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Marketplaces: The Battery Perspective

In an increasingly online world, consumer marketplaces continue to drive innovation as they become more embedded into our everyday lives. Just two decades ago, eBay and Craigslist were perhaps the only well-known marketplaces connecting buyers and sellers of various products and services. Yet today, we see consumers leverage multiple marketplaces in their daily lives, such as Instacart for grocery delivery, Bumble for dating and Spotify for enjoying music and discovering new artists.

In many ways, 2023 was a watershed year for marketplace businesses, as consumer behavior normalized after the pandemic highs and subsequent spend pullback. Many businesses that had adopted a "growth-at-all-costs" mindset had to re-orient themselves to profitability in order to demonstrate sustainable, long-term value.

In this report, we explore the successes publicly-traded marketplace businesses experienced in the last year — as well as the challenges — to uncover what marketplace founders can learn. In doing so, we aim to guide founders through the fundamentals of what drives value in a marketplace.



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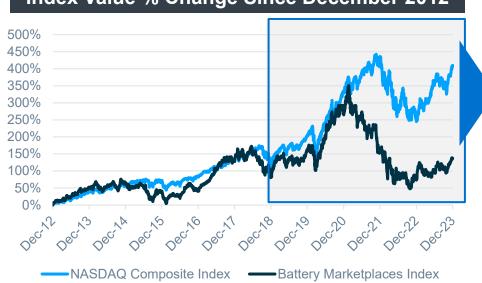
Battery Index of Public Marketplaces

Marketplaces saw record share price highs in 2020 – today, prices have normalized to ~2018 levels.

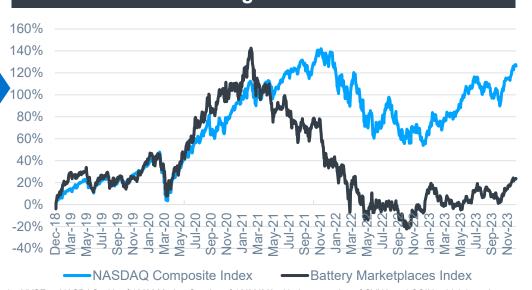
Marketplaces¹



Index Value % Change Since December 2012



Index Value % Change Since December 2018



+126% NASDAQ (since Dec. 2018)

+24%
Battery
Index of Public
Marketplaces
(since Dec. 2018)



¹ Battery Index of Public Marketplaces is a list of public marketplace companies tracked by Battery that are listed on the NYSE or NASDAQ with >\$100M Market Cap (as of 12/29/23) with the exception of CVNA and COIN, which have been excluded. CVNA has been excluded due to abnormal share-price increases (+1090% for CVNA given starting price of \$4), while COIN has been excluded as we have excluded all crypto-related businesses.

² Source data from CapIQ (as of 12/29/23) – Numbers refer to Market Caps. Battery Marketplace Index is market cap-weighted and pro-rated.

^{*} Denotes a current or former Battery portfolio company. For a complete list of portfolio companies, please visit: www.battery.com/list-of-all-companies/

2023 Key Marketplace Learnings

1

Efficiency Drives Superior Returns

Businesses that prioritize efficiency (e.g., a combination of profitability and revenue growth) are valued at higher multiples to their peers in public markets.

At the growth stage, it's important to be mindful of unit economics at both the order and market levels.

Companies should ensure there is a clear path to profitability, especially for the most mature cohorts.

3

Lean Into Viral / Product-Led Growth Loops

Overreliance on paid marketing can create a fragile business model. Integrate viral marketing and product growth loops to gain a structural advantage when it comes to acquiring customers and managing marketing costs.

2

Layer on Higher-Margin, Recurring Software Products

Reaching a certain level of network density (supply, demand, data) allows for the introduction of more profitable and recurring software products.

This is important to increase customer retention, drive higher average order values (AOVs) and expand gross margins.

4

Be Prepared For (and Leverage) the Power of Gen Al

Generative AI is poised to bring about fundamental and transformative change to marketplace experiences — for both supply and demand.

It will be important for founders to integrate AI capabilities into their products to align with this evolving landscape.



