

Case 19 Google Is Now Alphabet—But What’s the Corporate Strategy?

On August 10, 2015, Google’s CEO, Larry Page, announced that Google Inc. would become Alphabet Inc., a holding company of which Google (comprising the company’s search and Internet businesses) would be the biggest operating company. Extracts of the announcement are reproduced in Exhibit 1. The organizational structure of Alphabet is shown in Figure 1.

The creation of Alphabet was widely viewed as Google’s top management finally conceding to investors’ demands for greater transparency by separating Google’s primary source of profits, its search business, from Google’s other businesses. It was also a confirmation by Google’s founders, Larry Page and Sergey Brin, that their company was no longer simply a search company. The announcement was a reaffirmation of the company’s commitment to developing and commercialization of revolutionary technologies. This quest had already led Google beyond search, beyond the provision of information, and beyond software into mobile devices, home appliances, life sciences, self-driving cars, broadband services, digital eyewear, and a host of other ventures.

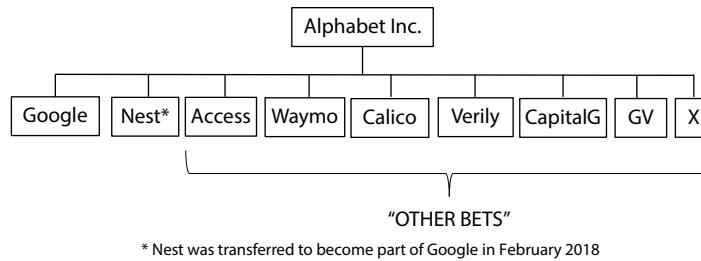
Soon after its founding, Google had proclaimed “Ten Things We Know To Be True”—a set of business principles that would guide the company’s development. Second on the list was, “It’s best to do one thing really, really well,” to which the response was: “We do search.”¹

Google—now Alphabet—was no longer a search company. But what was it?

Founders Brin and Page had consistently emphasized that the essence of their company was applying technology to improving the lives of people. Page had declared, “The societal goal is our primary goal,” the challenge being to: “... use all these resources ... and have a much more positive impact on the world?”²

If Alphabet was to be described by technology—then which technologies? From the beginning Google/Alphabet has been about algorithms. Initially, its PageRank algorithm, but increasingly artificial intelligence algorithms that model the functioning of the human brain. By combining machine learning and artificial intelligence, Alphabet is identifying areas where machine intelligence can be superior to human intelligence. The scope of these applications—from autonomous driving to medical diagnosis, to facial recognition, to education—seems limitless.

The diversity of Alphabet’s business and technological initiatives also fueled suspicions about the motivations of the founders, Brin and Page. Despite their proclamations to pursue the good of society and to “do no evil,” it seemed to some that Google was locked in battle with Apple, Amazon, Facebook, and Microsoft for the control of cyberspace.

FIGURE 1 Alphabet Inc.: Organization structure, March 2018**EXHIBIT 1**

Google Announces Plans for New Operating Structure August 10, 2015

As Sergey and I wrote in the original founders' letter 11 years ago, "Google is not a conventional company. We do not intend to become one." ... From the start, we've always strived to do more, and to do important and meaningful things with the resources we have.

We did a lot of things that seemed crazy at the time. Many of those crazy things now have over a billion users, like Google Maps, YouTube, Chrome, and Android. And we haven't stopped there. We are still trying to do things other people think are crazy but we are super excited about.

We've long believed that over time companies tend to get comfortable doing the same thing, just making incremental changes. But in the technology industry, where revolutionary ideas drive the next big growth areas, you need to be a bit uncomfortable to stay relevant.

Our company is operating well today, but we think we can make it cleaner and more accountable. So we are creating a new company, called Alphabet. I am really excited to be running Alphabet as CEO with help from my capable partner, Sergey, as President.

What is Alphabet? Alphabet is mostly a collection of companies. The largest of which, of course, is Google. This newer Google is a bit slimmed down, with the companies that are pretty far afield of our main internet products contained in Alphabet instead. What do we mean by far afield? Good examples are our health efforts: Life Sciences (that works on the glucose-sensing contact lens), and Calico (focused on longevity). Fundamentally, we believe this allows us more management scale, as we can run things independently that aren't very related.

