costs.



manufacturing: additive manufacturing makes factories hyper-local

- Initial capital outlays for additive manufacturing (AM) are decreasing as the technology develops, and because they don't require tooling of molds or fixtures, their relative cost is already appealing.
- For small production runs, as well as for rapid iteration, AM is more cost effective than conventional techniques.
- Materials science has also increased the viability of AM, taking it beyond colored plastics and into materials that can simulate wood, bronze, iron, or ceramics.

Breakeven analysis comparing conventional and additive manufacturing process



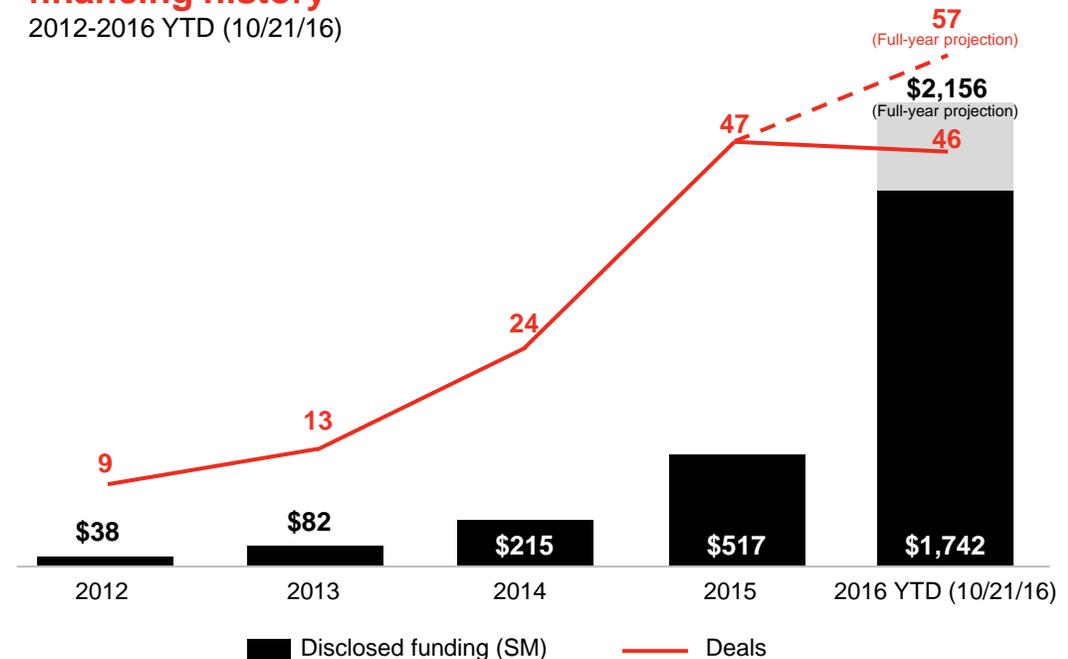
manufacturing: VC investments grew 4x from 2014-2015

investment in delivery startups is growing

In 2015, venture capital investments in supply chain and logistics start-ups was more than **four times higher** than in 2014 (\$1,202 million versus \$388 million), and venture capital dollars invested in the same space in the first quarter of 2016 alone was \$1.75 billion.

Supply chain & logistics corporate annual global financing history

2012-2016 YTD (10/21/16)



<https://www.cbinsights.com/research/supply-chain-logistics-startups-corporate-investors/>

logistics: small package shipments propelling giant changes

“ With last year’s soaring air freight market defined by e-commerce as a new and likely long-term trend, with less-than-containerload (LCL) ocean shipments propelled by growth in small package shipments, and with North American trucking also redefined by e-commerce, **2017 was arguably the year when e-commerce most greatly impacted the entire supply chain.** ”

logistics: demand for air freight more than doubled in the last year

shipping from global manufacturing partners is getting cheaper

Global demand for air freight, measured in freight tonne kilometers (FTKs) **grew 9% in 2017**- more than double the 3.6% annual growth reported in 2016 – **driven by the restocking cycle and buoyant demand for manufactured exports.**



logistics: container ship volume is accelerating

shipping from global manufacturing partners is getting cheaper

Global container port throughput is estimated to have **grown by 5.8 percent** in the first quarter of 2017. If the current strong momentum is maintained, the full-year figure may be adjusted further upwards and could surpass the 5.1 percent volume increase that was recorded in 2014.



logistics: freight trucking is getting bigger

shipping from global manufacturing partners is getting cheaper

Nearly **70%** of the freight shipped throughout the US travels by truck at some point in its journey. **Shipments grew 7.7% in 2017** year-over-year, making it the **best year on record**.



logistics: IoT driving costs down within existing infrastructures

shipping from global manufacturing partners is getting cheaper

- Several startups are turning to the cloud to drive logistics costs down while still using existing infrastructure
- Firms like Flexport, Freightos, and Haven automate processes within a client's logistics stack, from scheduling to routine paperwork
- These firms also employ IoT and sensor technology to generate real-time data feeds on the location and status of inventory
- Flexport, in particular, is investing \$110MM in warehouses around the world to keep freight within their ecosystem

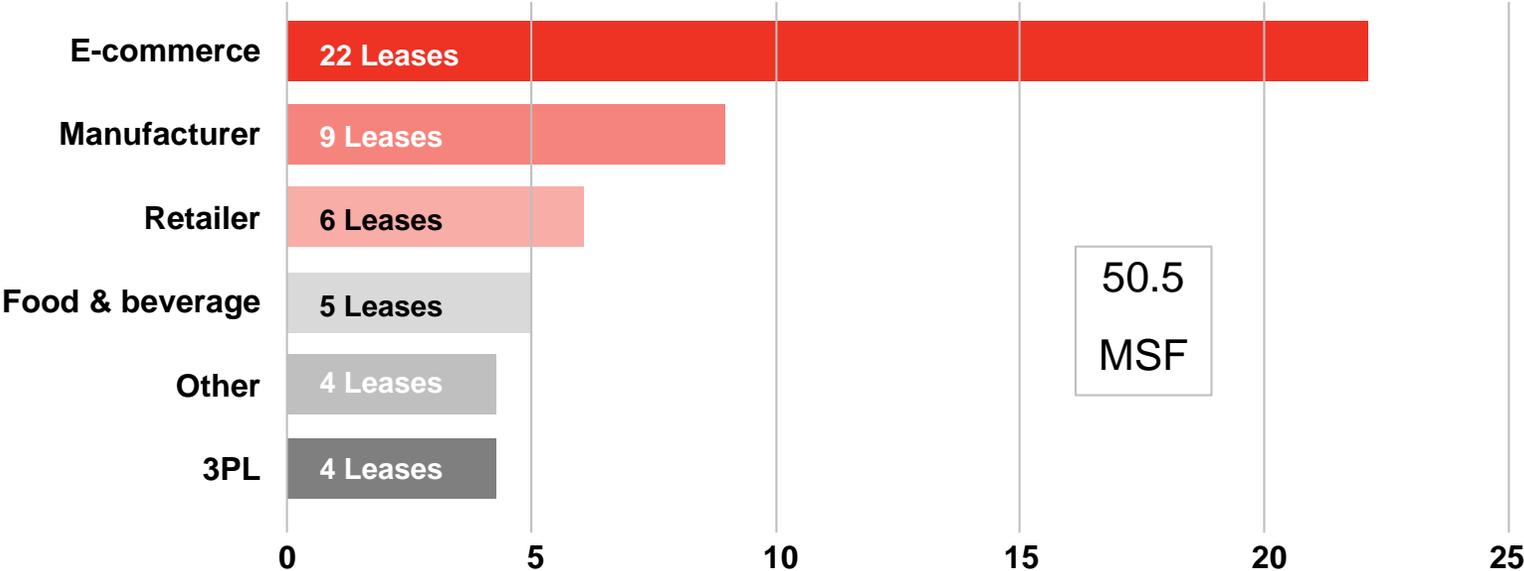


warehousing: e-commerce dominates new leases

shipping from global manufacturing partners is getting cheaper

Largest U.S. warehouse leases in 2017

Breakdown by industry



Source: CBRE Research, 2017
<https://www.cbre.us/research-and-reports/US-MarketFlash-Dealmakers-Largest-Warehouse-Leases-2017>

warehousing: direct consumer delivery forcing greater efficiencies ...

shipping from global manufacturing partners is getting cheaper

National distribution model (Pre-2007 vs. present)

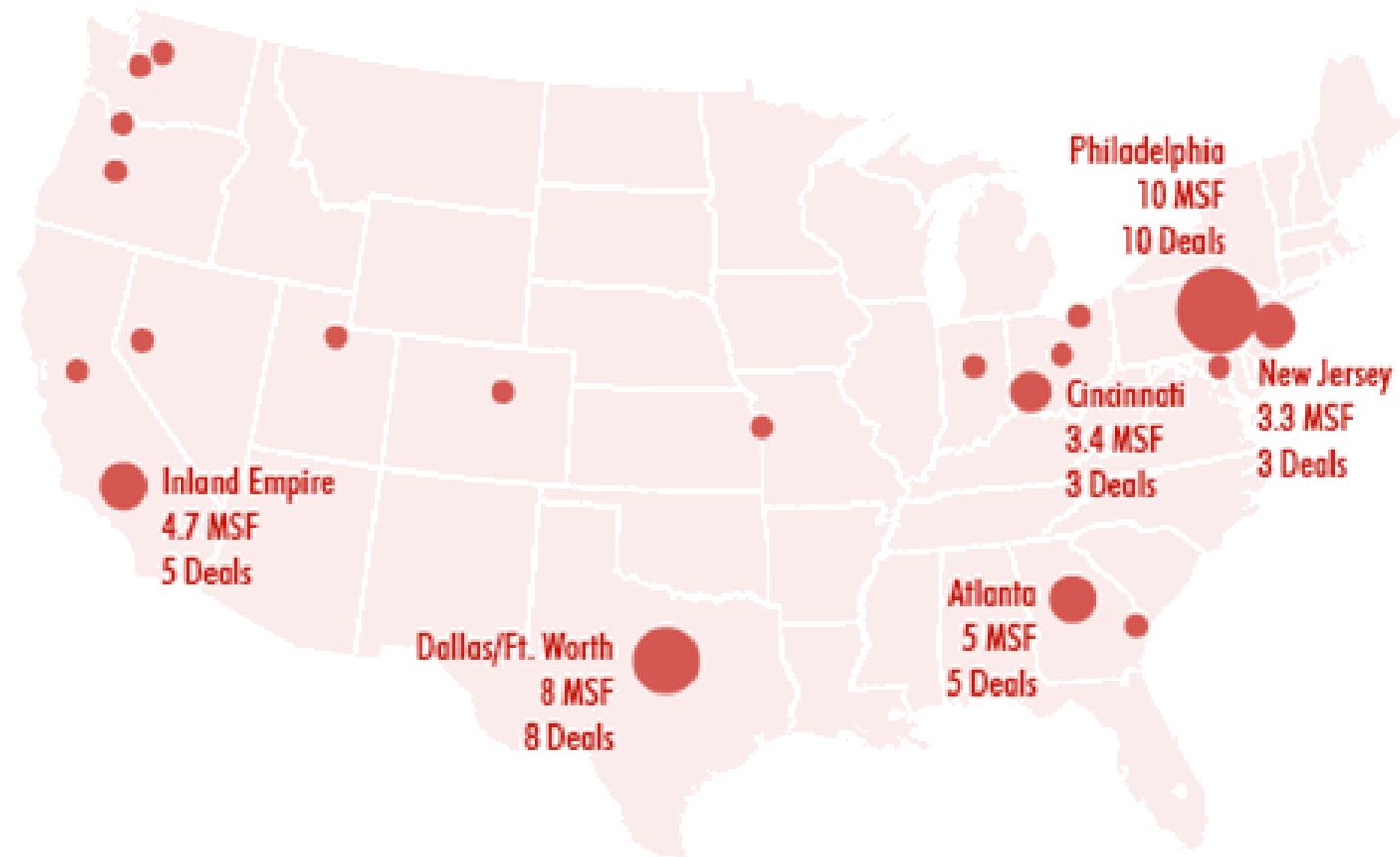
Changing consumer preferences and expectations forced supply chain models to become more efficient nationwide



Source: CBRE Global Supply Chain Services, January, 2017.
<https://researchgateway.cbre.com/MyGatewaySearch.aspx>

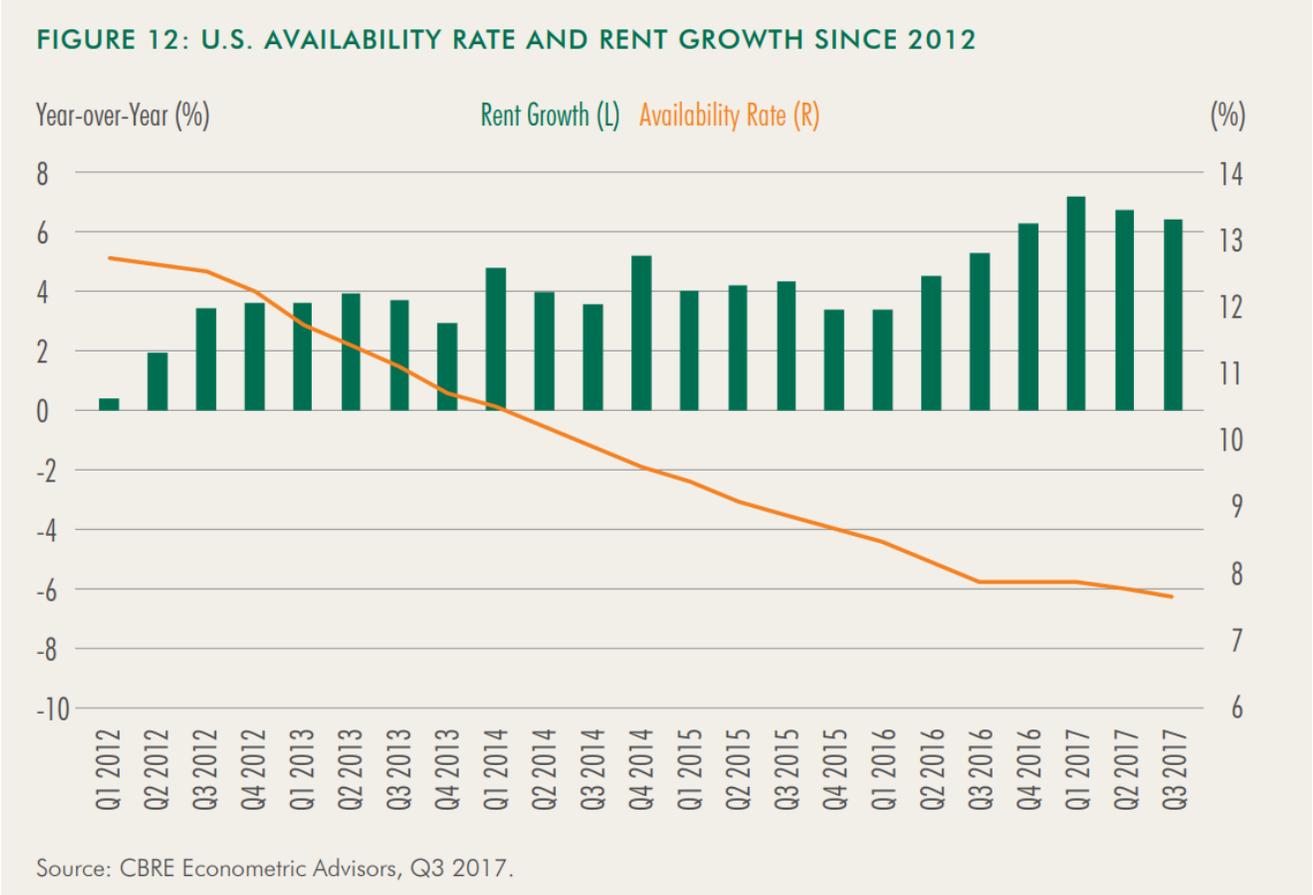
... which is driving warehouse leasing activity nationwide