2023 Marketplace Learning #1:

Efficiency Drives Superior Returns



The Rule of 40 Explained

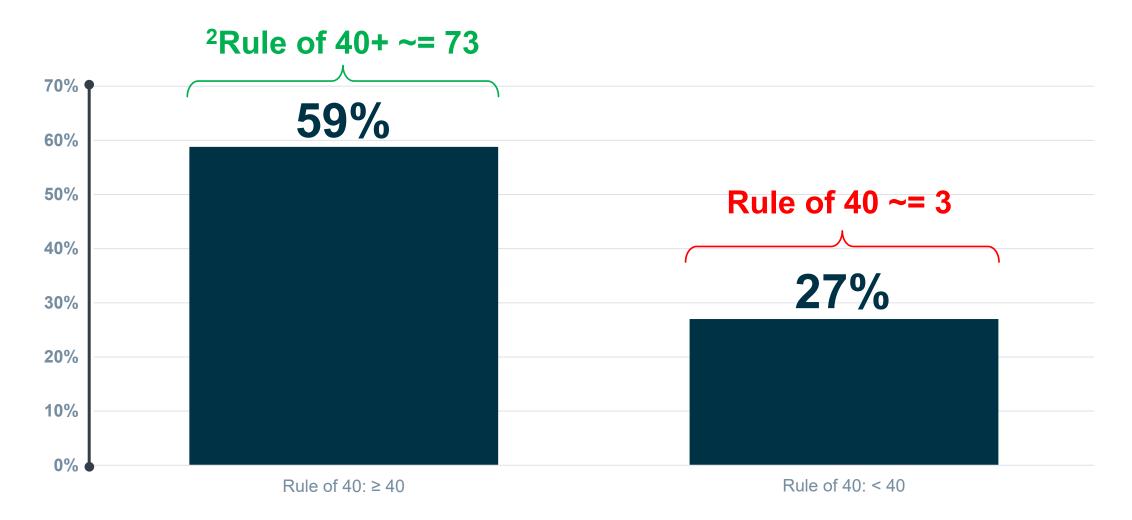
Companies that score >40 on the Rule of 40 tend to outperform their peers.

Rule of 40 = Revenue Growth % + EBITDA Ma	rgin % BOOKING HOLDINGS	ZipRecruiter	
2023E Net Revenue	\$21.2B	\$638M	
2023E Net Revenue Growth %	25%	-29%	
2023E EBITDA ¹	\$7.1B	\$167M	
2023E EBITDA Margin %	33%	26%	
Rule of 40	58	(3)	
Last Twelve Months (LTM) Share Price Change	+77%	(15%)	
EV / NTM Revenue Multiple ²	5.4x	3.1x	



Battery Index of Public Marketplaces: LTM Share Price Changes¹

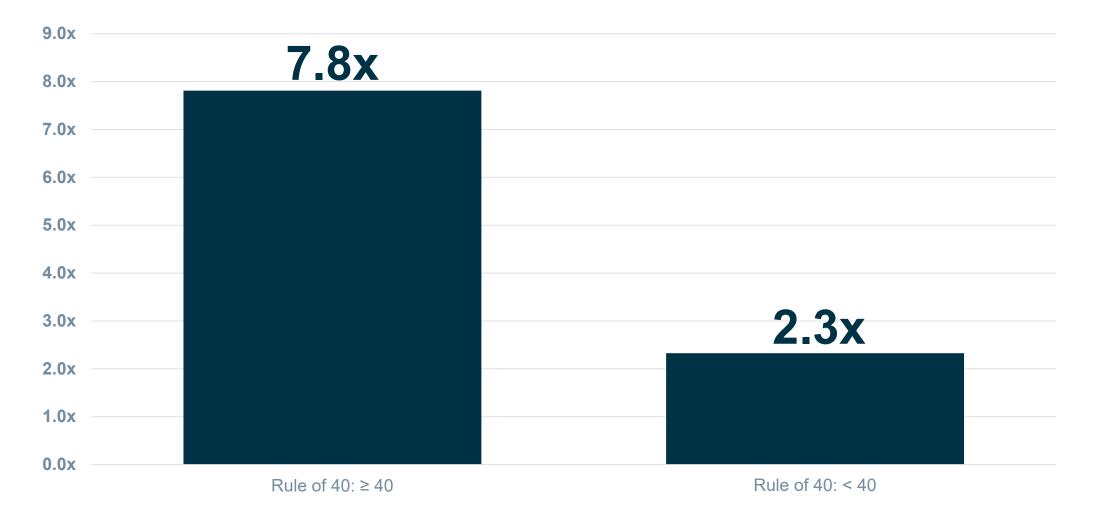
Efficiency, demonstrated by the Rule of 40, is critical. The Battery Index of Public Marketplaces follows the Rule on aggregate.





Rule of 40¹ vs. Enterprise Value / Next Twelve Months (NTM) Revenue Multiple²

Companies with a higher Rule of 40 also trade at higher revenue multiples than their peers.





2023 Marketplace Learning #2:

Layer on Higher Margin, Recurring Software Products



Instacart's Marketplace Growth Paradox

Building a marketplace infrastructure and network can be incredibly hard and yield subpar unit economics initially. Instacart, for example, raised a total of almost \$3B to pay the costs of the platform's "first" model.