Alphabet is about businesses prospering through strong leaders and independence. In general, our model is to have a strong CEO who runs each business, with Sergey and me in service to them as needed. We will rigorously handle capital allocation and work to make sure each business is executing well. We'll also make sure we have a great CEO for each business ...

Larry Page, CEO, Alphabet

Source: <https://abc.xyz/investor/news/releases/2015/0810.html>, accessed March 21, 2018.

Yet, in terms of its revenue model, Google is an advertising company. In 2017, advertising accounted for 86% of Alphabet's revenues. Common to almost all Alphabet's businesses is that they are either vehicles for carrying advertising or they are sources of information that could be utilized to better target advertising.

The confusion over Alphabet's corporate strategy was no recent phenomenon. In 2009, the *Mercury News* reported:

Google increasingly feels like a company running in a thousand different directions at once ... The problem is that in expanding into so many different areas, the identity of Google itself has become muddled ... it's getting harder every day to articulate what Google is. Is it a Web company? A software company? Something else entirely?³

Although comparisons have been made with other diversified giants—the *Economist* proclaimed Alphabet to be “the new General Electric” and Alphabet's Chairman Eric Schmidt drew parallels with Berkshire Hathaway—ultimately, it seemed that Alphabet truly was “a different kind of company.”⁴ Hence, the creation of Alphabet had done little to answer the question that had tormented Google-watchers for years: What was the corporate strategy of the company formerly known as Google?

The History of Google, 1996–2018

The Google Search Engine

Larry Page and Sergey Brin met as PhD students at Stanford University. Their investigation of the linkage structure of the World Wide Web led them to develop a page-ranking algorithm that used backlink data (references by a Web page to other Web pages) to measure the importance of any Web page. They called their search engine “Google” and in September 1998 incorporated Google Inc. in Menlo Park, California. Google's “PageRank” algorithm received a patent on September 4, 2001.

Search engines met the need of the growing number of people who were turning to the World Wide Web for information and commercial transactions. As the number of web-sites grew, locating relevant content became essential. Early Web search engines included WebCrawler, Lycos, Excite, Infoseek, Inktomi, Northern Light, and AltaVista. Several of them became *portal sites*—websites that offered users their first port of entry to the web. Other portals, such as Yahoo! and AOL, soon recognized the need to offer a search facility.

The Google search engine attracted a rapidly growing following because of its superior page ranking and simple design. In 2000, Google began selling advertisements—paid Web links associated with search keywords. Its Adwords placed “sponsored links”—brief, plain text ads with a click-on URL—which appeared alongside Web search results for specific keywords. Advertisers bid for keywords; it was these “cost-per-click” bids weighted by an ad's click-through rate (CTR) that determined the order in which the paid listings would appear. By 2004, Google became the US market leader in Web search; by 2009 its share had reached 65.6%.

Google became a public company on August 19, 2004: an IPO of about 7% of Google's shares raised \$1.67 bn., valuing Google at \$23 bn.

Organizing the World's Information

Google's expansion beyond Web search was a reflection of its mission “to organize the world's information and make it universally accessible and useful.” Google's IPO prospectus elaborated this intent:

We serve our users by developing products that enable people to more quickly and easily find, create and organize information. We place a premium on products that

matter to many people and have the potential to improve their lives, especially in areas in which our expertise enables us to excel.

Search is one such area. People use search frequently and the results are often of great importance to them. Delivering quality search results requires significant computing power, advanced software and complex processes—areas in which we have expertise and a high level of focus.

The result was a series of new products that allowed access to information from diverse sources. These sources of information included images (Google Image Search), maps (Google Maps), academic articles (Google Scholar), books (Google Book Search), satellite imagery (Google Earth), panoramic street photographs of most of the world's cities (Google StreetView), news (Google News), patents (Google Patent Search), video (YouTube), finance (Google Finance), Web logs (Google Blog Search), and many more.

However, Google's entrepreneurial and technological dynamism led it well beyond the accessing and organizing of information. Beginning with Gmail in 2004, Google introduced a widening array of software and services for communicating, creating and manipulating images, producing documents, creating Web pages, managing time, and social networking.