50 largest leases by market



warehousing: increased demand pressuring warehouse costs

shipping from global manufacturing partners is getting cheaper



Source: <https://researchgateway.cbre.com/MyGatewaySearch.aspx>

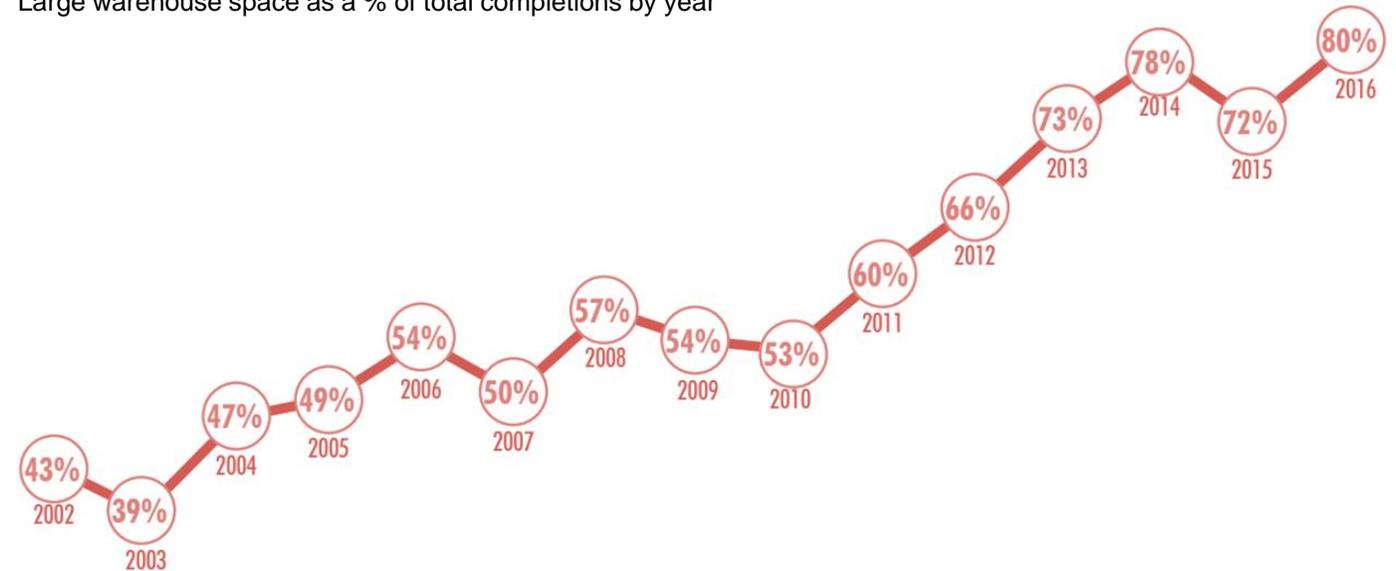
... leading to new warehouse construction to meet e-commerce demand ...

shipping from global manufacturing partners is getting cheaper

CBRE estimates that for every **\$1 billion** in new e-commerce sales, **1 million square feet of warehouse** will be needed.

New construction dominated by large warehouse space

Large warehouse space as a % of total completions by year

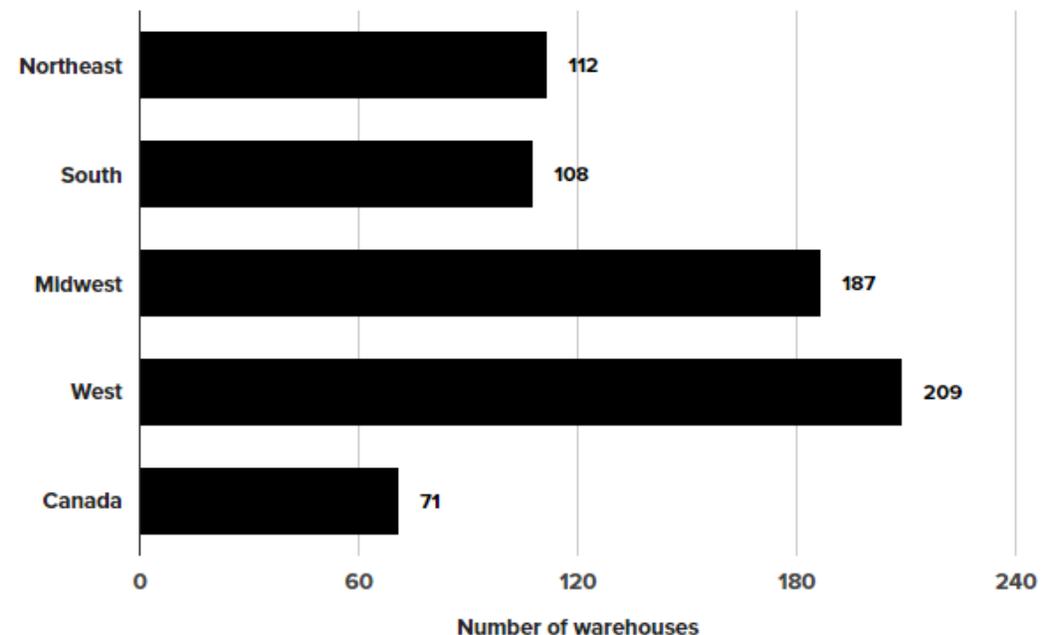


... and flexible warehousing solutions

shipping from global manufacturing partners is getting cheaper

- Platforms like Flexe are creating storage space markets to connect those with unused warehouse capacity with those who need it.
- Flexe currently offers space in more than 750 warehouses nationwide.
- Wide national distribution primes inventory for efficient and fast last mile delivery.
- Brands like Casper and Toms use Flexe for high-demand times like summer moving season (Casper) or holiday season pop-ups (Toms).

Flexe Network by region



Data from Flexe



the 21st century brand economy

07. understanding the attention stack

activities included in this stack ...

CREATE

your brand voice

CONNECT

with consumers

ENGAGE

in a value
exchange

the attention stack



create: massive platforms start at free

\$0

Cost to have account

2017 Average Users/Month

 **YouTube** 221MM

 **facebook** 202MM

 122MM

 117MM

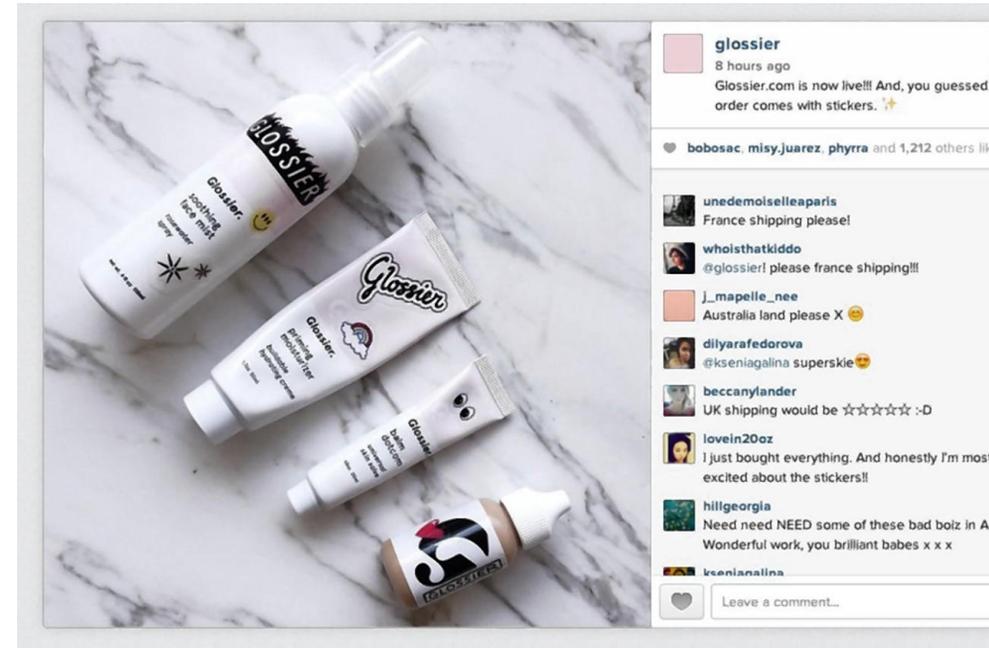
 102MM

 102MM

create: social media is central to brand development

social media accounts are free to set up, but benefit from investment nonetheless

- The Glossier brand was introduced with a series of posts on Instagram.
- 10 months of development were compressed into a few weeks of posts.
- By the time the first products were sold online, Glossier already had 13K followers on Instagram.
- One day later, the count surpassed 18K.



“Six weeks after its launch, [Glossier} announced \$8.4 million in Series A funding led by Thrive Capital. [Founder Emily] Weiss used the money to invest in technology and data analytics that would study Instagram and other social platforms, measuring not just how well certain Glossier posts performed but how well each product performed”¹

create: once thought dead, blogs resurfaced as brand-launch platforms

Range of blog and hosting options:

| |  WP org |  WP com |  Blogger |  Tumblr |  Medium |  Ghost |  Squarespace |  Wix |
|------------------------|--|--|--|--|--|---|---|---|
| Price | \$0 [?] | \$0 [?] | \$0 | \$0 | \$0 | \$0 [?] | \$8-\$24 per month | \$0-\$18 per month |
| Hosting included | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ / ✗ [*] | ✓ | ✓ |
| Custom domain included | ✗ | ✗ ^{***} | ✗ ^{***} | ✗ ^{***} | ✗ | ✗ ^{***} | ✓ | ^{***} |
| Mobile-friendly | ✓ ^{**} | ✓ ^{**} | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ ^{**} |
| Designs available | 1000+ | 100+ | Nearly none | 100+ | ✗ | 100+ | 10+ | 100+ |
| Plugins and extensions | 1000+ | ✗ | ✗ | ✗ | ✗ | ✗ | 100+ | 10+ |
| Ease of use | 7/10 | 9/10 | 9/10 | 10/10 | 10/10 | 6/10 | 10/10 | 8/10 |

^{*} hosting included for pro; no hosting for open source

^{**} depending on the specific design you choose

^{***} you get a subdomain; you can hook up your custom domain as well

create: minimal investment can turn a blog into a company

\$12,240 is
estimated cost to
launch professional
blog in first year

| BLOG BUDGET CALCULATOR | <i>SETUP COSTS (ONE-TIME)</i> | <i>RECURRING COSTS (ANNUAL)</i> |
|--------------------------------------|-------------------------------|---------------------------------|
| Hardware | | |
| Computer | \$2,000 | |
| Digital camera | \$750 | |
| Video camera | \$1,500 | |
| Webcam | \$100 | |
| Microphone | \$300 | |
| Tripod | \$250 | |
| Lighting | \$1,000 | |
| | | |
| Hosting, Tools & Software | | |
| Domain name | | \$10 |
| Email hosting | | \$10 |
| Email list provider | | \$50 |
| Blog hosting | | \$360 |
| WordPress theme | \$100 | |
| Premium plugins | \$200 | |
| Spam protection | | \$60 |
| SSL certificate | | \$50 |
| | | |
| Contracted services | | |
| Custom logo and header | \$250 | |
| Additional custom design | \$500 | |
| Virtual assistant | | \$100 |
| | | |
| Training & Education | | |
| Books | | \$100 |
| Blog audit | \$250 | |
| Online Training | | \$300 |
| Conferences | | \$1,500 |
| Coaching/mentoring | | \$2,500 |
| | | |
| TOTALS | \$7,200 | \$5,040 |

create: partnering with influencers amplifies a brand's message

Content creation/curation

Influencers can efficiently bring creative concepts to life through the lens of their social media influence, adding insights and producing original text, photo or video content that can be shared on their networks and also leveraged across platforms.

Content credibility

A well-chosen influencer's content will provide instantaneous relevance and high credibility within a targeted group or market, which will reflect well on both the publisher and the brand.

Content amplification/distribution

Influencers are the masters on the platforms where they are most likely to reach the intended audience. From their own blogs or social media accounts, to paid amplification on their posts on social, their content will resonate and provide greater scale.

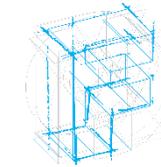
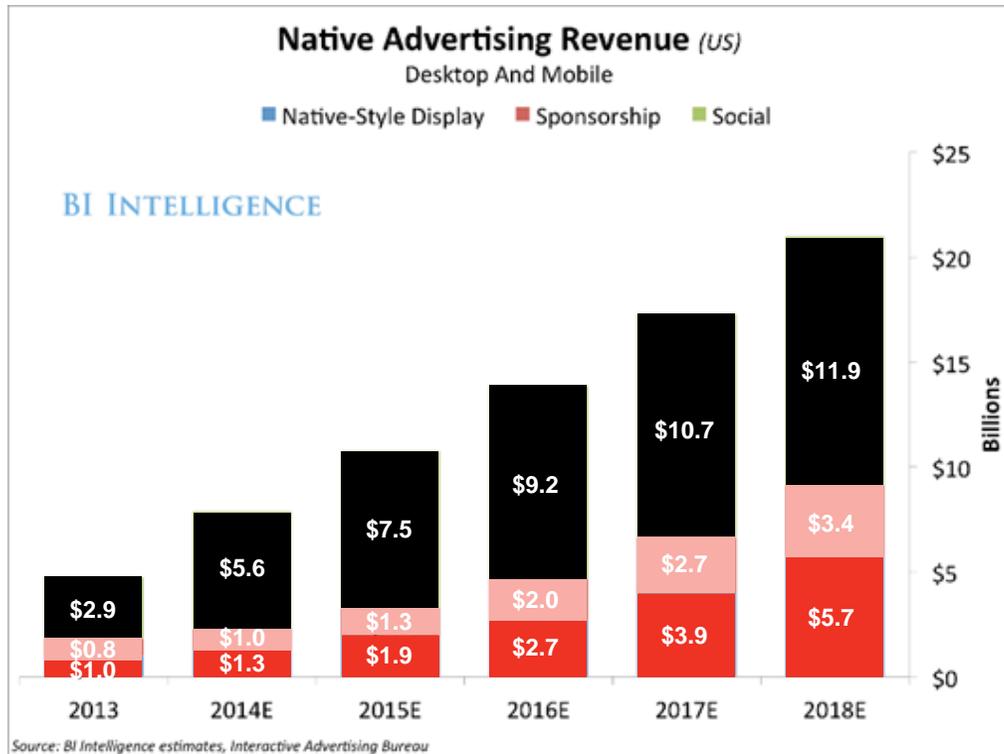
Content as extension of a publisher's thought leadership