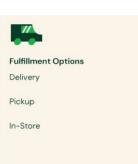
***instacart**

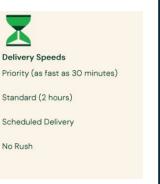
Grocery

Alcohol Business









Year	Revenue	Net Income
2020	\$1.5B	(\$70M)
2021	\$1.8B	(\$73M)
2022	\$2.6B	\$428M*

/XIOS

<u>Instacart remains unprofitable overall</u>, but Mehta says it becomes profitable in individual markets around six months after launch. Last year Instacart expanded from 18 to 30 markets, and this year plans to add another 30 (inclusive of five new markets already launched).



March 8, 2017

The New York Times

The grocery delivery start-up changed its leadership, slashed its valuation and shifted its strategy after sales slowed.

Instacart... has struggled to show that its business model works and that it is compatible with the historically thin profit margins of the grocery business.



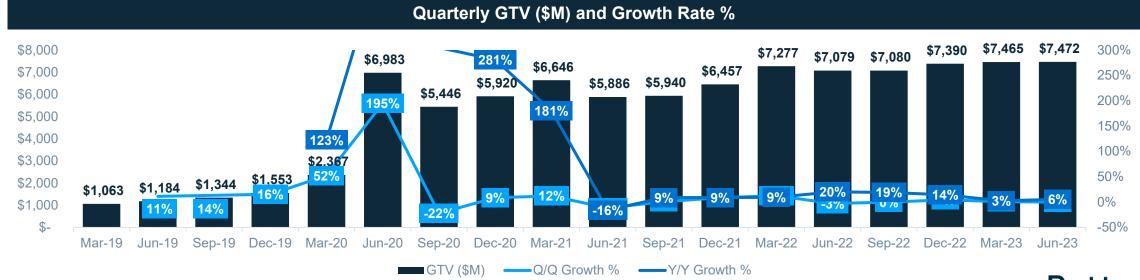




Instacart's Marketplace Growth Paradox II

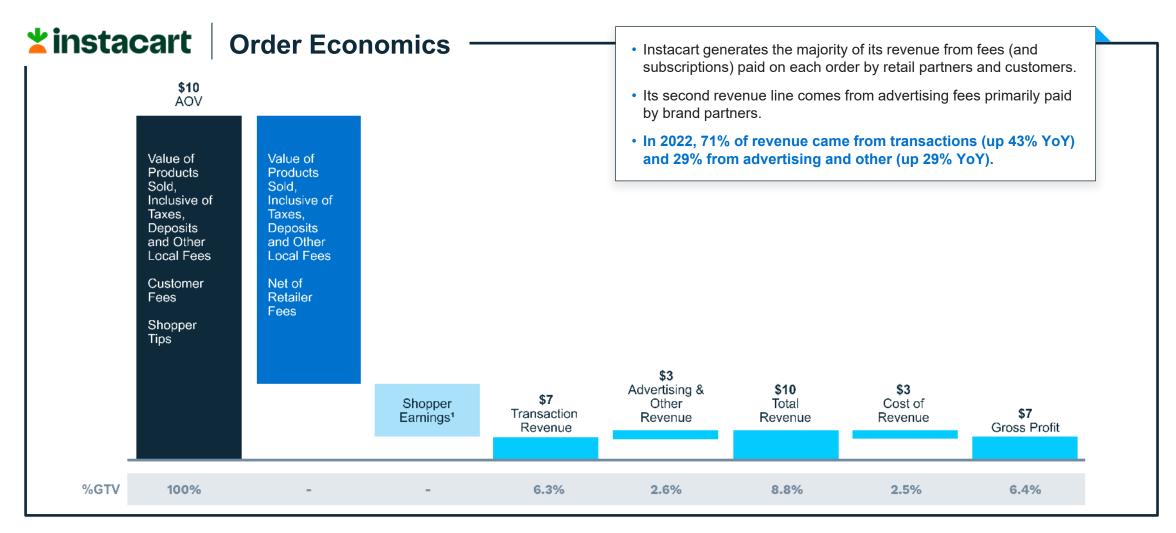
As expensive as it is, this marketplace infrastructure is critical to locking in both supply and demand.





Instacart's Product Development

Reaching a certain level of network density (supply, demand, data) allows for the introduction of more profitable and recurring software products.





Instacart Transaction vs. Advertising Revenue

For Instacart, these higher-margin, recurring products included the following:

Instacart+ (Subscription)

Transaction Revenue

- Instacart+ membership costs \$99 per year or \$9.99 per month.
- Members spend ~\$461 / month vs. nonmembers' \$223 / month.

Instacart+ drives stickier consumer behavior: higher AOVs and more frequent monthly orders.

Instacart Enterprise Platform

Transaction Revenue

- End-to-end software solution supports Instacart's retail partners on their own storefronts.
- Instacart charges partners a fee on orders completed, or a fixed fee per order for larger clients.

Unlocks online grocery TAM – making Instacart agnostic to where orders happen.