These new products expanded Google's advertising revenues by providing additional opportunities for carrying ads and improving Google's targeting of ads. Google's primary source of advertising revenue was AdWords, launched in 2000. Advertisers specify the keywords that should trigger their ads and the maximum amount they are willing to pay per click. When a user searches google.com, short text advertisements appear on the screen. The rank ordering of ads is determined by advertiser's cost-per-click bid and the "ad quality" (its relevance to the user). The advertiser then pays Google according to the number of clicks on the advertisement.

AdSense uses an advertisement placement technology developed by Applied Semantics (acquired in 2003) that allows Google to place ads on third-party websites. Table 1 shows Alphabet's revenues from advertising and other sources.

In 2007 and 2008, Google's diversification efforts took a dramatic new turn with Google's entry into mobile telephony and Web browsers.

TABLE 1 Alphabet's revenue sources, 2008–2017 (\$billion)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Google advertising revenues (total)	21.1	22.9	28.2	36.5	46.0	51.1	59.6	67.4	79.4	95.4
—Google properties	14.4	15.7	19.4	26.1	31.2	37.4	45.1	52.4	63.8	77.8
—Google network members' properties	6.7	7.2	8.8	10.4	12.5	13.1	14.0	15.0	15.6	17.6
Google other revenues	0.7	0.8	1.1	1.4	2.4	5.0	6.9	7.2	10.1	14.3
Google total revenues	21.8	23.7	29.3	37.9	46.0	55.5	66.0	74.5	89.5	109.7
Other Bets revenues ^a	—	—	—	—	—	—	—	0.4	0.8	1.2
Total revenues	21.8	23.7	29.3	37.9	46.0	55.5	66.0	75.0	90.3	110.9

Notes:

^a Revenues from Other Bets businesses were included in "Google total revenues" prior to 2015.

Source: Google Inc. and Alphabet Inc 10-K reports.

Android and Mobile Telephony

Google acquired Android Inc. in 2005 and in November 2007 launched the development of its Android software platform, a Linux-based operating system for mobile devices. According to Google:

“Android is being developed ... with the goal of providing consumers a less expensive, richer and more powerful mobile experience.”⁵ Most observers thought that Google’s primary concern was the threat that the shift from desktop to mobile devices posed to Google’s advertising revenues.

Android was a spectacular success: in establishing market leadership (Table 2), it prevented Apple from dominating the smartphone and tablet market. By offering Android as a free, open-source, mobile operating system, it was able to attract a large number of handset manufacturers (the most important being Samsung) and an army of application developers—by 2018, there 1.76 million Android apps.

Chrome

Google’s Chrome Web browser announced on September 2, 2008 generated huge publicity, but little surprise. Google’s then head of product development (later CEO of Google within Alphabet), Sundar Pichai, explained: “Google’s entire business is people using a browser to access us and the web.” Google’s website added: “Google Chrome is a browser that combines a minimal design with sophisticated technology to make the web faster, safer, and easier.” By contrast, Microsoft’s Internet Explorer (IE) was constrained by the legacy of its 15-year history.

Google’s goal for Chrome was not simply a superior user experience. Version 8 of Microsoft’s IE launched in 2008 allowed an “InPrivate” protection mode that would delete cookies, making it more difficult to track users’ browsing habits. This would limit Google’s ability to use such information to target consumers with advertising.

Others saw Google’s primary intention as not so much to protect its search engine but more to attack Microsoft’s dominance of personal computing and to speed the

TABLE 2 Shipments of smartphones: Market share by operating system

	2018 ^a (%)	2015 ^a (%)	2013 ^a (%)	2011 ^a (%)
Android (Google)	86.1	78.0	75.5	36.1
iOS (Apple)	13.7	18.3	15.9	18.3
Blackberry OS (RIM)	–	0.3	2.9	13.6
Windows (Microsoft)	–	2.7	3.2	2.6
Other	0.2 ^b	0.7	1.5	29.4 ^c
TOTAL	100.0	100.0	100.0	100.0

Notes:

^a The data are for the first quarter of each year.

^b Includes Blackberry and Windows.

^c In 2011, “Other” comprised Symbian with 26.0%, Linux with 3.1% and other systems 0.3%.

Source: IDC.

transition of computing to a new online environment. *Wired* magazine viewed it as: “an aggressive move destined to put the company even more squarely in the crosshairs of its rival Microsoft.”⁶

The announcement ten months later that Google would add an operating system to its Chrome browser was seen as confirmation of Google’s aggressive intent toward Microsoft.