Publisher's internal staff, in their own right, can be effective influencers for brands given their association with the publisher. Likewise, a publisher may have a list of available influencers, a "speaker's bureau" of sorts who are well versed on a publisher's unique DNA who can be readily called on to unite the brand with the publisher's unique reason for being.



create: content marketing growing as influencer-partner

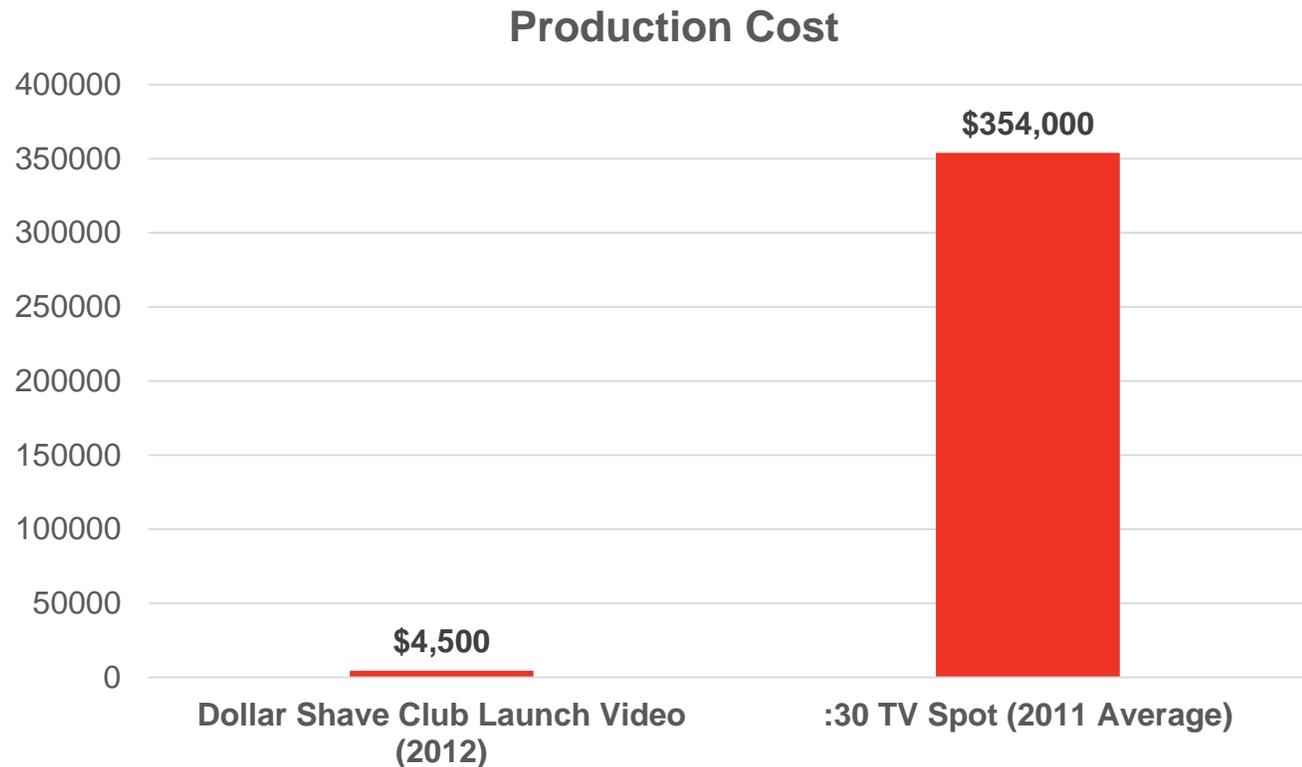
native content brings marketer and media brands together



create: video production costs are plummeting

video production costs have declined significantly

Dollar Shave Club vs Typical TV Commercial



connect: media access was concentrated in a few gatekeepers

1977

3 Networks
accounted for
93% of all
television
viewing



connect: access into media ecosystem has exploded



2017

>1BN Websites

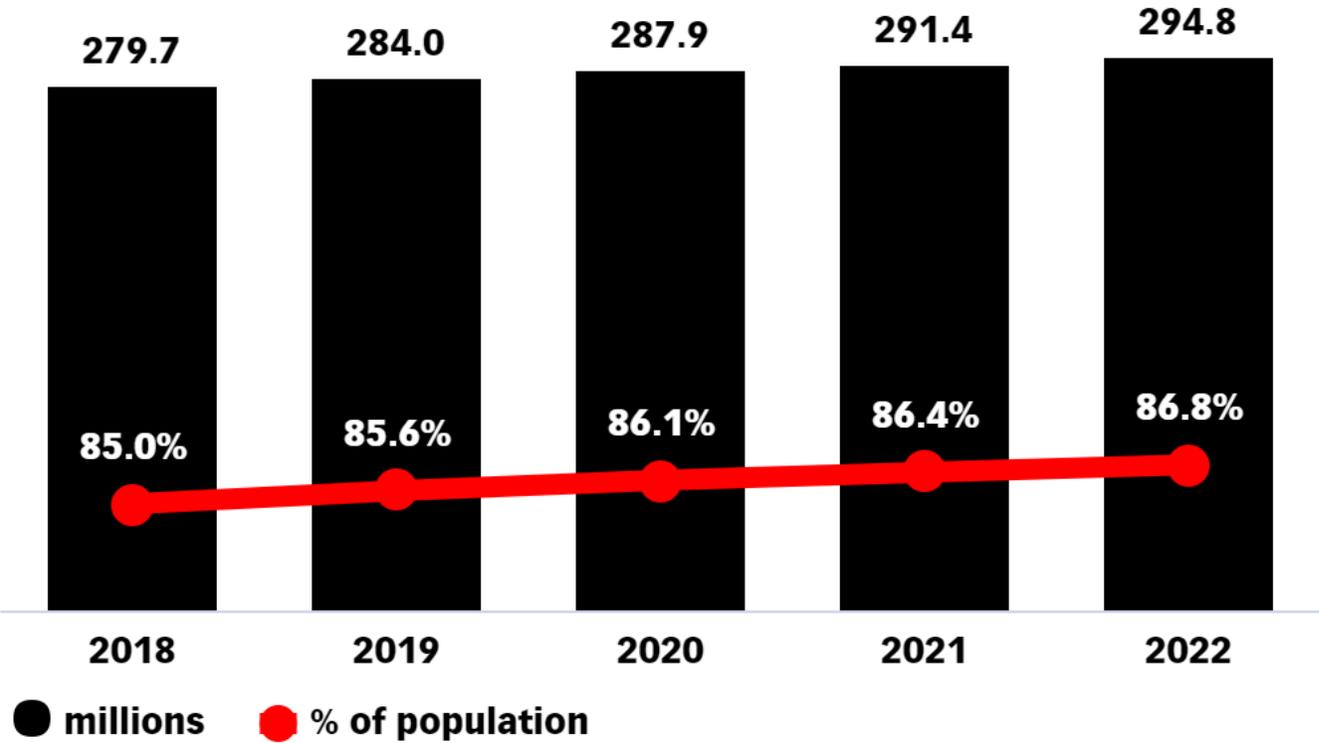
~5MM Apps

~224MM Social Media Users

>60% Watch OTT Video

connect: digital is the modern mass medium ...

US internet users 2018-2022:



Source: eMarketer, January 2018

www.eMarketer.com

Source: <https://numbers-na1.emarketer.com/584b26021403070290f93a13/5851918a0626310a2c186a2c>

... and digital is modern mass marketing

low-friction/DIY digital touchpoints have significant reach

% of total digital population reached monthly by:

71%

Blogs

87%

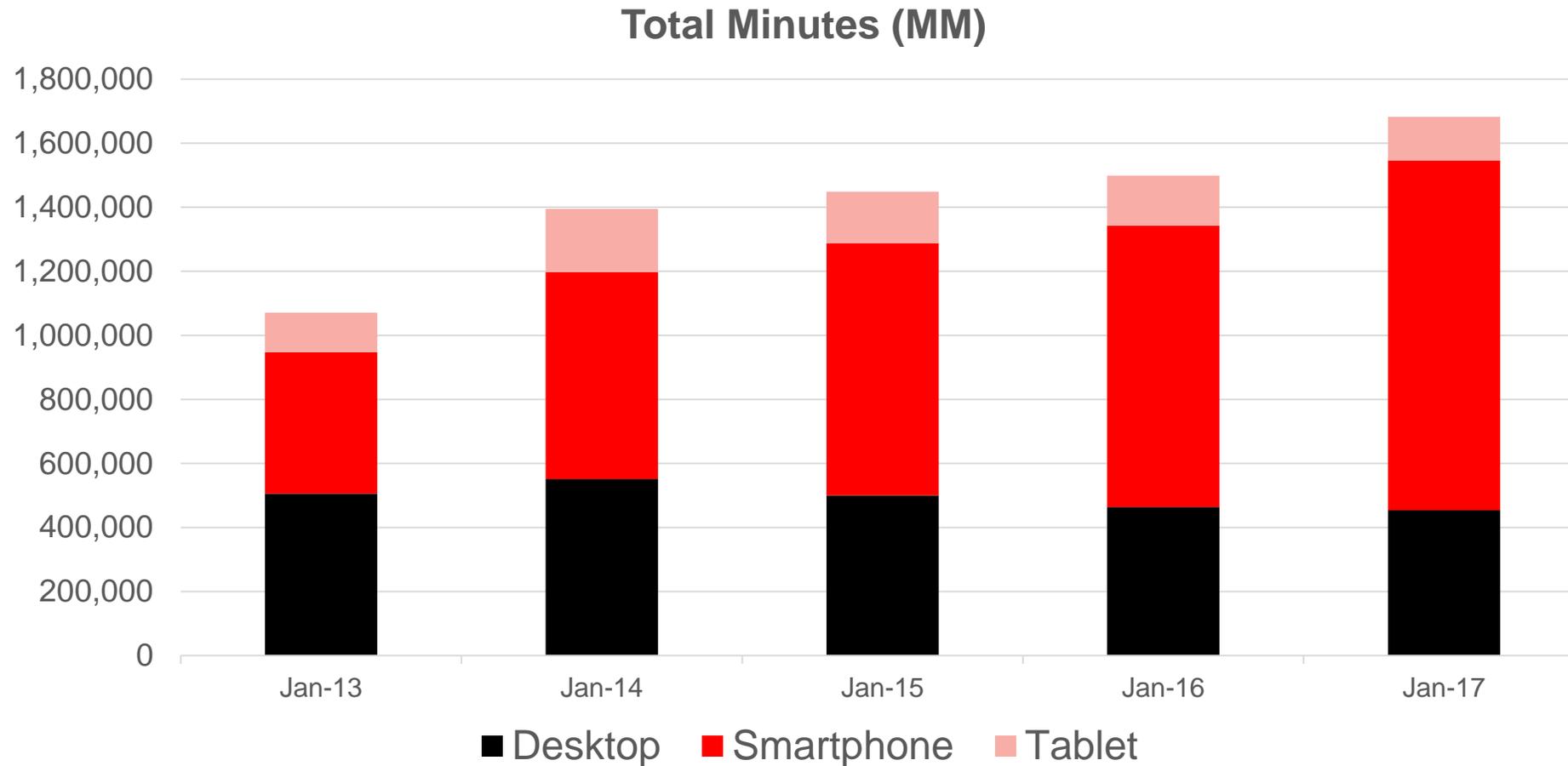
Social Networks

90%

Search/Navigation

connect: consumers' time with digital screens is growing

U.S. consumers are spending ever-more time with digital screens



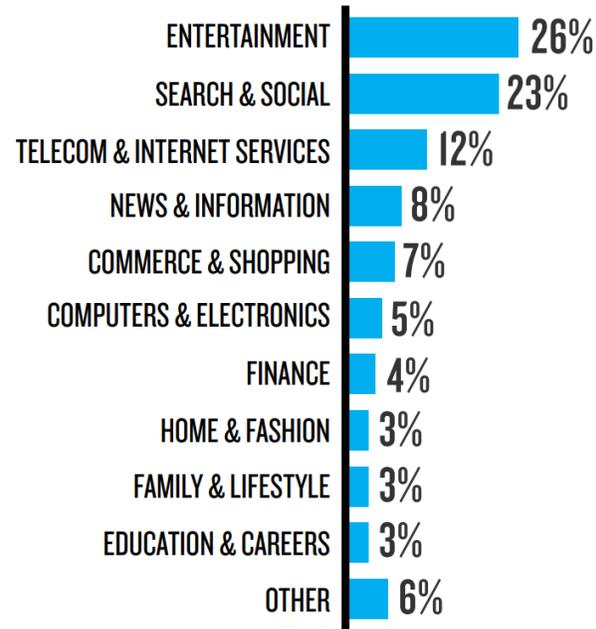
connect: 50-60%+ of that time = entertainment + social + search

entertainment, search, and social activities dominate digital screen time

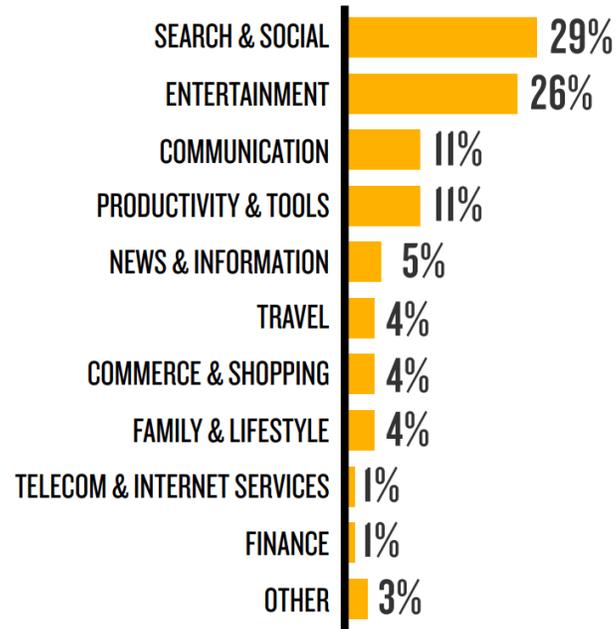
Share of gross minutes by category:



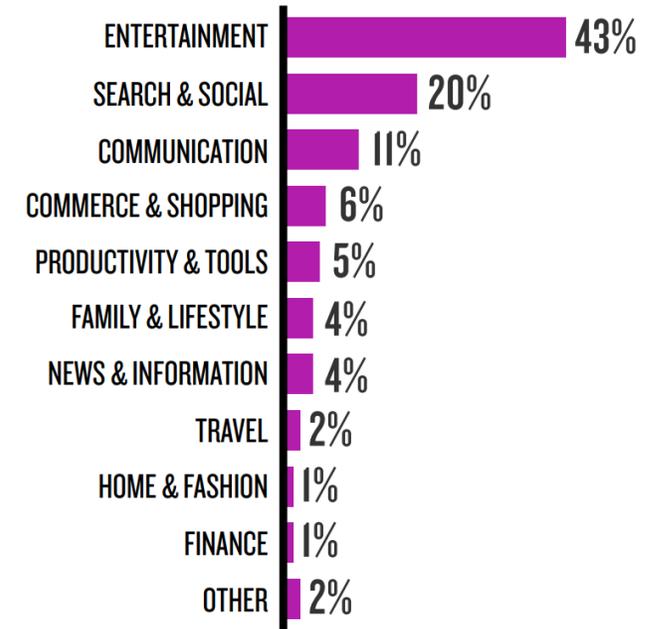
COMPUTER



SMARTPHONE

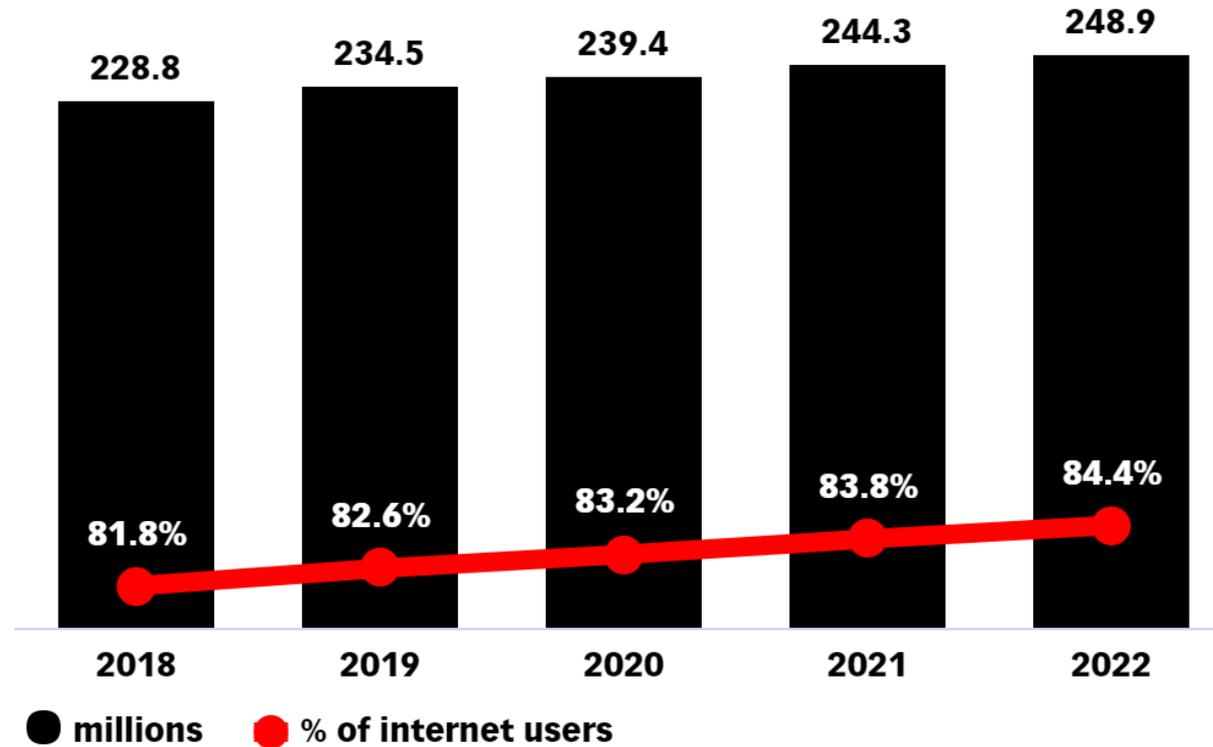


TABLET



connect: digital consumers are video consumers

US digital video viewers 2018-2022:



Source: eMarketer, January 2018

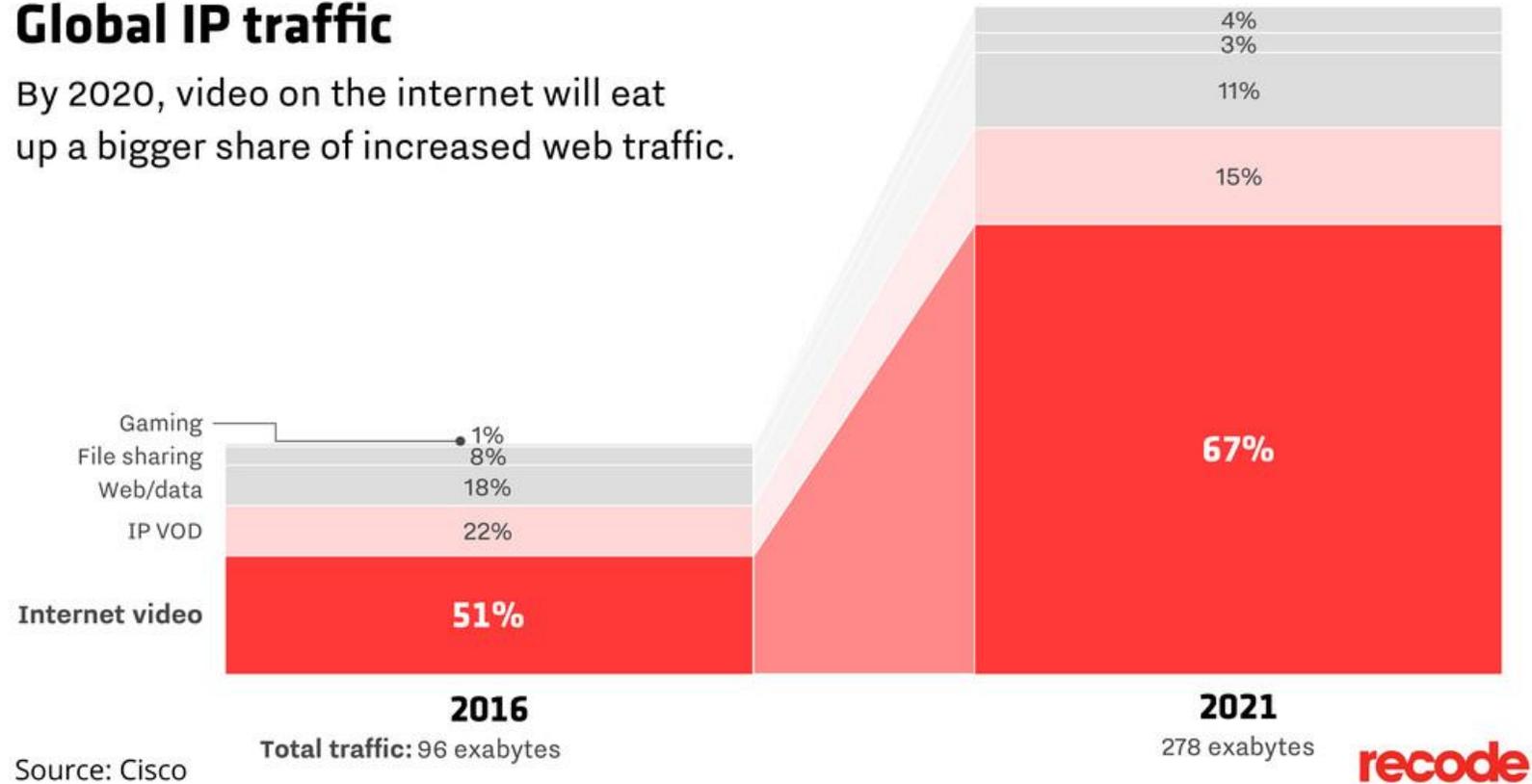
www.eMarketer.com

connect: video's share of traffic is rocketing ...

Video is expected to make up **82%** of internet traffic over the next **3 years**

Global IP traffic

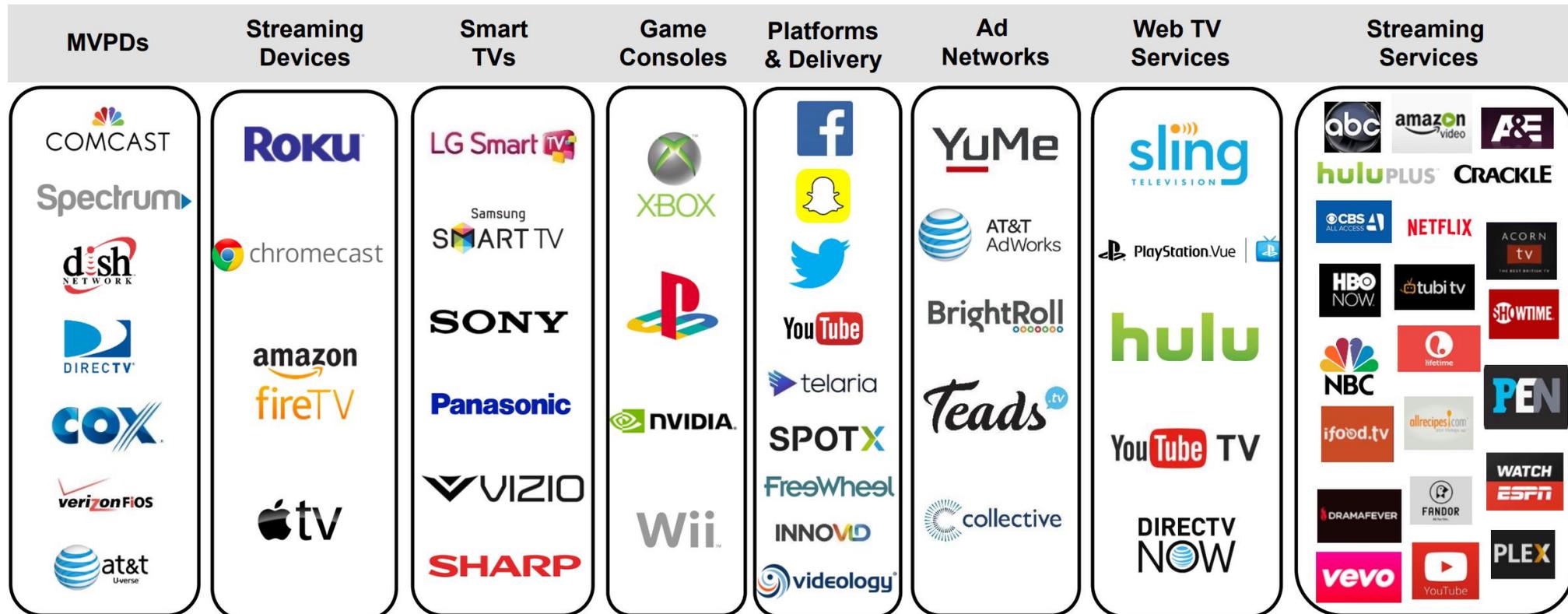
By 2020, video on the internet will eat up a bigger share of increased web traffic.



connect: many paths to the videos consumers want ...

the paths to, and creators of, video content are increasingly diverse...

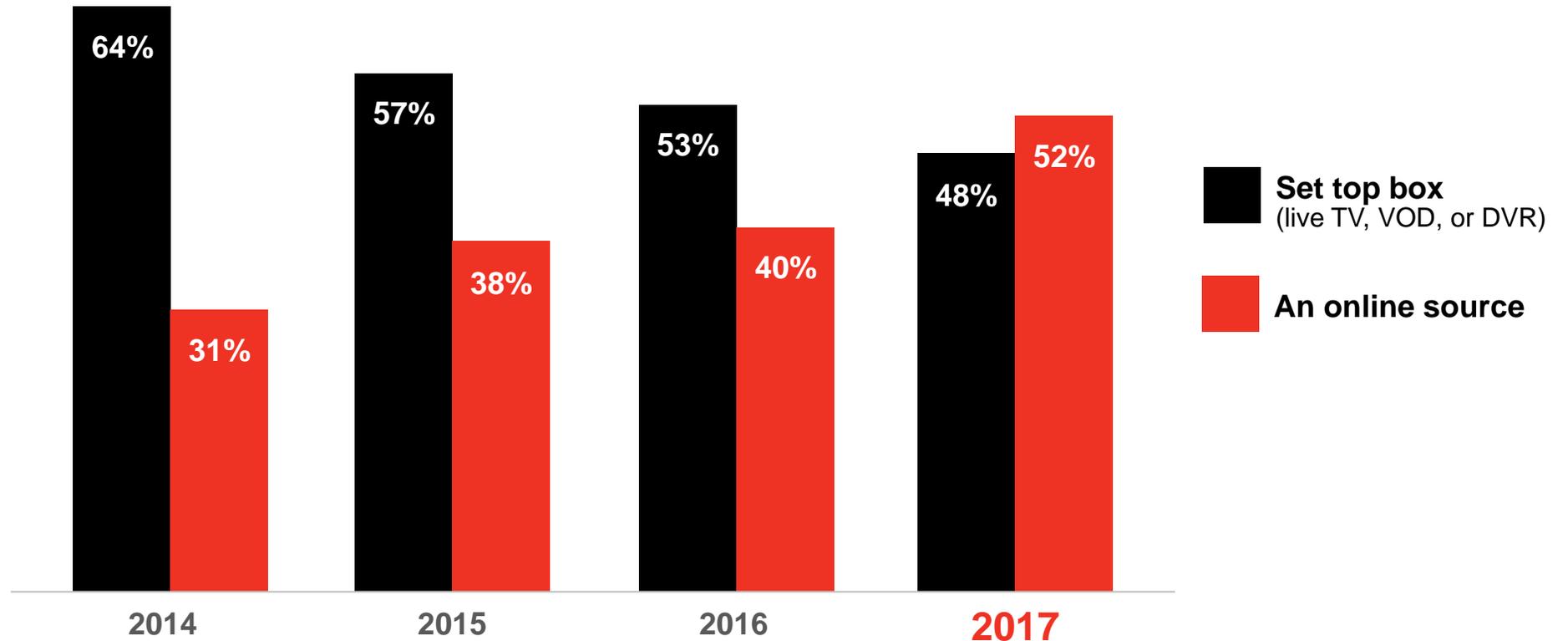
Video delivery and consumption 2017:



... but digital is preferred path

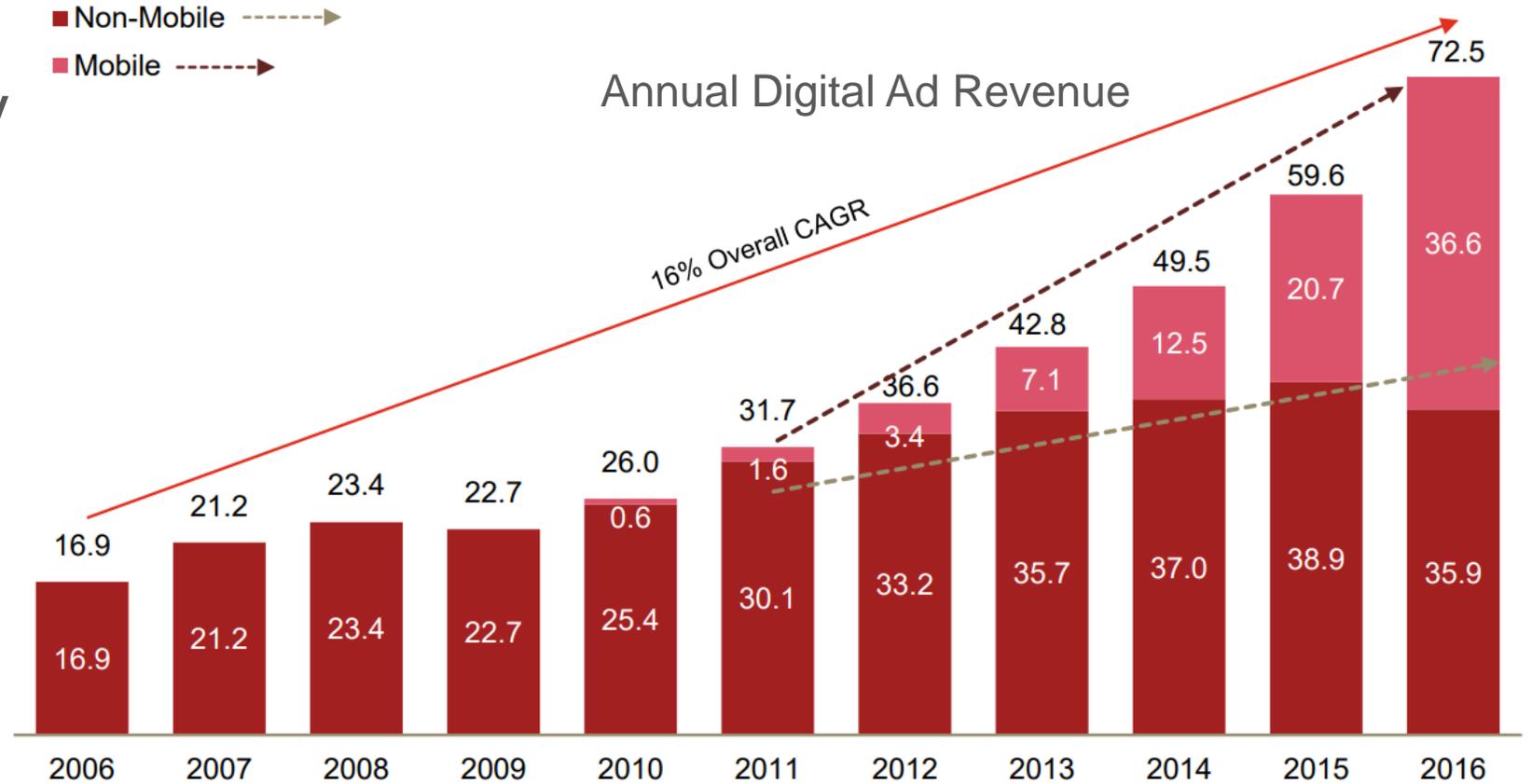
...and increasingly digital

How do you watch your favorite show?



connect: ad spend patterns validate digital's power to connect

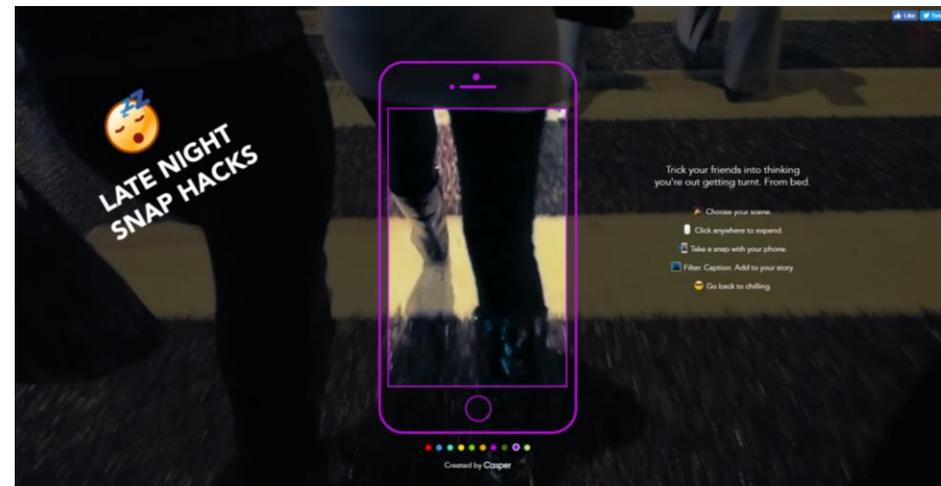
Digital Media's ability to **connect brands and consumers** is reflected in the consistent growth in marketer spend year after year.



Source: IAB/PwC Internet Ad Revenue Report, FY 2016

engage: interactive marketing builds brands, relationships, and buzz

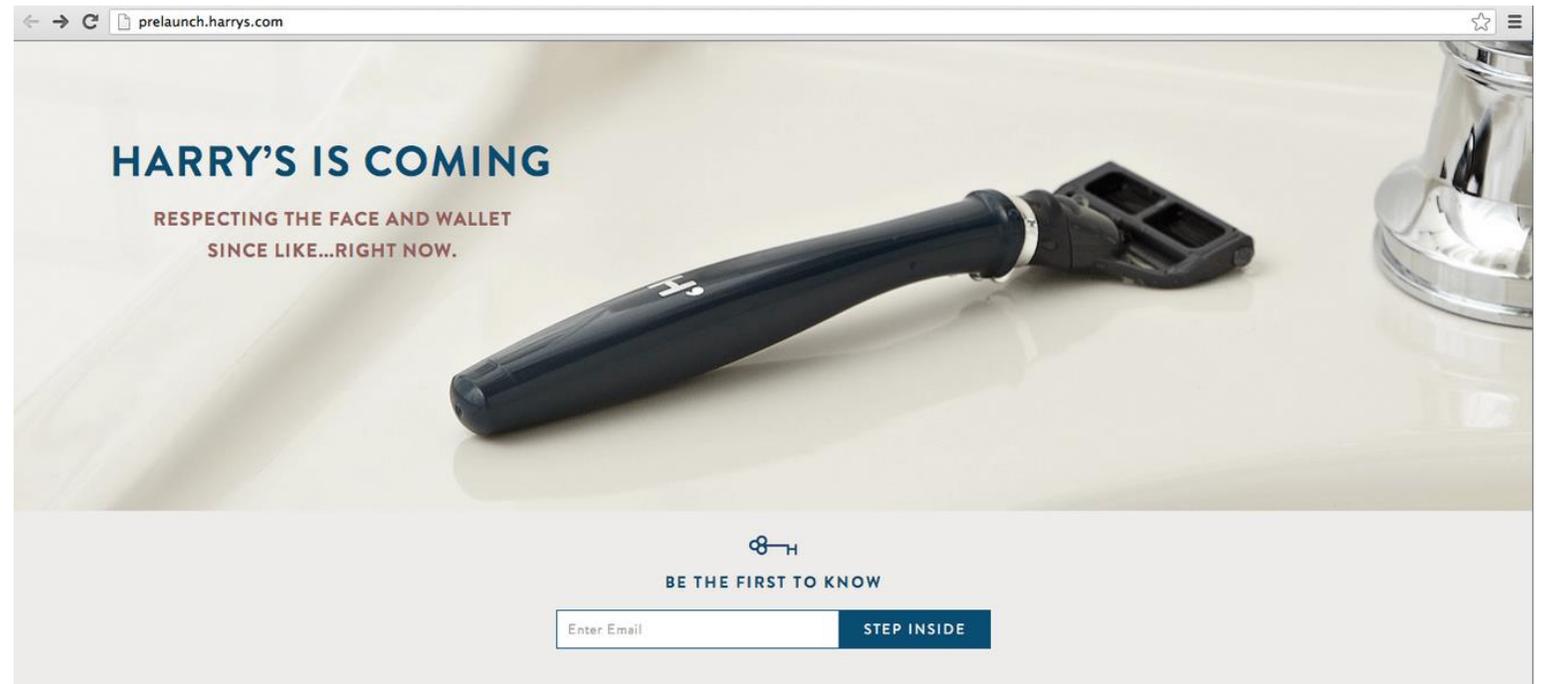
- Casper's 'Late Night Snap Hacks' featured video clips designed for users to play, record, and post on social media as evidence they were doing something other than lounging in bed.
- The site had **hundreds of thousands** of views within the **first few days** of launch, and was featured on sites like Mashable, Teen Vogue, Billboard, and The Next Web.



engage: interactive messages allow for data exchanges

- Harry's encouraged people to spread the word in exchange for prizes.
- **10K people** gave Harry's their email addresses.

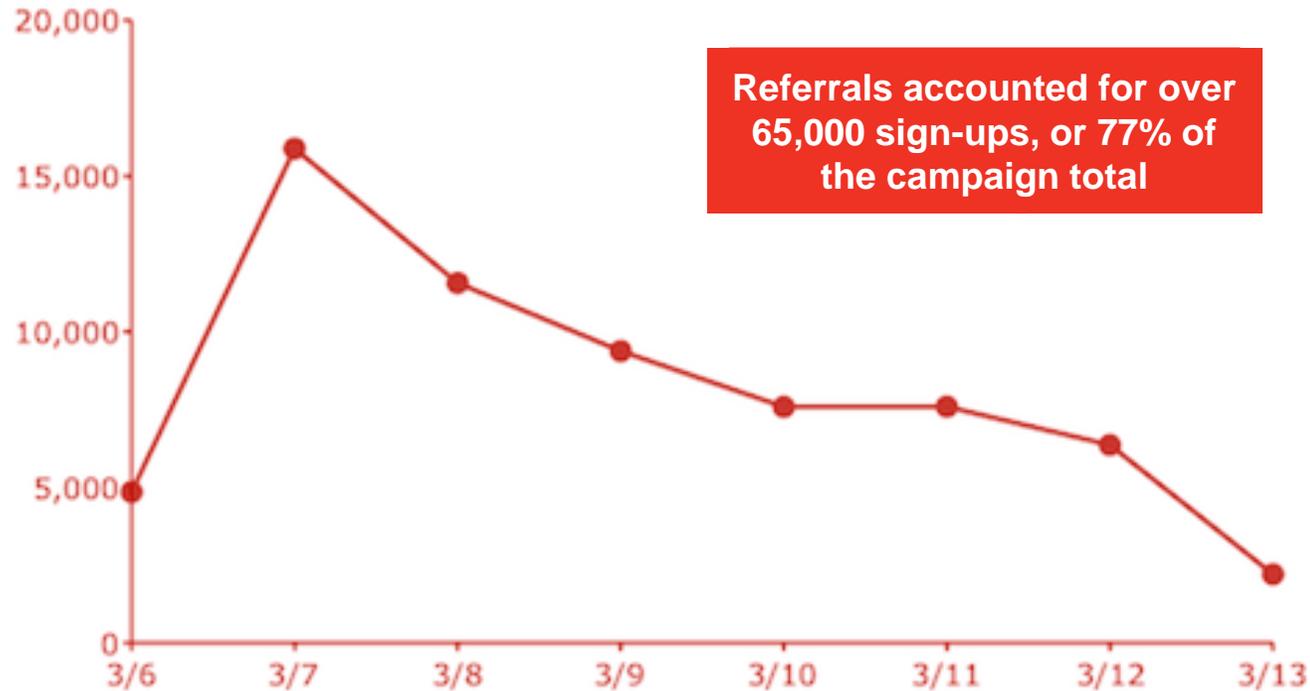
Harry's launch landing page



engage: 1st party data is the goal

which in turn drove additional earned reach

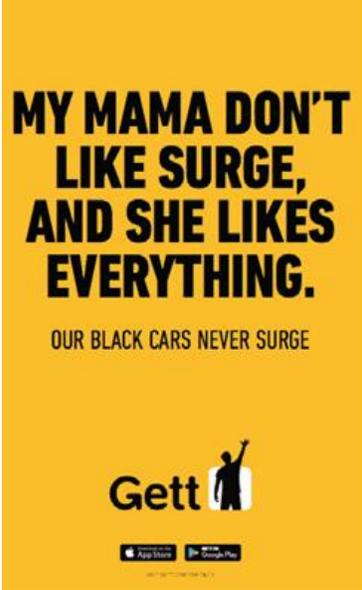
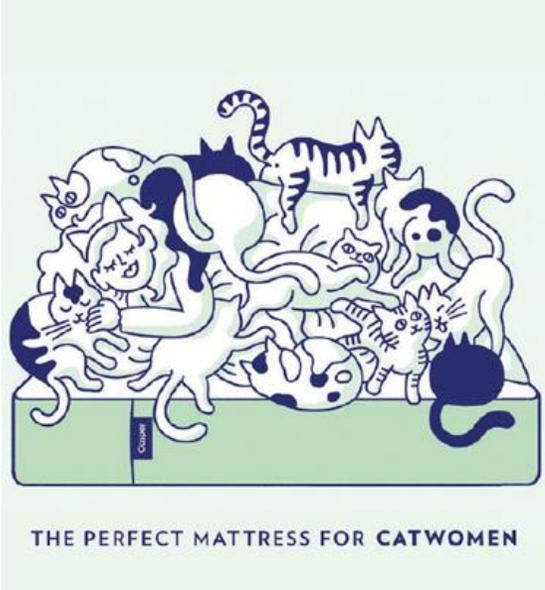
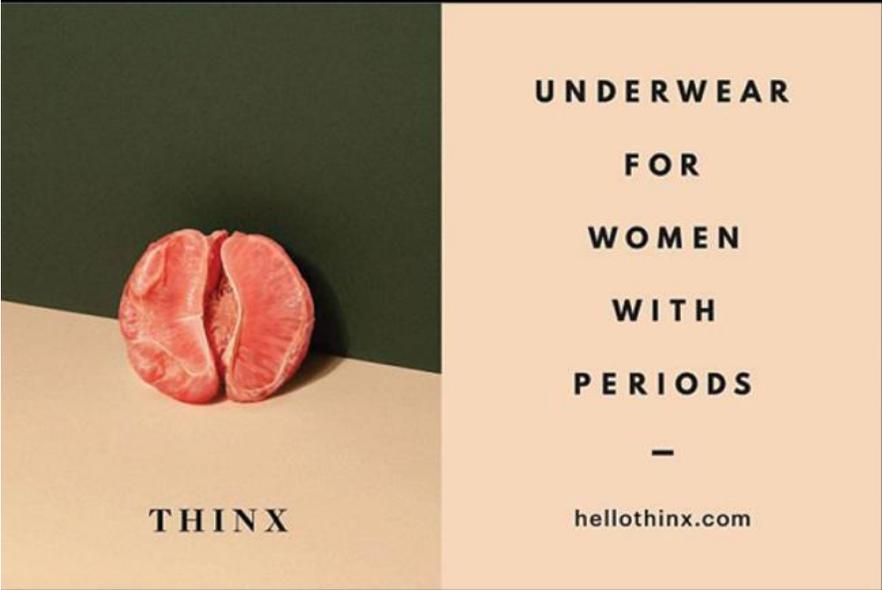
Harry's: Number of referral sign-ups by day



- 5 friends:
free shave cream
- 10 friends:
free handle with blade
- 25 friends:
Winston shave set
- 50 friends:
a year supply of free blades

engage: real world interactions also creating digital data

Thinx created a unique URL “hellothinx.com” for its subway campaign and tracked online traffic from different cities.



Source: <https://digiday.com/marketing/challenger-brands-embrace-classic-ad-channels-thinx-casper-like-subway-ads/>



the 21st century brand economy

08. understanding the fulfillment stack

activities included in this stack ...