Instacart Ads

Advertising Revenue

- Brand-focused advertising solution connects brands of all sizes to customers.
- Instacart Ads supports 5.8K active brands in 2022, up 5.3% Y/Y. Per Instacart, ads on the platform deliver 15%-100% incremental sales lift.

Advertising revenue is "highly profitable" and contributes strongly to improving unit economics – generating ~\$740M in FY22, up ~30% Y/Y.

In a virtuous cycle, the scale and customer base of Instacart's marketplace improve the Instacart Enterprise Platform through demand and infrastructure. In turn, the Enterprise Platform strengthens the marketplace through retailer integrations, expanding its breadth.

Lastly, data from the Enterprise Platform improves search, recommendations, replacements and ads, attracting more brands to Instacart Ads.

This three-way symbiotic relationship drives operating efficiencies for all nodes of the company.



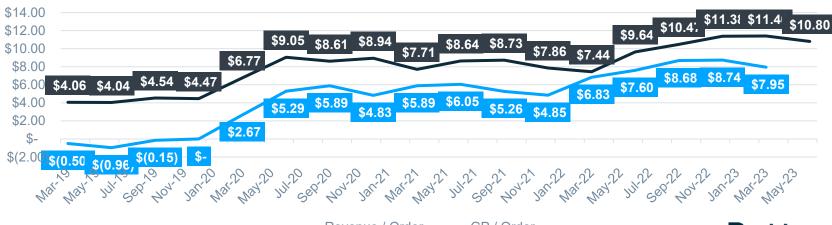
More Attractive Economics Over Time

Ultimately, these platform additions drive increased customer retention, higher AOVs and higher GMs over time — and can yield more attractive economics.

- Annual GTV Cohorts: Since 2017, annual GTV for customer cohorts has expanded Y/Y, which more than offsets GTV lost from customers who churned or did not further transact. In H1 2023, GTV from new customers was 1.6x higher than GTV from new customers in H1 2019 (despite overall tempered GTV growth).
- Monthly Active Orderers have increased their monthly order frequency on Instacart from approximately 2.1x in Y1 to 3.9x by Y6; representing a rise in average monthly GTV from \$226 to \$480.
- Increasingly Profitable Cohorts: As larger orders (higher AOVs and increased frequency) tend to be more profitable, and advertising opportunities increase with more items in an item. Since 2020, the business has been able to achieve positive gross profit in customer cohorts' first year with Instacart, which expands over time (from 4.0% in Y1 to 6.5% in Y4).

Annual GTV by Cohort						
Cohort	Y1	Y2	Y3	Y4	Y5	Y6
2017	1.00x	1.73x	1.74x	3.00x	3.26x	3.52x
2018	1.00x	1.49x	2.42x	2.67x	2.81x	
2019	1.00x	2.18	2.36x	2.43x		
2020	1.00x	0.95x	0.85x			
2021	1.00x	1.29x				
2022	1.00x					

Quarterly Revenue & Gross Profit per Order (\$)



2023 Marketplace Learning #3:

Lean Into Viral / Product-Led Growth Loops



The Battery Growth Magic Number (BGMN)

Battery Growth Magic Number = (LTM Rev Growth %) – (LTM S&M % of Rev)