Google in Hardware

As Internet access transitioned toward mobile devices, Google sought to reinforce its proprietary technology in that sphere. Its acquisition of the struggling handset maker Motorola Mobility in 2012 for \$12.5 bn., was primarily to acquire its rich portfolio of patents relating to wireless communication.

Owning Motorola would also permit Google closer integration of hardware and software development in smartphones and tablet computers, thereby enhancing the user experience.

However, becoming a handset maker put Google into competition with some of its major customers, notably Samsung, which was already developing its own operating system. In 2012, Google sold Motorola to Lenovo, but continued to develop and market mobile devices, including the Nexus brand of smartphones (built by HTC) and a range of notebook and tablet computers based upon its Chrome operating system. In January 2018, Google deepened its relationship with HTC when it paid HTC \$1.1 bn. for patent licenses and an engineering unit.

Subsequent diversifications also increased Google’s involvement in hardware:

- Google Glass, an Internet-enabled, optical head-mounted display controlled by natural language voice commands, was marketed on an experimental basis between April 2013 and January 2015.
- With the acquisition of Nest in January 2014, Google became a supplier of home security and control devices—including thermostats and smoke detectors. The goal was to build Google’s position as a central player in the “smart home.” In May 2015, Google announced Project Brillo, an operating system to link home devices, such as door locks, light bulbs, and security cameras, while Project Weave would allow these devices to communicate with other products and web services.⁷
- Google Home, launched in October 2016, and the Home Mini, launched 12 months later, were Google’s entrants to the fast-growing market for voice-activated, smart speakers. Despite selling about 2 million smart speakers per month in the closing months of 2017, Google remained a distant second to Amazon in this market.
- Google’s involvement in smart TV has included its Google TV and Android TV software programs and its Chromecast plug-in devices, first launched in 2013, which allow video streaming on TV receivers.

Google+

Google’s foray into social networking began with Orkut in January 2004 and continued with Google Friend Connect and Google Buzz. However, all were eclipsed by Facebook. When, in March 2010, Facebook overtook Google as the most visited website

within the United States, Google became fully aware of the threat posed by Facebook to its online advertising revenue:

If you were an advertiser, who would you rather place your ads with? On the one hand, you have a company that will attempt to gear ads to things like the search history of users. On the other hand, you have a company that knows where its users went to college, where they work, who they are friends with, what they're reading and sharing, and their favorite bands, books, foods, and colors. Advertisers want to target their ads to the people most likely to be receptive to them, and information is the key to targeting. The more information available, the better the targeting.⁸

Launched in June 2011, Google+, the company's fourth venture into online social networking, had 540 million users by October 2013. However, by the end of 2017, it was clear that, yet again, Google had failed to build a viable competitor to Facebook—although YouTube was widely viewed as a social media platform.

Waymo

Google began developing autonomous driving systems in 2009 with applications both to existing production cars and its own prototype cars, which lacked all driver controls. By 2017, Waymo had a fleet of self-driving vehicles in Phoenix, AZ, being driven without a person behind the wheel. However, it was competing with at least 12 other companies in developing self-driving systems and any commercial revenues within the next five years seemed unlikely. In February 2018, Alphabet received \$244 million in Uber equity, settling a legal suit over Uber's alleged theft of Waymo's technology.

Life Sciences

Alphabet's research activities in life sciences were organized into two businesses. Calico's mission is "to harness advanced technologies to increase our understanding of the biology that controls lifespan." In 2014, Calico formed an R&D alliance with AbbVie to develop new therapies for age-related diseases, including neurodegeneration and cancer. Verily's mission to make the world's health data useful so that people enjoy healthier lives. It makes a smart contact lens that measures blood sugar. In January 2017, Temasek, a Singapore-based investment company, paid \$800 million for a non-controlling equity stake in Verily.

Broadband

Alphabet's Access subsidiary combines several broadband projects whose goal is to expand access to the Internet. The major component of Access is Google Fiber, which offers broadband and TV service in several locations within the United States. It also includes Webpass, a gigabit Internet provider acquired in 2016.

Venture Capital

Google Capital was established in 2013 to make late-stage venture capital investments in technology companies. In 2016, it was renamed CapitalG. In addition to finance, CapitalG provides companies within its portfolio access to technological and strategic

advice from Google's executives. Its investments include Survey Monkey, Lending Club, Airbnb, Snap Inc., Stripe, Looker, and Lyft.

