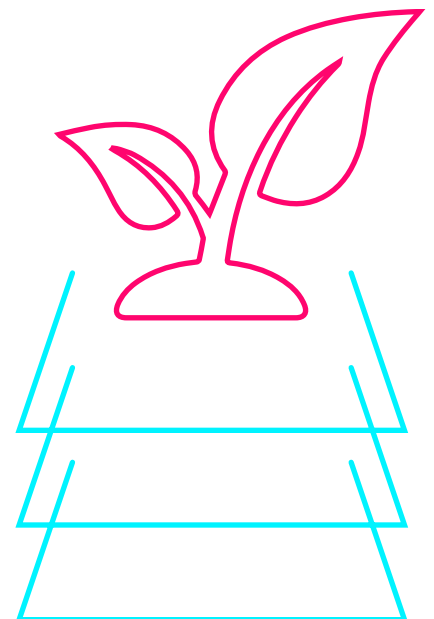


THE LIFETIME VALUE OF CONTENT



Snap's first major announcement post IPO wasn't about growing users. It was about increasing the utility of the content on its platform. By making its 1M+ Stories searchable, Snap looked to grow value not by growing users, but instead by growing the value of the content already on its platform.¹

Content is foundational to platform companies' business value and content operations are critical to their success. Despite this importance, most have focused on customers and customer engagement when trying to maximize business performance. Now the tides are shifting. In a future where content continues to evolve and expand, platform companies must also think about maximizing the value of every piece of content that resides on their platform. And, as with customers, not all content has equal value.



CUSTOMERS AND CONTENT DRIVE REVENUE GROWTH FOR PLATFORM COMPANIES

Successful platform companies deliver explosive, sustained customer growth on a global scale. This customer growth draws high valuations as platform company investors typically focus on customer measures such as user growth, engagement per user and revenue per user.

Often valuation models also estimate likely attrition and engagement over time to arrive at lifetime value of an average customer. But volume and quality of content are also crucial to platform company success —and are often overlooked as a valuation metric. Companies typically see an accompanying growth in content under management that even eclipses customer growth. Total user generated content in 2016 was estimated at 13 zettabytes, representing a 40 percent increase in just one year.

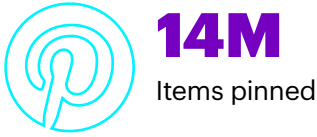
Worldwide Monthly Active Users (M)

| COMPANY | 2012 | 2013 | 2014 | 2015 | 2016 | CAGR |
|-----------|------|------|------|------|------|------|
| Snap | N/A | 33 | 100 | 180 | 201 | 109% |
| Pinterest | N/A | N/A | 70 | 100 | 150 | 46% |
| Facebook | 1056 | 1228 | 1393 | 1591 | 1860 | 15% |
| Instagram | 80 | 150 | 300 | 400 | 600 | 65% |
| Twitter | 185 | 241 | 288 | 305 | 319 | 15% |

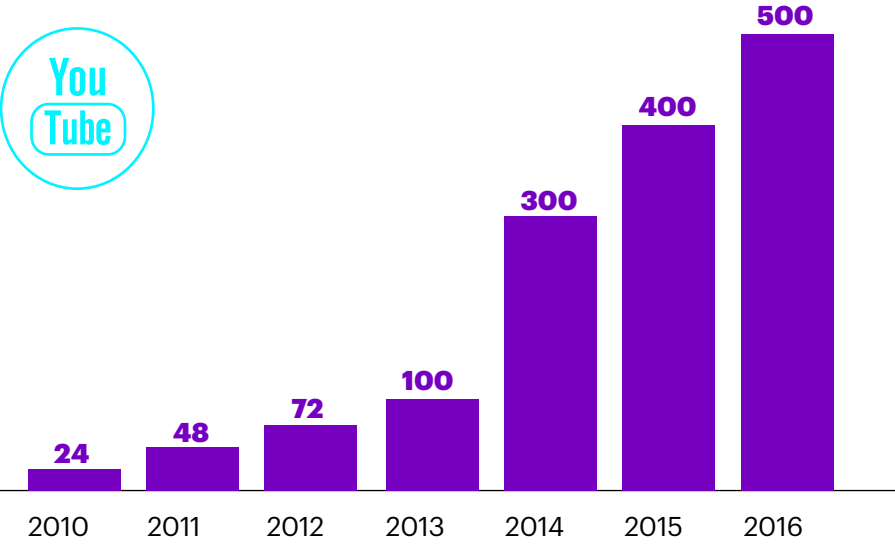
Sources: Forbes, Business Insider, Statista, TechCrunch

For platform companies that follow an advertising-driven revenue model, the content on the platform serves as the available inventory from which revenue is derived. Publishing content that engages users enables platforms to raise their cost per thousand impressions (CPM). If many users are clicking on the platform's content, advertisers want to advertise on the platform and the value of advertising goes up with demand. Ads placed between content in a home feed have more productive placement opportunities when content quality is high. And, ads that require users to click on content to see the ad will have a greater number of impressions more quickly if the content is engaging. Conversely, if no one is clicking on the platform's content, advertisers will not be interested, driving the platform's CPM down. Therefore, in addition to user growth, the net value being derived from each element of content is an equally important factor for growth and valuation. But how does one assess and improve the net value of content over time?

Daily Content Statistics



Hours of Video uploaded to YouTube (Per Minute)



EVALUATING THE LIFETIME VALUE OF CONTENT

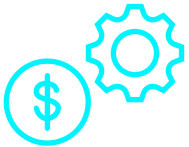
The net value of content is a function of four levers: the quality of the content in the inventory, the costs associated with managing it, the utility that the platform drives from the content and the speed with which it is published. In order to maximize value, platform companies need to manage all four levers simultaneously, recognizing that the operational imperatives within each one vary.