Battery Growth Magic Number > 0

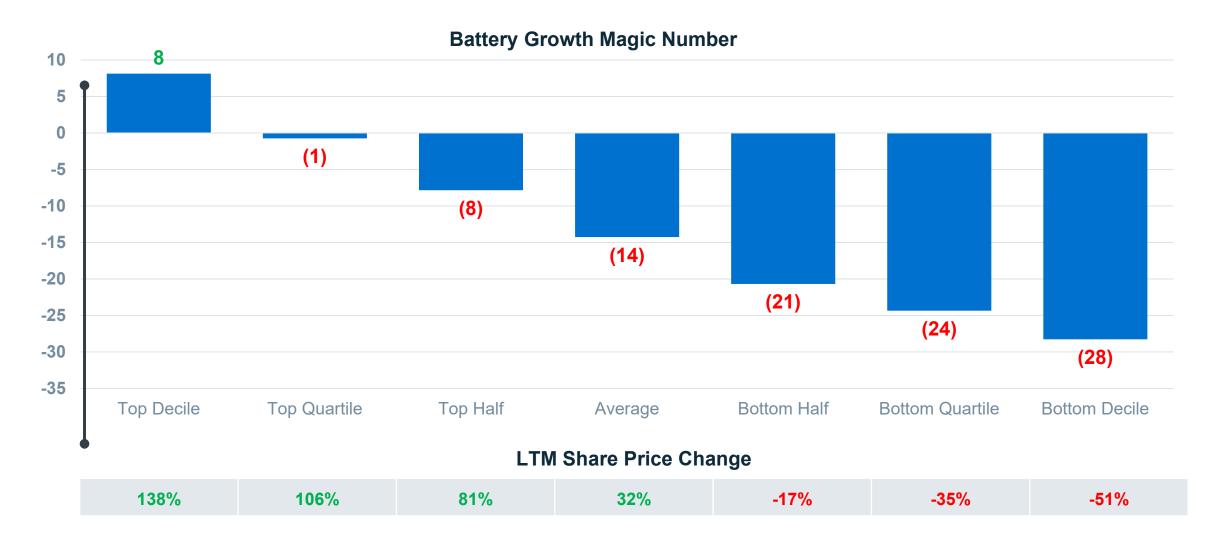
Battery Growth Magic Number <= 0 X

In order to effectively measure sales efficiency, marketplaces should subtract the last twelve months' sales and marketing costs as a percentage of revenue from the last twelve months' revenue growth. This will help companies determine how much growth is driven by organic – or efficient – growth vs. paid-for, marketing-driven growth.



Average Battery Growth Magic Number (BGMN) vs. LTM Share Price Change

The top decile of BGMN companies strongly outperform their marketplace peers on LTM share price.





Product-Led vs. Paid-Marketing-Led Growth

Companies can improve their Battery Growth Magic Number by leaning into product-led or viral growth mechanisms.

BV Growth Magic Number = LTM Rev Growth – LTM S&M of Rev







LTM Revenue Growth ¹	+43%	+64%	(52%)	
LTM S&M % of Revenue ¹	16%	37%	51%	
Battery Growth Magic Number	27	27	(103)	
LTM Share Price Change	+222%	+78%	(58%)	
EV / NTM Revenue Multiple	13.5x	4.6x	NM ²	

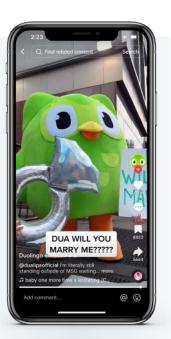


The Era of "Unhinged" Content



Entertainment Over Selling

- Duo, the app's mascot, has become a TikTok sensation, with social content highlighting its relatable humor.
- The company now has over 8.1M+ TikTok followers, making it one of the most-followed corporate accounts on the increasingly popular platform.



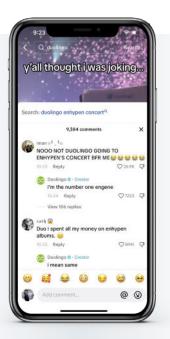
Consistent Storylines

- Duolingo's consistent storylines deepen viewer-brand connections, fostering belonging among dedicated viewers in an ongoing narrative.
- For example: Duo's "crush" on singer Dua Lipa. This gives the brand easy material any time Dua Lipa is trending.



Tapping into the Cultural Zeitgeist

- Duolingo remains on top of the latest themes and cultural moments to remain relevant.
- For example: Duo attended the Barbie movie premiere (IRL) in an all-pink outfit. This campaign alone created 140M organic social impressions.



Enabling Real-Time Conversations

- Instead of traditional ads, Duolingo engages with users organically by leaving witty comments and responses on viral videos and moments.
- This enables Duolingo to appear on consumers' "For You Pages" organically – without any advertising expense.

Duolingo's embracing of "unhinged" marketing, where brands deviate from a polished and perfect approach on social media, has proven very popular online. Gen Z consumers particularly are attracted to this form of authentic, less sales-y marketing, as evidenced by Duolingo's TikTok success.



Pinduoduo Champions "Social Shopping"



Team Purchases Fuel Both Virality & Network Effects

- PDD's group-buying model encourages users to invite friends and family to participate in collective purchases.
- As more people join a buying group, the price of the product decreases, further incentivizing users to invite others.
- This dynamic drives virality as users share invitations with their social networks.



Gamification Drives Engagement

- PDD often incorporates gamification elements such as time-limited offers, special discounts for reaching certain milestones and loyalty programs.
- These features promote a "treasurehunt" mentality, leading to increased user engagement, setting PDD apart from conventional shopping platforms.



User-Generated Content Creates a Flywheel of Trust and Loyalty

- Users are encouraged to create and upload honest product reviews.
- This user-generated content not only adds credibility, but also attracts new users who trust the opinions and experiences of existing members.



Livestreaming Enables Authentic, Real-Time Interactivity

- PDD promotes livestreaming that highlights "experiences," like wine merchants showcasing vintage bottles and offering wine appreciation lessons.
- This approach adds engagement and interaction into the purchasing process, creating a social dimension beyond the usual "click-and-pay" experience.

PDD's innovative "social shopping" and unique product aspects have created a strong consumer flywheel, promoting organic over paid growth.



Paid Marketing: A Wish-ful Thinking Game?

Unlike Duolingo and PDD, Wish has remained highly reliant on paid marketing to attract and retain users, with lukewarm results.