GV, formerly Google Ventures, is Alphabet's other venture capital subsidiary. It invests in life sciences, artificial intelligence, robotics, and cybersecurity companies, mainly in the early stages of their development.

X

X, formerly Google X, is a corporate lab for developing experimental technologies known as "moonshots." According to *The Atlantic* magazine: "X is perhaps the only enterprise on the planet where regular investigation into the absurd is not just permitted but encouraged, and even required."¹⁰ Because of the secrecy surrounding X, only a few of the projects being undertaken are known. During early 2018, these included:

- Project Loon—high altitude balloons providing internet connectivity in areas lacking broadband infrastructure;
- Project Wing—package delivery via airborne drones;
- Makani Power—generating electrical power through wind turbines mounted on tethered kites;
- development of a revolutionary, miniature battery for powering mobile devices;
- various robotics projects.

Alphabet's Management and Capabilities

Google—now Alphabet—had created a management system that was unique, even by the unorthodox standards of Silicon Valley. Some of the key features of this system included:

- *Hiring policy:* From its earliest days, Google committed itself to hiring only the "brightest of the bright." Google's targets were not simply the highly intelligent. They were "smart creatives"—people who were "not confined to specific tasks ... not adverse to taking risks ... not hemmed in by role definitions ... don't keep quiet when they disagree ... get bored easily and shift jobs a lot ... combine technical depth with business savvy and creative flair."⁹ As founders Page and Brin explained: "Our employees, who have named themselves Googlers, are everything. Google is organized around the ability to attract and leverage the talent of exceptional technologists and business people ... Because of our employee talent, Google is doing exciting work in nearly every area of computer science ... Talented people are attracted to Google because we empower them to change the world."¹¹
- *A "dramatically flat, radically decentralized" organization:* Google structure and systems were designed around the simple notion of "What do smart creatives need in order to be productive?" The answer was primarily about the aspects of traditionally managed organizations that should be avoided: authority, rules, formality, defined job roles, and hierarchical privileges. Google was a flat organization because its smart creatives needed easy access to key decisions in order to get things done. To minimize hierarchy, Google used a "rule of seven": each manager must have at least seven direct reports.
- *Small, self-managing teams:* The majority of Google's employees, including all those involved in product development, worked in small teams. Most engineers

were in teams of three or four. Team size was limited by the “two-pizza rule”—teams should be small enough to be fed by two pizzas. Teams appointed their own leaders, and engineers could switch teams without the need for permission from the HR department.

- *An environment that fosters creativity:* For employees to be productive required a working environment that stimulated and fostered their interaction. Google’s workplaces were designed to minimize separation among colleagues. Google’s opulent eating and sports facilities were similarly designed to increase human interaction. Creativity and innovation were institutionalized through Google’s “70–20–10” rule, which stipulated that Google would devote 70% of its engineering resources to developing the core business, 20% to extend that core into related areas, and 10% allocated to fringe ideas. As a result, Google employees were able to spend time working on pet projects of their own choosing.
- *Rapid, low-cost experimentation:* According to Gary Hamel: “Evolutionary adaptation isn’t the product of a grand plan, but of relentless experimentation ... Google’s ‘just-try-it’ philosophy is applied to even the company’s most daunting projects, like digitizing the world’s libraries ... That kind of step-wise, learn-as-you-go approach has repeatedly helped Google to test critical assumptions and avoid making bet-the-farm mistakes.”¹²

Underlying Alphabet’s capacity for innovation and the effective implementation of new initiatives was a set of resources that few other technology-based companies could match. With an operating cash flow of \$37 bn. in 2017 and a cash pile of \$103 bn., Alphabet was a financial powerhouse that could buy its way into almost any market or area of technology. (Table 3 shows financial data for Alphabet.) However, most of

