

TEACHING NOTE

Alphabet's Google

Case Overview

The case is written from the perspectives of Larry Page, CEO of Alphabet and Sundar Pichai, CEO of Google. The case focuses on opportunities and challenges faced by Alphabet's largest business unit, Google. The case discusses Google's history, its business model, and its role in Alphabet as it diversifies into other businesses.

Google was founded by Larry Page and Sergey Brin in 1998. The founders met as doctoral students at Stanford University, and started to create a method to index and rank pages across the web, dubbed PageRank. Page and Brin transformed these algorithms into a full-fledged search engine. After explosive growth of the engine, Google was able to secure venture capital funding from legendary firms KPCB and Sequoia Capital. Google's growth was accelerated when it licensed its search technology to Yahoo in 2000, allowing it to break into Yahoo's 180 million user base. In 2001, Google hired Eric Schmidt as CEO of the company, a seasoned executive that would help the company navigate its growth. With Schmidt at the helm, Google made its initial public offering in 2004 for eight percent of the company. Google became a behemoth in search through its partnerships with AOL and Yahoo, as well as its own organic growth. The use of the search engine drove advertising revenue to the company. Throughout the next decade, Google began to roll out new products to expand its reach of users, creating an entire ecosystem across the web. The acquisitions of YouTube and Android provided gateways into growing segments of video and mobile respectively. Google was notorious for investing in large, riskier ventures as well, known as "moonshots." To provide more transparency to investors, Page and Brin announced that it would restructure the company as Alphabet. This allowed Google to operate as its own company, and clearly separate from other long-term "bets."

Google has traditionally focused on consumer facing products. As the company moves towards competing in hardware-based markets such as smartphones and home services, it is strategically rationalizing its product portfolio to align with product cycles. At the core of Google's consumer products is search, which captured two trillion queries in 2016. Android, Google's open source smartphone operating system, has led the way for Google to capture 85 percent of the global mobile operating system market. Google has expanded its search capabilities with other consumer products such as Chrome, Maps, and Gmail. YouTube continues to drive strong user growth through the explosion of video content. It originally purchased YouTube for \$1.4 billion, and it has grown to generate over \$4 billion in revenue for Google.

Advertising represents Google's largest revenue stream, stemming originally from search, but now coming in many forms in varying products. Adwords and AdSense were used to directly monetize the search platform. Adwords auctions off "keywords" of a search, while AdSense formulated keywords from a website, and then matched it with Google's keyword inventory. Google also acquired Double Click to enter the display ad business, which brought in \$2.5 billion annually by 2015. AdMob, another key acquisition, allowed for Google to take hold in the mobile advertising space through various apps.

Competition in Google's advertising space has intensified, mostly by the way of Facebook. Facebook used its Pages, Instagram, and Messenger services to advertise to its two billion monthly active users in 2017. Facebook has also stressed the value of its advertising service linked to its social media data, which saw an average price per ad increase by 140 percent. Other players have attempted to take the dominant share of online advertising; however, they have been mostly unsuccessful. In 2017, Verizon acquired Yahoo to enter the online advertising market, but with only six percent share remaining.

Many challenges lie ahead for Google in terms of advertising. Facebook has been successful in its mobile strategy and is emerging as the dominant player in mobile. Google faces regulatory challenges in the European Union, as high online advertising share mixes with privacy concerns. Lastly, Google needs to find better ways to sift through bad content that alienates their top tier advertising partners.

As Alphabet continues to implement an M-form structure to administer unrelated diversification, the adjacent business units will have a significant impact on Google. Most notably, the Waymo subsidiary has the potential to enter a multibillion-dollar market. The uncertainty of this venture along with Google's core competencies present new opportunities and challenges to the firm. There is also the question of Alphabet managing this new structure while securing future growth and profitability. It needs to continue to innovate, even as it tries to retain the top talent that can create and commercialize new products. The road ahead comes with challenges in its core business in advertising, as well as the new corporate structure and accompanying moonshots of Alphabet.

Key Concepts

- Business Model
- Competitive Strategy
- Platform Strategy
- Innovation and Technology Strategy
- Corporate Strategy
 - Unrelated Diversification
 - Profit Pools
- Organizational Structure

Suggested Discussion Questions

1. What is Google's business model? How is it making money?
2. Who are Google's main competitors? What and who should Google worry about? What should Sundar Pichai do about these challenges? Provide recommendations, be specific.
3. How is Google using platform strategy? What are some strengths and some weaknesses of this approach?
4. What type of diversification strategy is Alphabet pursuing? What organizational structure is Alphabet using? What is the rationale behind this structure and diversification strategy?