BUSINESS INSIDER

Wish, a startup that's gunning for Amazon and Alibaba, is **spending a reported \$100 million on Facebook ads**

December 28, 2015



The New York Times

How Wish Built (and Fumbled) a Dollar Store for the Internet

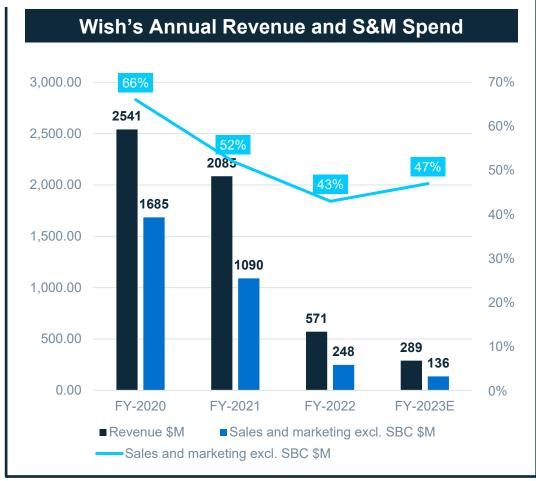


- "...Former employees point to an **emphasis on short-term growth** over customer service...
- ...For a while, the company was the top advertiser on Facebook and Instagram and among the biggest on Google, spending more than \$1 billion on sales and marketing last year..."

July 7, 2022

Wish Q3 '23 Earnings Call: "The decline [in Q3 '23 MAU] was largely driven by our decision to reduce ad spend over the past several quarters as we remained focused on achieving target returns on our ad spend."

Wish





2023 Marketplace Learning #4:

Leverage the Power of Gen Al



Gen Al Will Unlock Supply-Side Demand

All automation will allow marketplace businesses to expand the pool of supply in unprecedented ways.

Al has the power to augment supply — and even unlock net new supply — through various means...

Embedded Design Copilots

Pietra

Do you need design help?

Yes, I need help with designing products.

You can get design help for products, brand, and more.

No, I am able to design products myself.

I can use design tools like Photoshop to submit my designs

With Pietra, sellers can harness generative AI to effortlessly generate entirely new products with the platform's AI-driven design suite. Pietra then integrates seamlessly to potential manufacturers — streamlining the creative process.

More Effective Supply / Demand Matching

indeed

100+ matches for Community Associate

Austin, TX

Within 15 miles

Licenses/Certifications

Skills/Experience

Education

Indeed's recommendation AI provides job seekers with a personalized feed of ideal job matches, increasing the likelihood of applying by 55% compared to search results.

Net New (and Scalable) Digital Products





Finesse, a ready-to-wear platform, leverages Al and customer input to guide its design decisions, employing generative Al to create 3D-modeled outfits.





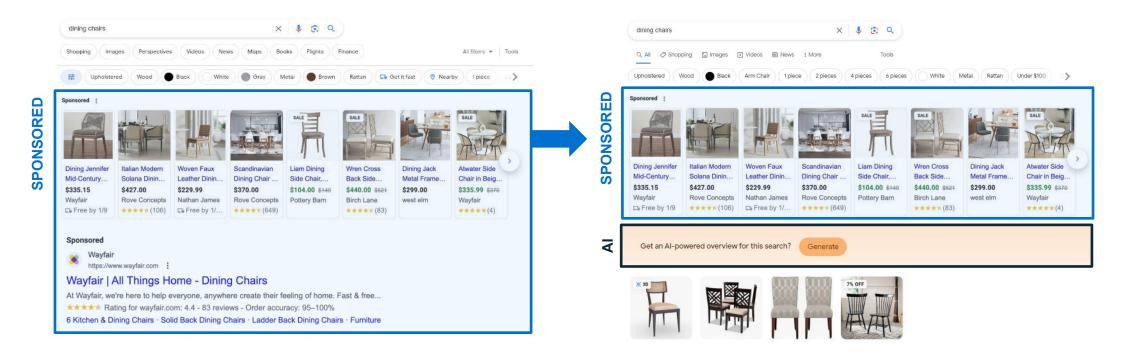
Cameo has utilized generative AI to introduce novel consumer experiences. For example, Cameo Kids now delivers personalized "messages" from AI-powered animations of popular cartoons.

In the future, marketplaces will be able to unlock entirely unique supply based off consumer taste and preference, leveraging generative AI for personalized services or even "one-of-a-kind" products.



A Gen Al Demand-Side Transformation (SEO)

Users' search experience will be transformed in the Al-driven future, with a multitude of second-order effects.



Previously, companies relied heavily on sponsored content or spend on SEO to optimize specific key words and phrases.