TABLE 3 Alphabet Inc.: Selected financial data, 2008–2017 (\$ bn.)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenues	21.8	23.7	29.3	37.9	43.7	50.5	59.1	75.0	90.3	110.9
Cost of revenues	8.6	8.8	10.4	13.2	17.2	22	25.7	28.2	35.1	45.6
R & D	2.8	2.8	3.8	5.2	6.1	7.1	9.8	12.3	13.9	16.6
Sales and marketing expense	1.9	2.0	2.8	4.6	5.5	6.6	8.1	9.0	10.5	12.9
General and admin. expense	1.8	1.7	2.0	2.7	3.5	4.4	5.9	6.1	7.0	6.9
Income from operations	6.6	8.3	10.4	11.7	13.8	15.4	16.5	19.4	23.7	26.1 ^a
Other income	0.3	0.1	0.4	0.6	0.6	0.5	0.8	0.3	0.4	1.0
Income before income taxes	5.9	7.1	10.8	12.3	14.5	15.9	17.3	19.7	24.2	27.2
Net income	4.2	6.5	8.5	9.7	10.7	12.9	14.4	16.3	19.5	12.7
Cash and marketable securities	28.4	24.5	35.0	44.6	48.1	58.7	64.4	73.1	86.3	101.9
Long-term liabilities	1.2	1.7	1.6	5.5	7.7	7.7	9.8	7.8	11.7	20.6
Total stockholders’ equity	28.2	36.0	46.2	58.1	71.7	87.3	104.5	120.3	139.0	152.5

Notes:

^a Operating income was reduced in 2017 by a European Union fine of \$2.7 bn.

Source: Alphabet Inc. and Google Inc. 10K reports.

the time it was content to make small acquisitions. Owning one of the world's most valuable brands (Google) and the world's two most visited websites (google.com and youtube.com), Alphabet commanded attention in any market it chose to enter.

The holding company structure of Alphabet would allow greater autonomy and flexibility for the individual subsidiaries, but would the loss of integration undermine the organizational capabilities that had made the company so successful?

Commenting on the transition from Google to Alphabet, the *Financial Times* observed: "Further down the organization, life gets more compartmentalized. It is not obvious that working in a silo at Company XYZ, 'an Alphabet subsidiary', is as attractive as working on complex issues across today's Google."¹³ Two years later, *Fortune* confirmed these fears, noting that the creation of Alphabet has "changed what it means to work for Google. Some grumble that their role now is to subsidize innovation at their sister companies, rather than to innovate themselves. ...That's a striking shift, especially for high-performing employees accustomed to moving about the company almost at will."¹⁴

The Future of Alphabet

Soon after Google's reincarnation as Alphabet, *Forbes* contributor, Ken Favaro, argued that Alphabet had failed to address the fundamental question of corporate strategy: "How does the company itself add value to its particular businesses and ventures?" As a result, Alphabet's "strategy remains as opaque as ever." In terms of the managerial effectiveness, lack of strategic clarity may translate into loss of "coherence, insight, and resilience" such that corporate development will "inevitably amount to a random walk that can only be rationalized ex post."¹⁵

These issues were especially pertinent in relation to Alphabet's "Other Bets." *Business Insider's* Steve Kovach noted:

The hope was that one of these Other Bets would become the next multibillion-dollar tech company and help diversify parent company Alphabet's revenue sources beyond Google's digital ads business. But this grand vision was always laden with some unanswered and uncomfortable questions: What does a successful Other Bet look like? When will one of those companies graduate from a mere "bet" to a winner that can stand on its own? Are they supposed to reach a point where they're big enough to spin out into a separate company outside Alphabet?¹⁶

Revealing the dire financial performance of Alphabet's Other Bets (see Table 4) had increased the tensions between Alphabet's technological ambitions and responsibilities to investors. These tensions appear to have been a factor in the high turnover of senior managers in the Other Bet companies:

[T]he heads of some of Alphabet's Other Bets, or of divisions that were on track to become Other Bets, were frustrated by the Alphabet structure... They signed up with the promise of being CEOs running their own startups, but were instead constrained from the top by Alphabet's CFO Ruth Porat, who controlled funding, as well as by the whims of Google cofounders Larry Page and Sergey Brin...The vision of Alphabet was to create nimble startups, but many of the entrepreneurs tasked with leading these startups concluded that they had better prospects of accomplishing their goals outside Alphabet than within.¹⁷

TABLE 4 Alphabet Inc.: Financial results of business segments, 2015–2017

		2015	2016	2017
Google	Revenues	74,544	89,463	109,652
	Operating income	23,319	27,892	32,908
	Capital expenditures	8868	9417	12,605
Other Bets	Revenues	445	809	1203
	Operating income	(3456)	(3578)	(3355)
	Capital expenditures	850	1385	507

Source: Alphabet Inc. 10K report for 2017.