TRANSACT

sell the product

DELIVER

get the product in the
consumer's hands

TOUCH

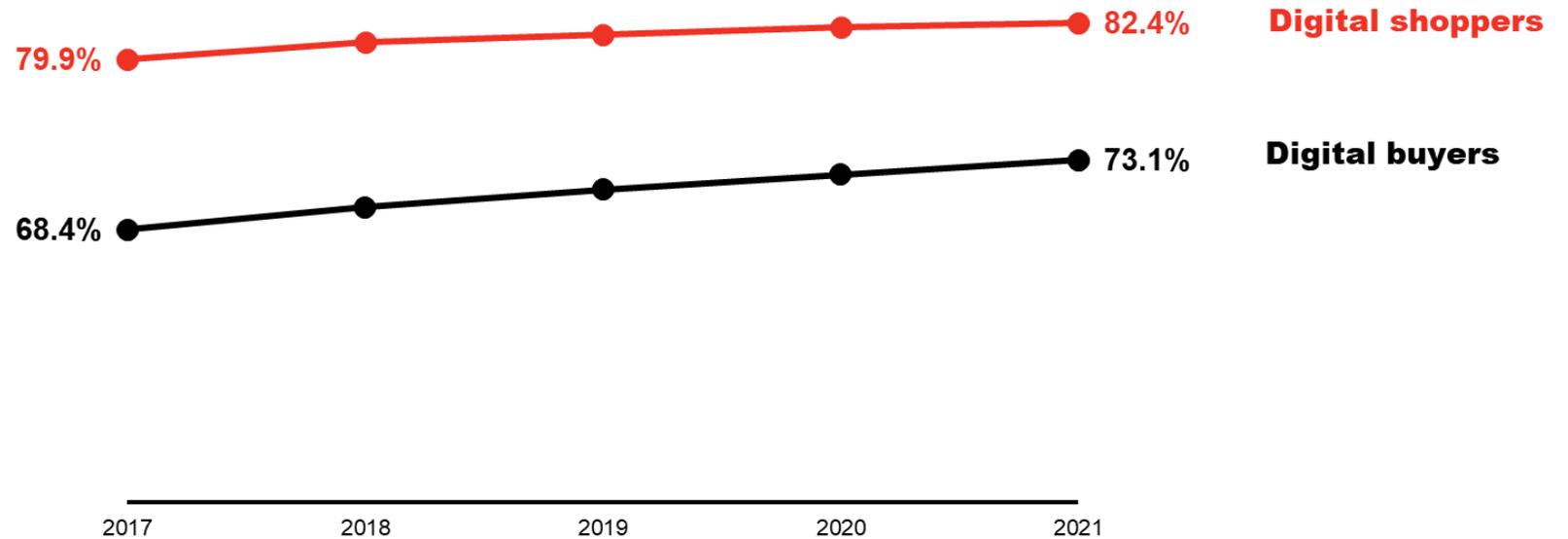
maintain and grow
the relationship

the fulfillment stack ...



transact: online shopping is already a mainstream activity

~70% of U.S. adults already buy online, and this is expected to increase



US Digital Shopper vs. Buyer Penetration (% of population)

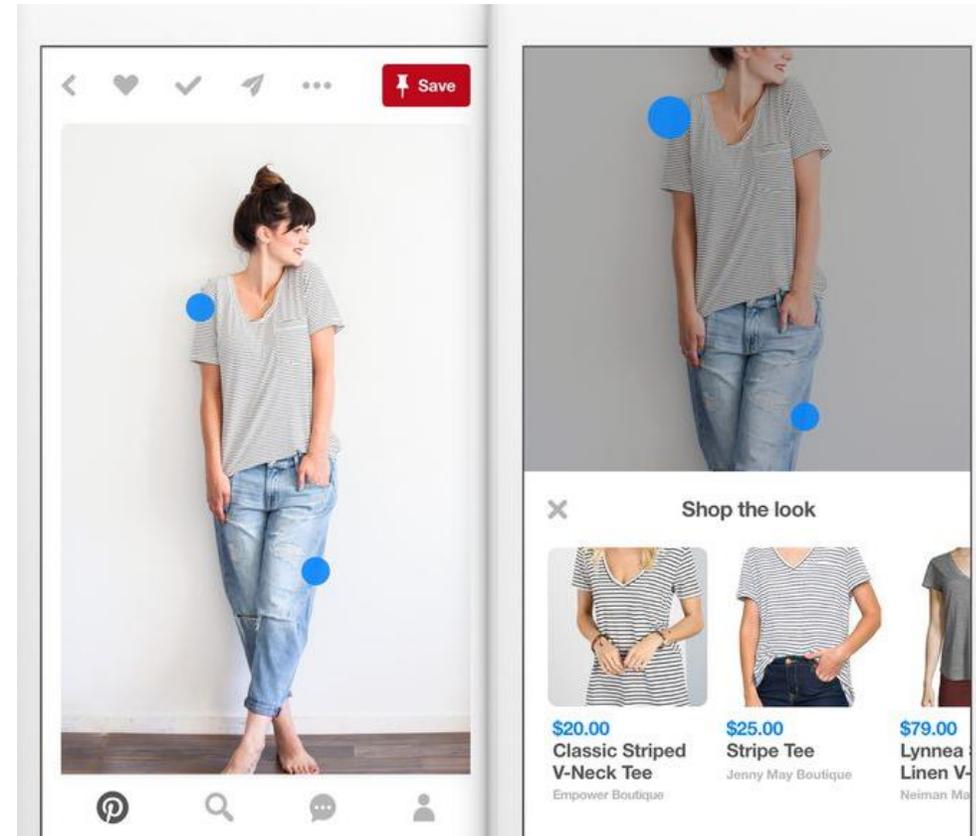
transact: many platforms exist upon which to build a storefront

| PLATFORM | MARKET SHARE | CLIENTS |
|--|--------------|--|
|  | 20% |   |
|  | 18% |  |
|  | 10% |  |
|  | 7% |  |
|  | 4% | |

Source: <https://pagely.com/blog/the-top-e-commerce-platforms-of-2017-compared/>; clients per each platform's website

transact: buying directly from a brand's content feed is growing

- Visual platforms like Instagram and Pinterest have been rolling out in-feed shopping tools.
- Brands are using these platforms to allow for their customers to move more quickly from discovery to purchase.
- This does not yet replace a brand's ecommerce site, as users are directed there to complete transactions.



transact: physical stores have a role to play, particularly as brands grow



We realized we need to have stores if we're going to grow on a national and global scale.¹



Plans to use a recent \$20MM funding round to open at least 4 retail stores³

Glossier.

Glossier's store has more sales/sq. foot than the average Apple Store, and a 65% conversion rate.²

WARBY PARKER

By June '17 had 50 stores, and was planning to open 19 more by year's end⁴

“Recognizing the demand-generating power of physical engagement, numerous online retailers have opened up their own bricks-and-mortar stores.”

HBR 12/7/17

<https://hbr.org/2017/12/shoppers-need-a-reason-to-go-to-your-store-other-than-buying-stuff>

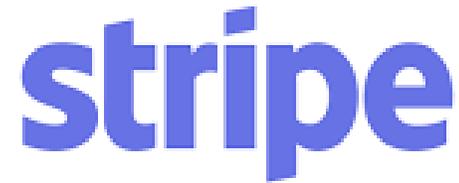
Sources:¹https://www.washingtonpost.com/business/economy/everlane-is-opening-its-first-stores-after-years-of-swearing-it-wouldnt/2017/11/22/32e7d142-c9ba-11e7-b0cf-7689a9f2d84e_story.html?utm_term=.c631823dcc65 ²<https://www.entrepreneur.com/article/298014>

³<https://skift.com/2017/05/26/travel-startup-funding-this-week-away-may-26-2017/> ⁴<https://www.inc.com/magazine/201706/tom-foster/warby-parker-eyewear.html>

transact: digital payment platforms are plug-and-pay

payment gateway providers' projected growth points to increasing transaction volume

- Payment Gateways, which allow ecommerce sites to connect to banks and credit card companies, processed nearly \$20BN in 2016.
- That is predicted to grow to nearly \$58BN by 2022. a CAGR of nearly 20%.
- Payment gateway provider Stripe, who's customers include Facebook, Amazon, Pinterest, Lyft, Fitbit, and Instacart, was recently valued at \$9.2 billion dollars.

The logo for Stripe, featuring the word "stripe" in a lowercase, blue, sans-serif font.The logo for Braintree, featuring the word "Braintree" in a black, serif font.

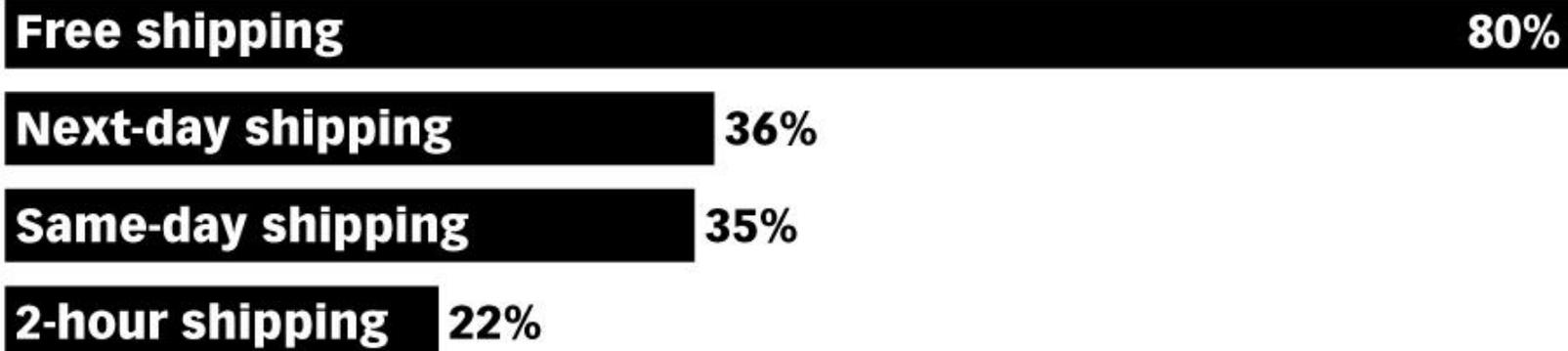
Square



deliver: free > fast (but fast is important)

Shipping Options that Would Encourage US Internet Users to Purchase Digitally, March 2017

% of respondents



Note: ages 18+

Source: Walker Sands Communications, "Future of Retail 2017," July 12, 2017

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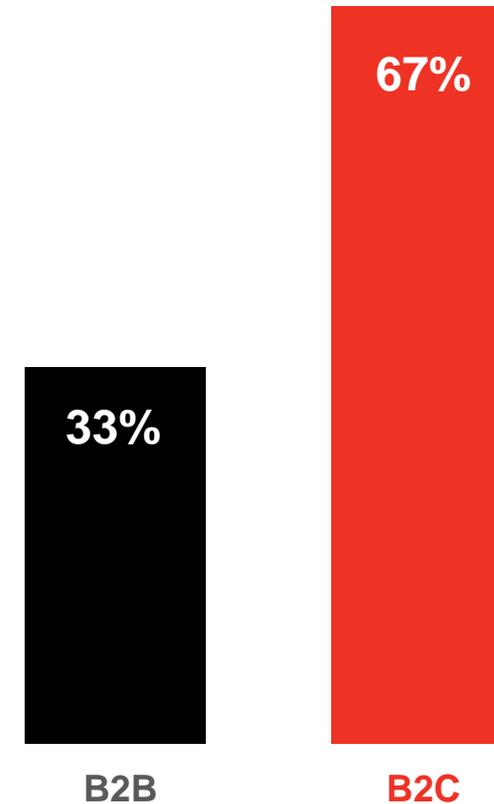
www.eMarketer.com

deliver: last mile delivery is seeing demand increase

How has demand for last mile services changed over the last 18 months?

+50%

Where has this demand come from?



deliver: consumer delivery today > than total delivery market 10 years ago

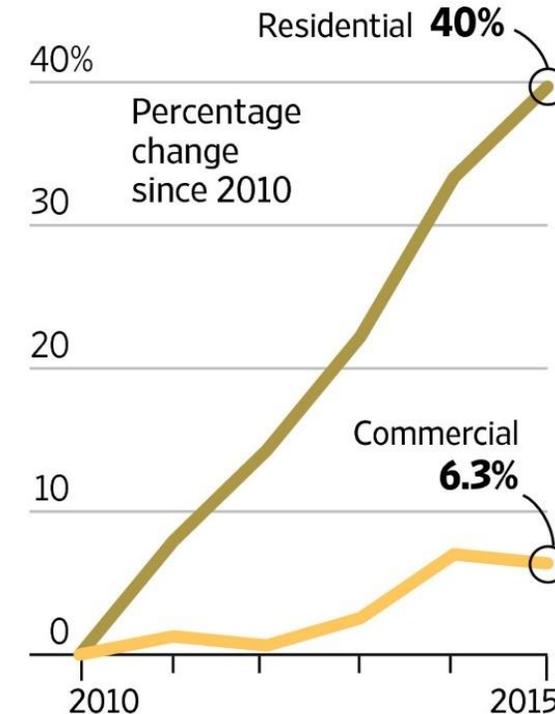
1998: Residential deliveries represented **20%** of the total domestic parcel market, or **\$5 billion**.

2017: B2C deliveries will exceed **50%** and represent **\$40 billion** in market size.

This is larger than the **total** parcel market size in 1998.

Home Delivery Blues

For truckers, labor-intensive residential stops are outpacing easier business deliveries.



Source: SJ Consulting Group

THE WALL STREET JOURNAL.

deliver: platforms like Fulfillment By Amazon lower barriers to entry

- Small and Medium Business sold 2 billion items through Fulfillment by Amazon.
- This accounts for more than half of the products Amazon sells online.
- FBA allows smaller companies to leverage Amazon's massive fulfillment infrastructure, and offer advanced delivery options like Prime two-day shipping.
- Amazon charges the small businesses fees for storage and shipping.