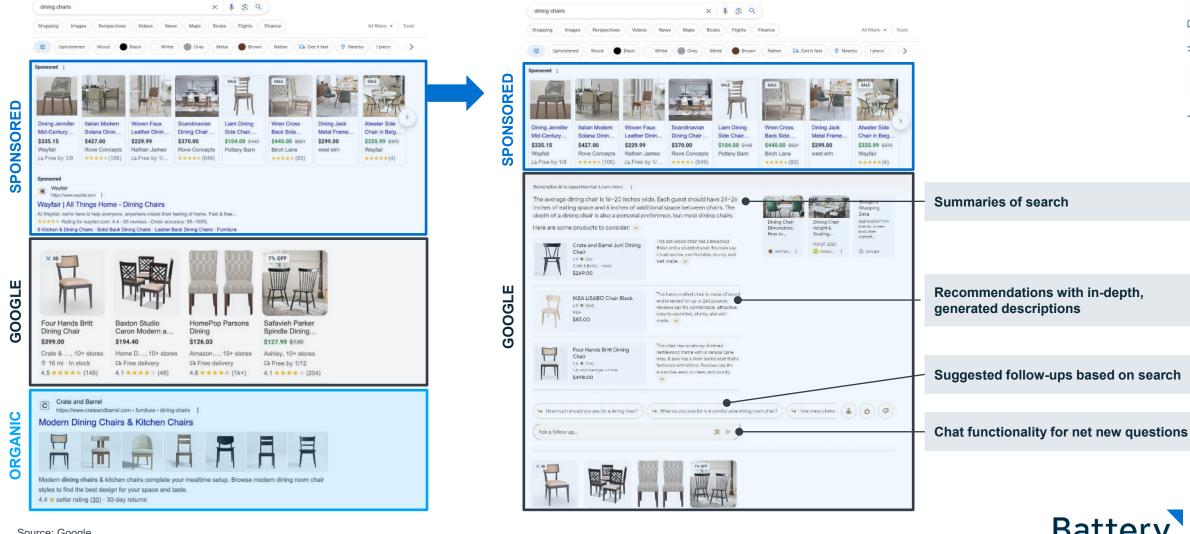
Today, Google's search-generated engine (SGE) combines data from multiple organic search results and utilizes Google's LLM to provide a comprehensive response to a user's search query — all without requiring the user to "click out" on any links in the results page.

Google's SGE will fundamentally change GTM motions — potentially leading to a reduction in web traffic, heightened vulnerability in paid search and a shift in content strategy, among other changes.



Google's "Results Page of the Future"

The new results page dedicates far more screen real estate to Google's search features and less to organic and paid search results, offering a more personalized and helpful experience to consumers.



SEO Strategy in an "Al-First" World

Businesses must fundamentally rethink their SEO strategy in a rapidly changing – and competitive – environment.

BrightEdge* Search Generated Experience (SGE) Presence in Search Results





	Healthcare	E-Commerce	B2B Tech	Insurance	Education	Restaurants	Entertainment	Travel	Finance
Overall Impact*	76% Extreme	49% High	48% High	45% High	44% High	36% Medium	36% Medium	30% Medium	17% Low
Collapsed Gen Al summary	70%	25%	23%	34%	17%	4%	5%	3%	5%
Opt-In Gen Al summary	17%	72%	76%	35%	80%	96%	91%	81%	38%
No Gen Al summary	13%	3%	2%	31%	3%	0%	2%	16%	52%
Unavailable	0%	0%	0%	0%	0%	0%	2%	0%	5%

Opt-In Gen Al summary conservatively assumes 1/3 of users opt-in to SGE (% likely higher as SGE gets more relevant over time)

Certain industries have a greater risk of being impacted by Google's SGE. For example, BrightEdge* data shows that for ~70% of healthcare searches, Google will provide a collapsed Gen AI summary instead of showing organic or paid-for material.

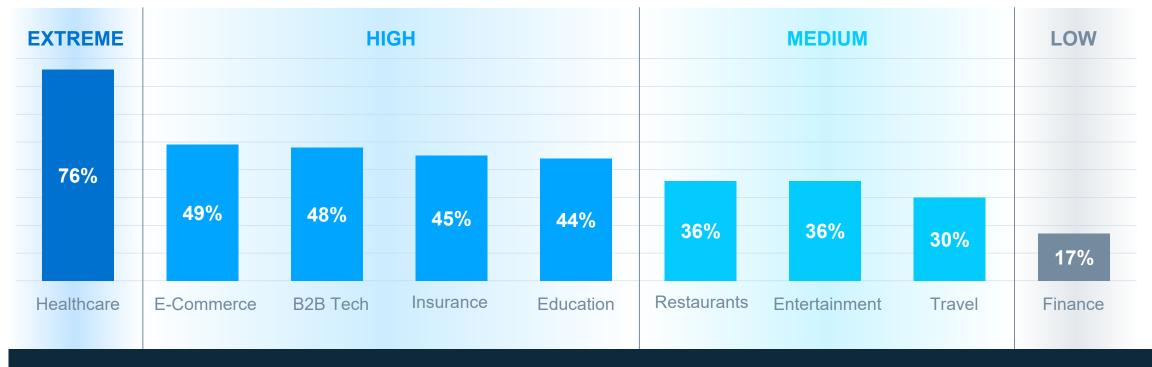


SGE Disruption May Disproportionately Affect Certain Industries

BrightEdge* Estimated Percentage of Search Queries Impacted by SGE¹







Generative Al's enhanced capability to deliver highly-personalized search results and recommendations directly to users might circumvent the necessity for intermediary affiliate platforms in various categories. Users may find their desired products or information more effectively and directly through Al-powered search engines or platforms, resulting in a decrease in affiliate commissions and a shift in user behavior.