In principle, the holding company structure had conferred greater autonomy to the businesses, giving them greater freedom to develop and grow. This would resolve many of the problems arising from Google's increasing size and complexity. By 2018, Google had 88,110 employees, up from 16,805 ten years earlier—inevitably this strained Google's famously informal management processes. Yet, the impact of the decentralization in taking pressure off top management would be offset by the increasing external pressures that Alphabet faced in 2018.

Concerns over Google's market power had resulted in antitrust investigations in the European Union, India, South Korea, Brazil, and Argentina. In 2017, the European Commission imposed a fine of €2.42 bn. for anticompetitive practices regarding Google's display and ranking of shopping search results. It was also investigating Android distribution practices and Google's syndication of AdSense.

Privacy issues were another area where Alphabet faced regulatory and legal threats. Privacy advocates and political activists have long expressed concern that Google's ability to track individuals' search and browsing behavior, the content of their Gmail messages, and, through Android, their cell phone usage and locations, represented a threat to individual privacy. Initiatives to restrict Alphabet's use of individuals' data included the European Court's "right to be forgotten" judgement in 2014, which allowed individuals to require that Google removed search results about them, the European General Data Protection Regulation to protect personal data, and a similar measure under consideration in California. Alphabet's vulnerability to concerns over privacy was highlighted by the crisis that engulfed Facebook in March 2018 over its release of personal data to Cambridge Analytica.¹⁸

One indication of growing regulatory and political pressures that Alphabet faced was its growing presence in Washington, DC. In 2017, Alphabet spent more on lobbying than any other company.

Competition provided another dimension of Alphabet's increasingly complex external environment. As the company diversified from search into an ever-increasing range of activities, so it came into competition with a widening range of rivals. In advertising, Facebook was its closest competitor; in mobile platforms and online payment systems, it was Apple; in browsers, computer operating systems, and office software, Microsoft; in home automation, Amazon and Honeywell; in autonomous driving, Tesla, Uber, Ford, and General Motors; in cloud computing, all the major IT companies. Competing with multiple companies on multiple fronts meant that Alphabet could not operate as a set of quasi-autonomous companies.

The new structure would also facilitate adding new businesses—either by acquisition or internal development—thereby setting the scene for further diversification. This raised concerns among investors as to whether the new company would provide greater opportunity for Page and Brin to pursue their ambitions of using technology to change the world. In an interview with the *Financial Times* in October 2014, Larry Page declared, “The societal goal is our primary goal,” and outlined the main challenge as: “How do we use all these resources ... and have a much more positive impact on the world?” The answer seemed to be to use the money generated by Google’s search advertising business to make bets on technologies that offered long-term solutions to some of the world’s most pressing problems. Many of these initiatives grew out of the curiosity and personal interests of the two founders. For example, the inspiration for Calico came from the interests of Larry Page’s wife, Lucy, in bioinformatics and the diseases of old age.

Beyond the notion of creating a “21st century, technology-based conglomerate,” there was little indication of the boundaries that would be established around Alphabet’s ambitions or its activities. *Forbes* contributor Dan Diamond pointed to healthcare as a major area of future growth for Alphabet.

The implications of the new company for Google’s core search and advertising business were far from clear. While investors hoped the holding company structure would allow greater transparency and bottom-line focus for management, there was limited evidence to support this optimism. The new Google subsidiary would include YouTube and Android; there was no indication that financial data would be available for the individual lines of businesses within Google.

Nor was it clear what the new structure would mean for the company’s ability to address the challenges it faced from competitors and regulators. One regulatory challenge was antitrust: Google’s dominant share of Internet search and Android’s share of mobile operating systems meant it was a monopoly in terms of the competition laws of many countries of the world. The other was privacy: concerns included the scanning of emails sent through Gmail, the use of cookies to track an individual’s search history, the aggregation of an individual’s data across Google’s various services, the depiction of private residences on Google’s StreetView, and the release of user data to national government agencies.

Given the breadth of the challenges Google faced, had the time come for Google’s leading trio—CEO and founder Larry Page, founder and director Sergey Brin, and executive chairman Eric Schmidt—to scale back Google’s ambitions and draw boundaries around Google’s corporate strategy?

Notes

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