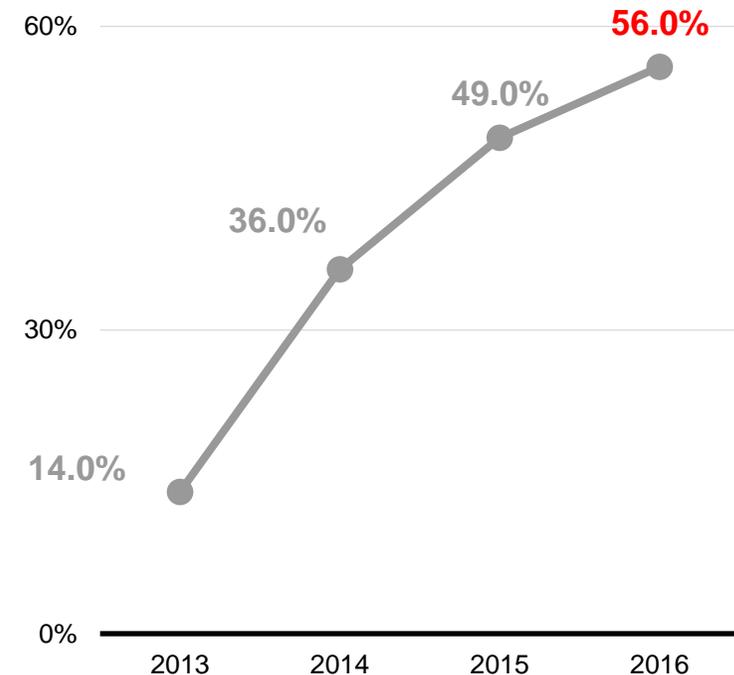


deliver: physical spaces can finish what digital spaces initiate

Webrooming is the flipside of Showrooming

Why do people Webroom

- I don't want to pay for shipping – 47%
- I like to go to a store to touch and feel a product before I buy it – 46%
- I want to check an item's availability online before I purchase it in-store – 42%
- I like the option of being able to return the item to the store if I need to – 37%
- I will ask the store to price match the better price I found online – 36%
- I don't want to wait for the product to be delivered – 23%



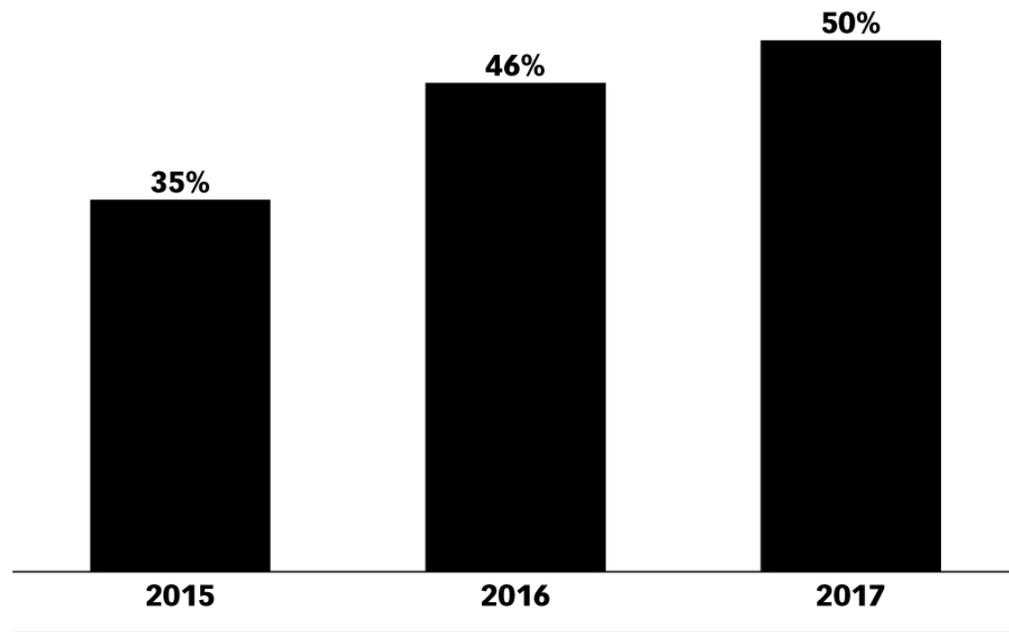
US Digital-Influenced* In-Store Retail Sales Share
(% of total in-store sales)

deliver: shop-for-pickup = half U.S. population

BOPUS (buy online, pick-up in store) is growing

US Internet Users Who Buy Online and Pick Up In-Store, 2015-2017

% of respondents



Note: ages 18+; in the past 12 months

Source: JDA, "The 2017 Consumer Survey," July 11, 2017

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www.eMarketer.com

83%

of US BOPUS users expect to wait no more than 24 hours for pickup

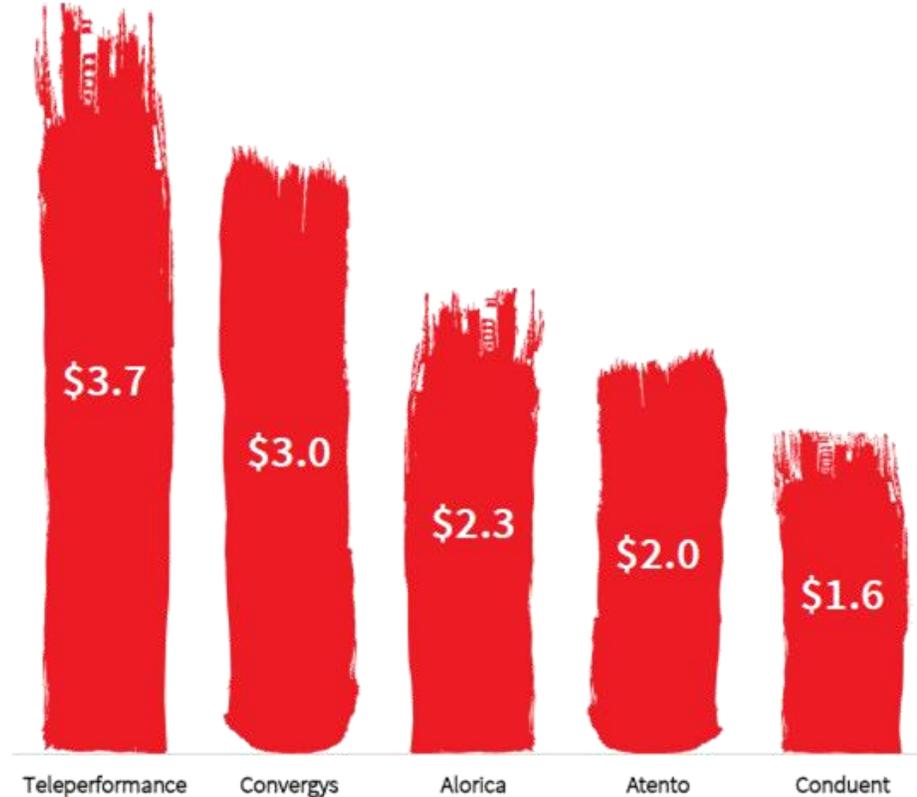
Source: Bell and Howell, April 2017

touch: maintaining consumer relationships driving investment

growth in spending on CCOs driven by service diversification

North American Contact Center Outsourcing revenues in 2015 were **\$9.4BN**, up 22.3% from 2013

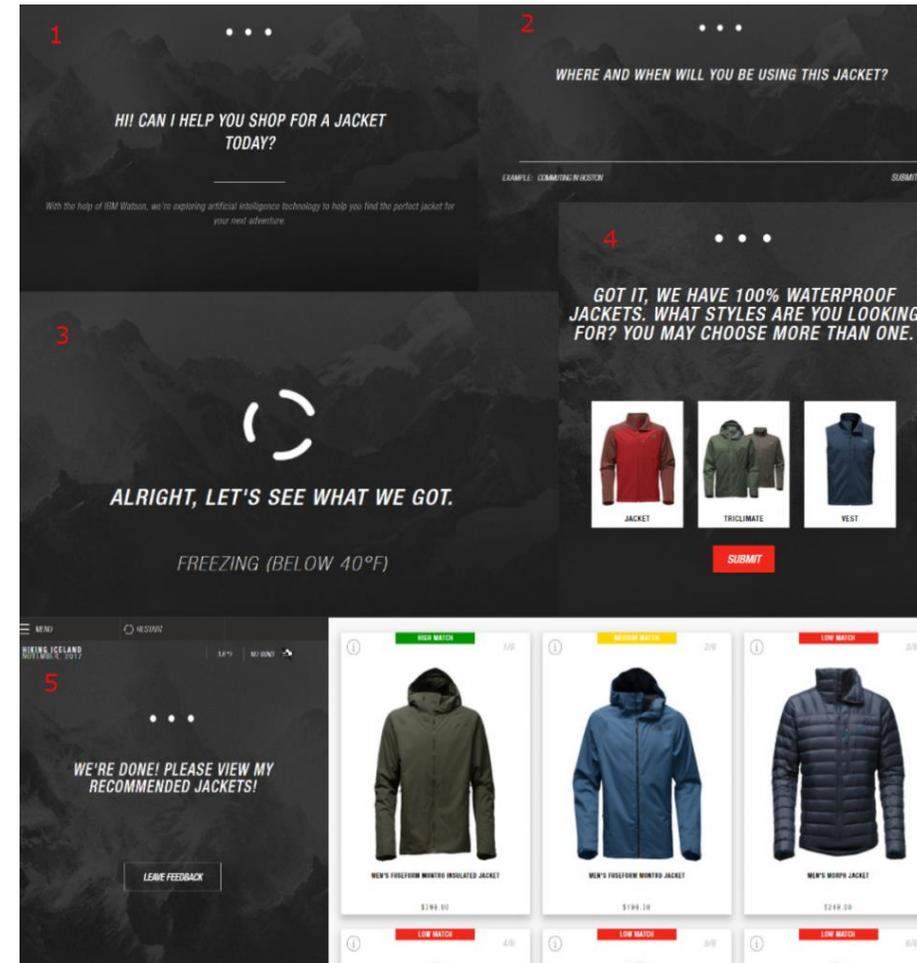
Top 5 global CCO providers by total revenue
(\$ in U.S. billions, 2015)



*Alorica revenue represents acquisition of EGS

touch: always-on & always-available engagement requires innovation

The global chatbot industry is expected to grow at a **CAGR over 37% to 2021** and the market share of chatbots in the retail and e-commerce industry will be **39%**



the 21st century brand economy

09. understanding the data stack

activities included in this stack ...

GATHER

1st party data

ACQUIRE

2nd & 3rd party data

DEPLOY

data to build business

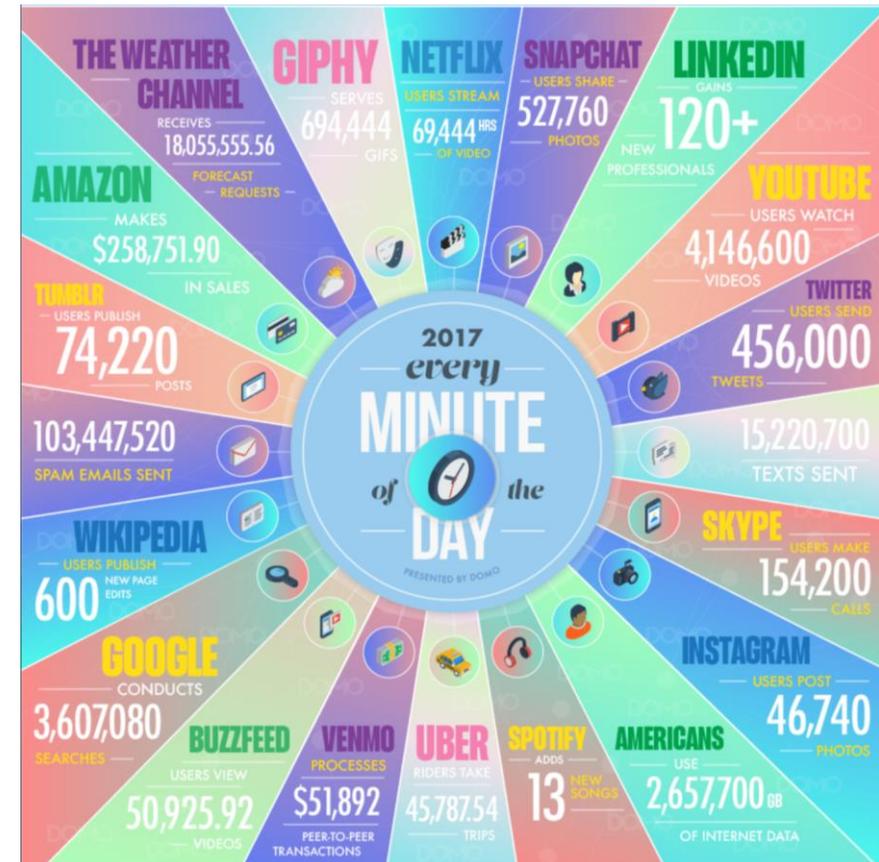
the data stack ...



gather: a world awash in data

the world is awash in data

The U.S. alone generates **2,657,700** gigabytes of data per minute.



gather: data range & scale are massive

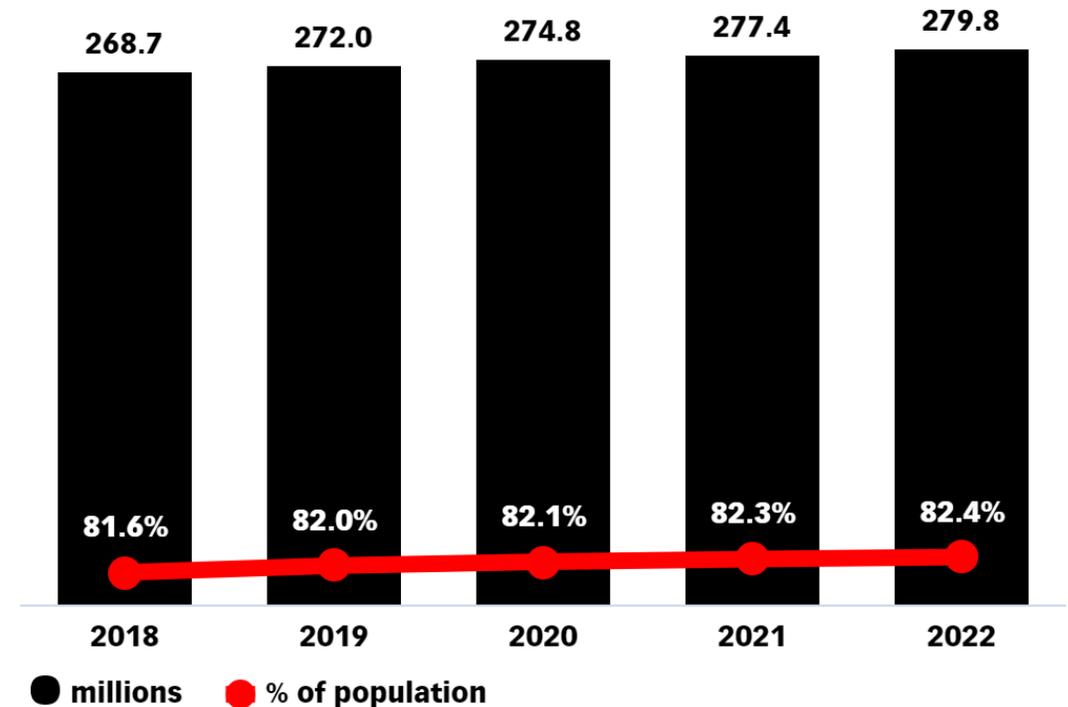
Mobile phone sensors

- Accelerometer
- Gyroscope
- Magnetometer
- GPS
- Barometer
- Proximity Sensor
- Ambient Light Sensor

X

Mobile Phone Users

US, 2018-2022



Source: eMarketer, January 2018

www.eMarketer.com

gather: data sources & volume will grow

...and proliferating

Number of devices connected to Internet globally:

2016: **11BN**

2020: **30BN**

2025: **80BN**

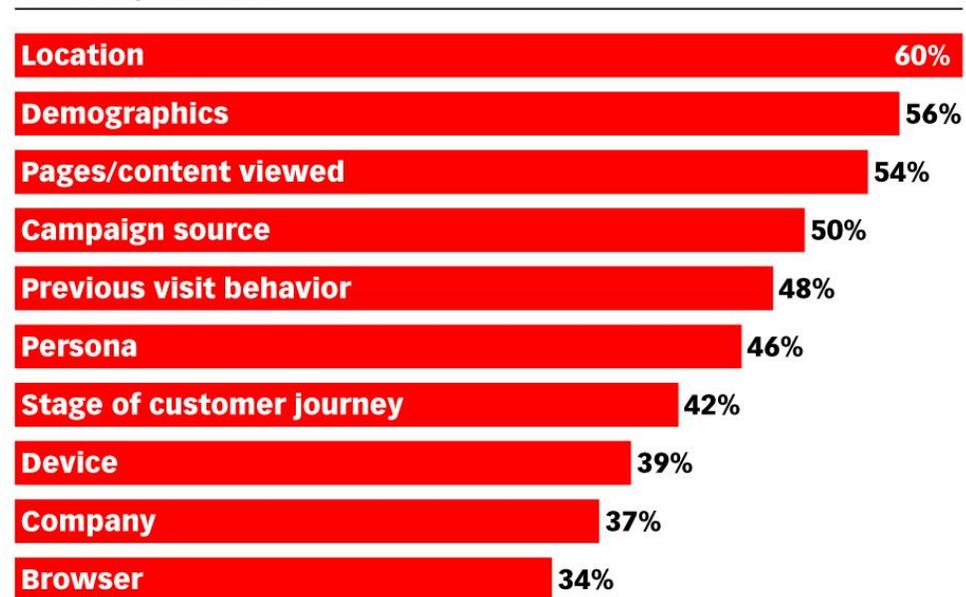
IDC predicts global
digital data
generated will total
180 zettabytes
annually by 2025

gather: data = brand-building signals

the consumer signals that emerge provide powerful tools to optimize relevance

Top criteria for targeting and personalization:

% of respondents



*Note: n=109; top 10 responses; *78% of respondents were from the US
Source: Evergage, "2017 Trends in Personalization" conducted by
Researchscape, April 25, 2017*

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www.eMarketer.com

gather: 1st-party data investments reflect economic importance

activation solutions include hosting, cleaning, and modeling

U.S. audience data activation investment:

\$10.1BN

in 2017

Integration, processing and hygiene

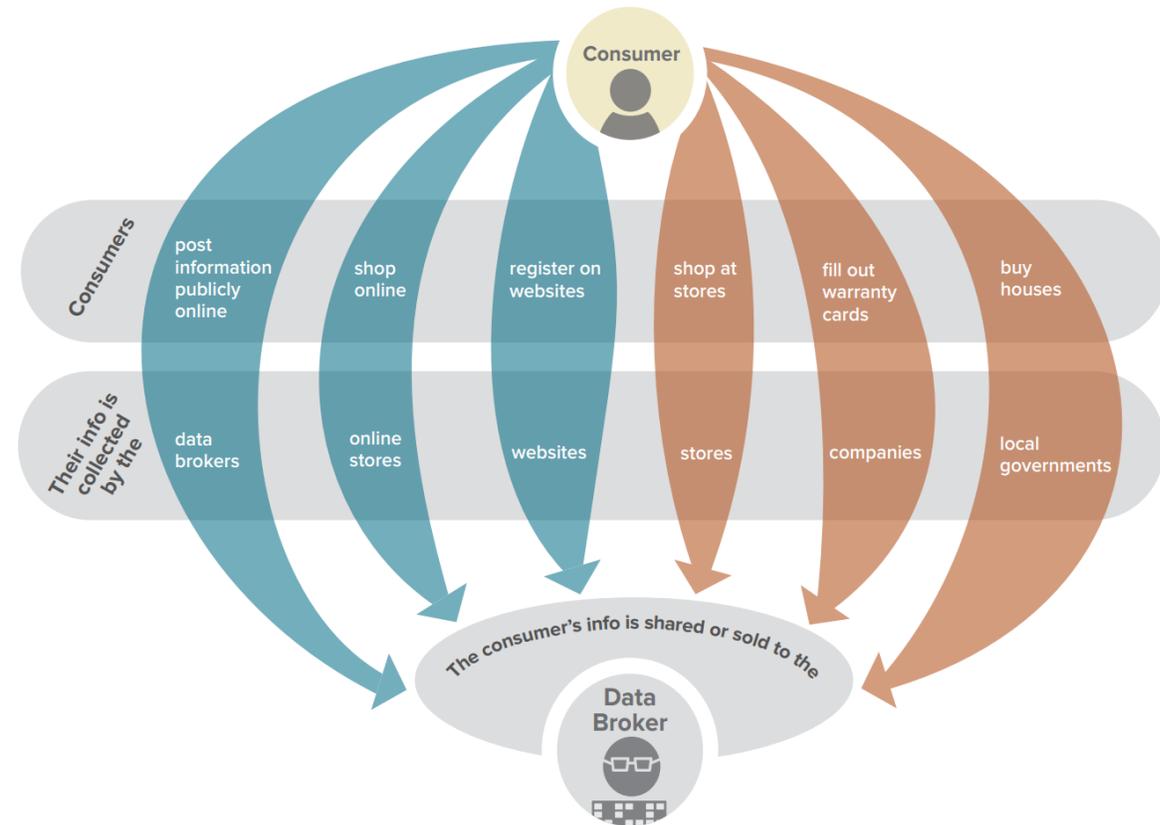
Hosting and management

Analytics, modeling and segmentation

acquire: range of 2nd- & 3rd-party data sources is as wide as the data itself

3rd Party data is being aggregated from various sources

Public data, online shopping data, website registrations, in-store shopping, warranty data, and more is available for purchase



acquire: full-journey consumer data is available ...

available data ranges across consumer behavior, identity, and transactions

|  U.S. Audience Data Types | | 2017E (\$BB) |
|---|--|-------------------|
| Category | Description | |
| Omnichannel | <ul style="list-style-type: none"> Personally identifiable (“PII,” including name, address, email address) and “non-PII” (interests, preference and certain behavioral) information used to identify customers and prospects and indicate ways to engage with them; typically for use across traditional (direct mail, offer optimization) and digital (email, display advertising, site experience, etc.) channels | \$3.530 |
| Transactional | <ul style="list-style-type: none"> Purchase history associated with audience members/segments; often provided in aggregate, used to determine interests and needs and used to support segmentation for targeted marketing (includes credit, prescription and cooperative datasets that support marketing) | \$2.997 |
| Digital | <ul style="list-style-type: none"> Online behaviors of customers and prospects (as transmitted through IP addresses, device IDs and other unique identifiers) indicating how these users interact and are likely to interact across digital devices and associated media channels | \$2.078 |
| Specialty | <ul style="list-style-type: none"> Insights into customer and prospect behavior across new and emerging channels and specialty functions not easily integrated with other data types (including addressable TV, “Internet of things”/wearables, etc.), enabling customer/prospect profile enhancement, segmentation and marketing engagement planning | \$0.886 |
| Identity | <ul style="list-style-type: none"> Information that supports the reconciliation of customer and prospect profiles built across a range of disparate touchpoints; can support onboarding of identity profiles in support of unification/optimization of cross-channel marketing engagements | \$0.563 |
| Total | | \$10.054BB |

12

... and attracting significant investment

activation solutions include hosting, cleaning, and modeling

3rd party audience data investment:

\$10.1BN
in 2017

Omnichannel

Transactional

Digital

Specialty

Identity

deploy: brands' data goals vary

Consumer-related marketer capabilities:

% of respondents

Use data about our customers to find similar audiences



Understand our customers' typical cross-channel buying journeys



Deliver dynamic content across digital formats, such as display, mobile and video advertising, in response to individual's behavior



Understand our customers' cross-device behaviors

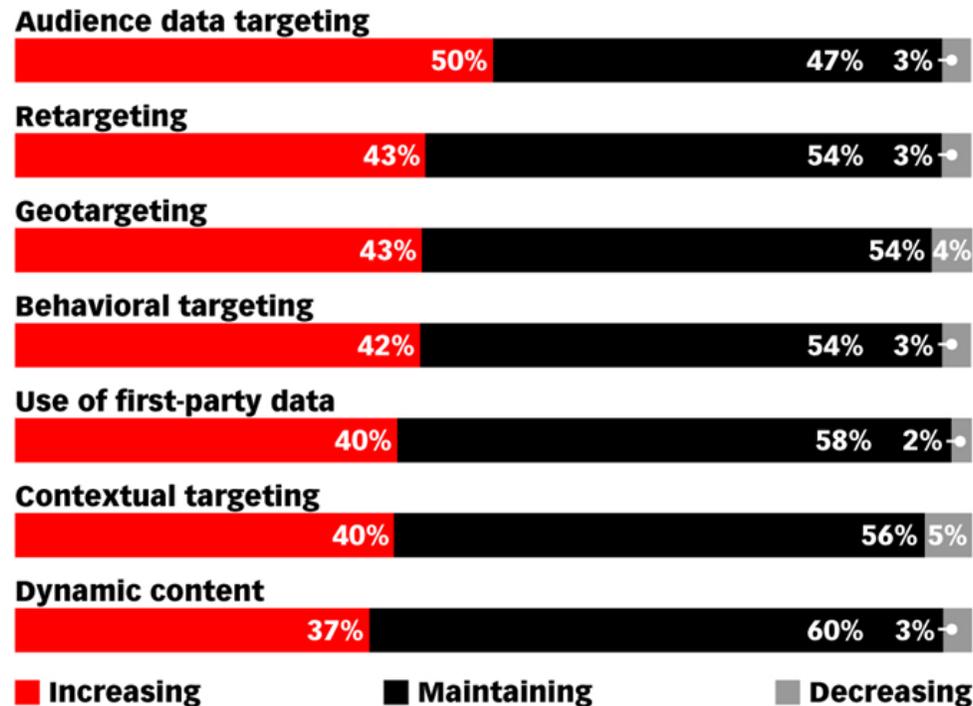


deploy: data targeting capabilities & spend growing

spending on targeting across various consumer signals is increasing

Change in ad targeting spend, by method:

% of respondents



deploy: programmatic buying still mostly about reach ...

marketers are seeing benefits to automation

Benefits of programmatic buying:

% of respondents

- | | |
|-------------------------------|-----------------------------|
| 1 Very important | 4 Slightly important |
| 2 Important | 5 Not important |
| 3 Moderately important | 6 Don't know |

| | 1 | 2 | 3 | 4 | 5 | 6 |
|--|----------|----------|----------|----------|----------|----------|
| Better audience targeting | 74% | 22% | 3% | 1% | - | - |
| Real-time optimization | 52% | 33% | 11% | 2% | 1% | 1% |
| Ability to build audience reach | 48% | 42% | 9% | 1% | - | - |
| Cost efficiency | 45% | 35% | 12% | 4% | 4% | - |
| Reach customers at multiple points along the purchase path | 45% | 29% | 18% | 5% | 2% | - |
| Managing buys across channels | 37% | 42% | 14% | 5% | 1% | - |

*Note: n=100; numbers may not add up to 100% due to rounding
Source: Association of National Advertisers (ANA), "The State of Programmatic Media Buying," Dec 18, 2017*

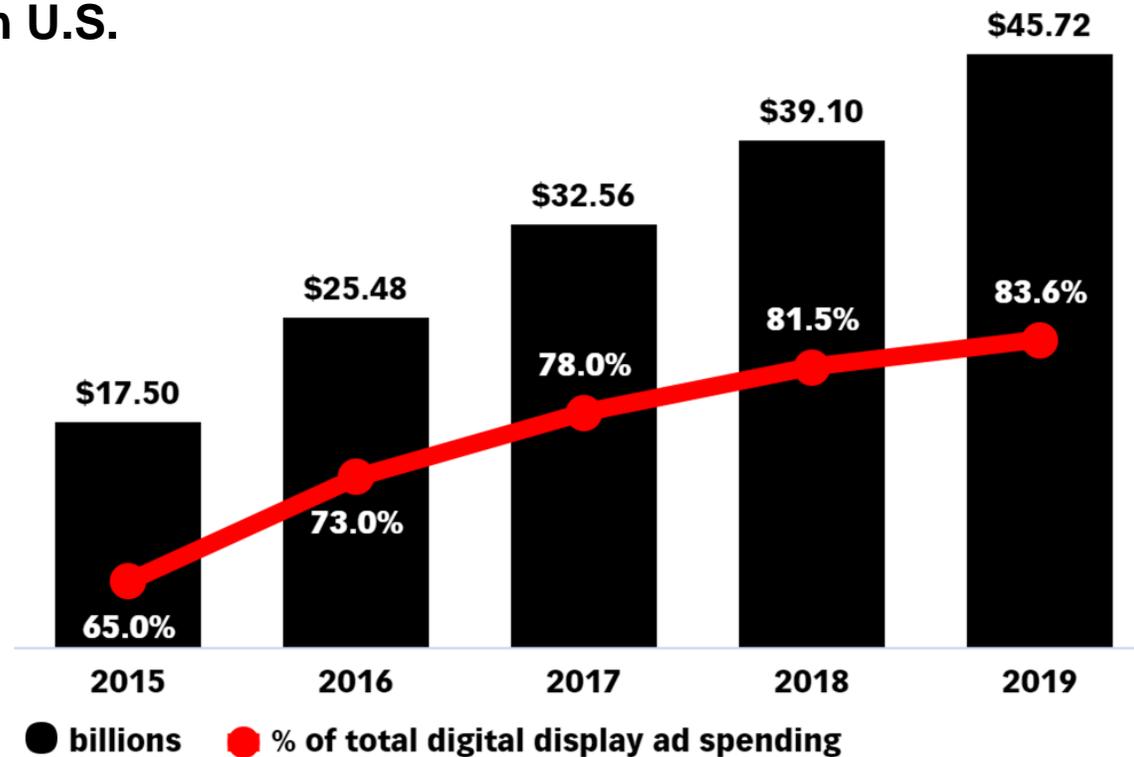
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www.eMarketer.com

... as spend on programmatic continues to grow

and automation continues to grow as a deployment method

Programmatic ad spend in U.S.



Source: eMarketer, September 2017

www.eMarketer.com

dmp growth and competition is accelerating

In October, Oracle was dominant as the most preferred DMP.
Salesforce is now a competitor

Preference of Data Management Platforms (Top 3)
Percent of Respondents

| | | | % Change from Prior Wave |
|---|--|---|--------------------------|
| 1 |  ORACLE bluekai |  23% | -8 |
| 2 |  salesforce DMP |  19% | +16* |
| 3 |  Adobe Audience Manager |  9% | -2 |
| 3 |  MediaMath |  9% | +1 |

"Oracle goes above and beyond to manage/integrate clients."
- Marketer Executive

"Salesforce integrates with our CRM system. A true valued partner."
- Agency Director

"Adobe Audience Manager offers a collection of integrated online marketing and Web analytics that make my life easier."
- Marketer VP

"MediaMath's DMP is quite easy and intuitive to upload campaigns, check the stats and also to have a good overview."
- Agency Director

- The \$500 million US DMP market is expected to grow 43% annually 2015-2021.
- Forrester has identified 25 types of data used in DMPs, including social, mobile, and CRM data.
- New sources of first-party data are emerging, including TVs (data sets from set-top boxes and over-the-top video), automobiles, and wearable sensors.

Q: If you were to only send out one RFP for an advertising campaign, which of these Data Management Platforms (DMPs) would you choose?
Base: Intending to Use Data Management Platform in the Coming Year (Fixed Base)
Q: What does [BRAND] do or offer that makes them your preferred partner?
Q: Where can [BRAND] be even better or improve?
Base: Selected Brand As Preferred (Variable Base)
*Note: Salesforce DMP was listed as "KruX" in previous wave.

 Advertiser Perceptions



Randall Rothenberg
Patrick Dolan
Chris Kuist
Maggie Zhang
Eric Johns
Orchid Richardson
Susan Borst
Edward Kleban
Craig Coleman
Carmen Walkershaw