^{*} Denotes a current or former Battery portfolio company. For a complete list of portfolio companies, please visit: www.battery.com/list-of-all-companies/

¹ Search queries impacted time frame: when Google ends beta period and deploys SGE broadly.

The SGE Checklist For Businesses



Adapt to New Realities — Quantify the Risk to Your Business

Different industry verticals face varying degrees of susceptibility to disruption from SGE, according to data from BrightEdge.* It will be crucial for businesses to assess and quantify the potential risk to their data and adjust their marketing budget to accommodate new strategies accordingly.

We expect that industries characterized by "low accuracy but high fluency," such as retail and travel, may experience disruption sooner. Conversely, "higher-accuracy" sectors like financial services or insurance may take more time to undergo significant disruption.



Optimize for Related Clusters

In the past, head terms were effective in delivering substantial value and generating high conversions. However, the evolving landscape now calls for a shift towards optimizing for a cluster of interconnected keywords and associated attributes to achieve similar or even greater results.



Keep in Mind Alternative Data

Al will aggregate data not only from product descriptions but also from reviews, consumer platforms like Reddit and other sources. It's essential for businesses to bear this in mind when handling and assessing customer feedback.



Lean into PLG-Growth Loops

Organic growth and product-led growth (PLG) strategies are less profoundly affected by SGE. As a result, businesses should constantly refine their PLG approaches to attract as many new, organic customers as they can.



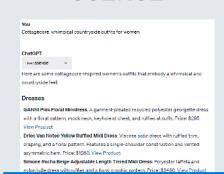
Marketplace Gen Al Opportunities

Beyond Google, there is opportunity for marketplaces to leverage generative AI to maximize their own search experience.

Search 2.0: New search modalities and recommendations will create stickier, more engaged consumers...

Natural-Language Search — Based on "Abstract" Descriptions

SSENSE



Ssense has introduced a ChatGPT plugin that enables consumers to search for specific SKUs using phrases and to search by sentiment: e.g. "cottagecore" or "whimsical."

Image-First Search — Transcending Beyond Image Reverse Search



In today's landscape, online marketplaces like Alibaba offer Al-powered reverse-search engines. Looking ahead, we envision that image-based searching will shift towards a broader, more holistic search experience leveraging Gen Al. Eventually, users may even be able to upload entire "mood boards" to curate personalized shopping lists.

Al Companion / Assistants

Trip.com



Trip.com's TripGenie helps consumers generate and personalize trips by interpreting user input and responding with text, images and related itineraries ready to book.



Instacart's "Ask Instacart" is an Al guide that provides customers with intuitive product recommendations, food attributes and more from simple prompts. The platform then directs users to the most relevant SKUs.

Over time, more search use cases will evolve to search modality #3 — Al assistants. However, consumer behavior may take time to accept LLM commerce recommendations, as consumers may not be satisfied with a singular "match."

The most successful Al-based search will likely be more subtle, recommending many products rather than one.



2024 Advice to Marketplace Founders



- · Efficiency is still king.
- For early-stage founders: Solve a particular problem in a narrow category. Regularly iterate through customer feedback and measure engagement, repeat rate and stickiness to prove product-market fit.
- For growth-stage founders: Deeply understand "cohort profitability" and show a path to achieving positive unit economics.
- Pre-IPO: Create optionality and demonstrate long-term viability by layering on higher-margin recurring software products. At the same time, continuously execute on a series of operational optimizations and remain focused on company-level profitability.

2

- Consumer attention is becoming more expensive lean into product-led / viral-growth loops and do not become too dependent on paid marketing.
- Be disciplined about marketing spend as this has true implications to company culture, organizational structure, product roadmap and go-to-market (GTM) playbook.
- Decreasing customer acquisition cost (CAC) is a powerful indicator of strengthening network effects. Ask yourself: Are you seeing leverage in your strategies over time?

3

- Continue to explore the integration of generative AI to improve marketplace experiences.
- Consider how you can use AI to streamline transactions, whether by increasing net-new supply, improving match rates or creating a more delightful customer experience.

4

- Don't fret! Refocus on first principles and play to your core strengths.
- Many large, well-established marketplaces have crafted success within changing landscapes and market environments!