CONTENT QUALITY

High quality content is credible and engaging. Quality is maintained through a combination of ensuring inappropriate or **poor quality** content is not on the platform and enhancing acceptable content to maximize its appeal and engagement. The quality of content can be screened by both source and piece. Particularly for professional content, whether the source has a reputation for high quality content can be easily identified and prioritized. The content moderation efforts of platform companies can also work to assure that, on a piece by piece basis, inappropriate content does not slip into the platform. Artificial intelligence (AI) is already improving the pace and accuracy of content review. A next generation of AI tools with dynamic algorithms and advanced analytics will use an amalgamation of data to help platform companies increasingly detect and even predict

bad content and behavior at the source.² In addition having processes and tools in place to make sure content is relevant to specific users raises user perception of quality.



COSTS OF OPERATION

The costs of content operation include those costs associated with creating, processing, storing and publishing content. Optimization of operating costs is accomplished through ongoing, incremental process improvements plus stepwise automation over time. As AI capabilities improve, we believe operations will tend toward a hybrid-approach, with humans better enabled by the AI to deliver more radical processing of content with reduced average handle time (AHT).

UTILITY



Utility is derived from how relevant, discoverable, sharable and engaging content is on the platform. One approach to raising content utility is to improve the tagging of metadata to make content more discoverable. Another is to continue to tune search algorithms. Pinterest is just one example of a company continually working to improve search relevance and engagement based on text attributes.³ A third way to increase utility is to improve contextual recommendations through advanced algorithms—a capability where Amazon is leading the field. According to The Economist, Amazon’s “buy box” recommendations drive up to 86 percent of sales on the website,⁴ demonstrating the potential value contextually relevant content can deliver.



SPEED

Speed represents the responsiveness of the platform to publishing relevant content, with the objective of publishing in near real-time. For example, this involves the platform's near-real time tagging of live content, responsiveness to take-down requests, and ability to serve relevant content on breaking news and events. Automation plays a part, both in terms of streamlining existing processes and getting out ahead of any manual interventions. For example, Twitter's approach to improving safety aims to take out abusive accounts before they can cause harm.⁵

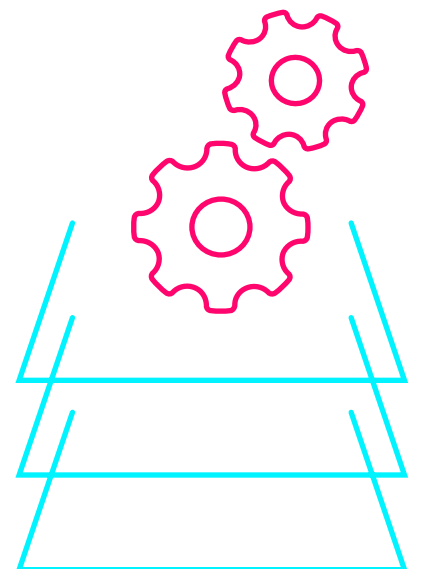
These four content value levers are not mutually exclusive. Forward-thinking companies are introducing initiatives that recognize the importance of all four levers, and impact multiple levers simultaneously. For example, Facebook announced several initiatives recently to reduce the spread of fake news on its platform. Its multi-pronged approach will address content quality concerns, but also improve its speed, by increasing responsiveness in handling take down requests.⁶ Netflix announced improvements to its dynamic compression algorithm that reduce its cost of operations and increase speed by improving the responsiveness of the experience, particularly on lower bandwidth environments.⁷ With forethought, platform companies can drive higher value from every content-related initiative they undertake by incorporating multiple levers.

TOWARD A TIERED APPROACH TO CONTENT MANAGEMENT

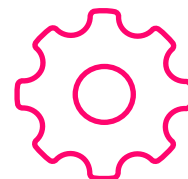
The four-lever equation provides perspective on ways to maximize the overall content value on the platform. But, platform companies need to recognize one more aspect to take this to the next level: just as customers are not equal, neither is content.

Some content—either a content type, or from a particular source, or on a particular topic—drives inherently more utility on their platform. If the other value levers can be managed successfully, then that content will, by definition, be more valuable. Said another way, every platform will have a segment of highly valuable, engaged users. It will also have a sub-set of highly valuable, engaging content.

Ultimately, a core goal of every platform company should be to maximize the exposure of its most engaging content to its most engaged users. For example, if live video content was found to be more engaging, the platform company could decide to tune the feed algorithm to surface that type of content preferentially over other types, thus increasing its discoverability. The platform could also increase its sourcing of that form of content, offering incentives to partners, developers and customers to create and upload that content more frequently. Taking this concept even further, there's more value in segmenting your content and your customers **in combination** to drive greater personalization. Certain individuals prefer certain topics, sources and types of content and segmenting content within their preferences can increase individual engagement.



To be market leading, platform companies should certainly think about the content value levers. They should also begin to consider the differential value that can be derived from certain types of content on the platform.



GOING FORWARD: MANAGING THE LIFETIME VALUE OF BOTH CONTENT AND CUSTOMERS

Managing the lifetime value of content requires a careful, long-term commitment to improvements—much the same way as **large scale** manufacturing processes for physical goods require improvements over time.

How platform companies should take action on their content value levers is a function of where they are with their content operations. If it is clear that one or more levers of content value are deficient, that is a clear place to focus. If it is not clear how the platform is operating across the four levers, an assessment could provide a roadmap for improvement. Finally, if content operations are mature, it may be time to try to understand the differential value of the platform’s content and build a strategy for segmenting and prioritizing content to maximize its lifetime value.

TO LEARN MORE

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