Suggested Answers

1. What is Google's business model? How is it making money?

Who – The main stakeholders for Google are the end-users of Google's consumer products and the advertisers. The users take advantage of Google's wide product and service offering, mostly for free. The large network of users and data is attractive for advertisers to spend their ad dollars. Advertisers are especially attracted to Google for its ability to match ads with users in a fine-grained and targeted fashion, based on individual data collected for each user.

What – Google's free services and simple user experience creates an entire ecosystem for its users. Google's products are used throughout daily life in the form of search, mobile, maps, and other activities. Google's services are "sticky" once a user is locked into its ecosystem, e.g., Gmail, YouTube, Search, Maps, and Android.

How – The product portfolio continues to grow in terms of consumer products. Google uses its core capabilities in search infrastructure to enhance its Android platform, create an "assistant" through Google Home, and develop visual search through Google Photos.

Why – As the number of interactions that Google makes with its users grows, the stronger the network effect of its platform growth. The data generated from users turns into insights that can be sold to advertisers to target customers in very specific ways.

See Exhibit TN-1 for the Why, What, Who, and How of Business Models Framework.

Google makes money by creating opportunities for advertisers to reach an audience through a growing ecosystem. As the breadth of Google's products and services grow, so does the data needed to generate individual profiles and insights for its customers.

2. Who are Google's main competitors? What and who should Google worry about? What should Sundar Pichai do about these challenges? Provide recommendations, be specific.

Google's main competitors are Facebook, Apple, Microsoft, and Amazon. Google should worry about competitors that are taking market share, or that have the potential to take market share of its advertising business. Specifically, Google should worry about Facebook. Over the last few years, Google and Facebook have captured basically all the new digital ad spend. New entrants like Snap are creating ripples, but the dominant players continue to provide products attractive for advertising spend. Facebook, however, has used its four main products (Facebook, Instagram, Messenger, and WhatsApp) to "own the mobile screen." As users move more exclusively to the mobile environment, Facebook has been able to take a larger share of the screen time and interactions with users. This has translated to greater earnings and share of advertising dollars by Facebook. Facebook is continuing to excel in mobile, creating a big challenge for Google, see **Exhibit TN-2, "Google Ad Revenue vs Competitors, 2012-2016."**

Sundar Pichai should invest in leveraging the entire user ecosystem to create more value for advertisers. Facebook has done a great job in moving into mobile swiftly to take advantage of customer habits. Google has the internal and acquisition capabilities to extend beyond the smartphone, and develop a larger ecosystem to interact with users. New products and investments such as the "Google Assistant" in Google Home and its Nest infrastructure are starting to show this may help in implementing this strategy. Improving share of its mobile devices itself, which embed several services also helps in creating a larger ecosystem. Other smaller services such as Photos and Google Flights may be able to all come together to bring data about a customer that can be attractive for advertisers, beyond social media.

The "trillion dollars" killer app for Alphabet could potentially be Waymo. If Alphabet's self-driving unit succeeds in developing and commercializing an operating system for self-driving cars, it could gain a significant market share because it is independent from individual car makers. The model is Android and mobile devices. If Waymo can repeat this success in the autonomous vehicle industry, Google is to reap not only more but as much more unique data about each individual, allowing for much more fine-grained service offerings and ad targeting.

3. How is Google using platform strategy? What are some strengths and some weaknesses of this approach?

Google is using platform strategy to drive users to its ecosystem, which enhances the value of the overall platform for earlier users, and most importantly, for Google's advertisers. Specific platforms include Android, Google Drive, Waze, and YouTube. Together, these platforms form a greater ecosystem.

Using the framework shown in **Exhibit TN-3**, the platform can be broken down further:

Owner - Google creates the platform for users, developers, and advertisers to interact. It often uses a free or open source platform to draw in users with low switching costs.

Providers – Hardware OEMs such as Samsung and LG act as providers in the platform. These hardware partners allow Google to focus on the platform software itself, not necessarily the accompanying hardware. This tactic, however, is changing as Google invests in HTC and other hardware components such as Nest.

Producers – App developers and content creators serve as the producers in the platform. Having a robust marketplace of apps is essential for Google to attract users to its Android platform. Also, YouTube's success is based on the centralized source of user created content, which has generated "YouTube stars" with millions of subscribers.

Consumers – The user base of Android and other Google products creates the entire ecosystem for Google. Having friends, family, and co-workers on the same platform enhances the value of Google's products. People can easily message, share photos, share videos, and collaborate via Google's portfolio.

Strengths – Google continues to grow its platform base by the development of new products. It has expanded from just search, then moved on to Maps, YouTube, Docs, and other services.

Weaknesses – The platform has not been able to grow into the social media space. Google has failed with Google+ and other social media ventures. Users spend valuable time on social media, and currently Google has not been able to add that data into its platform to increase its value.

4. What type of diversification strategy is Alphabet pursuing? What organizational structure is Alphabet using? What is the rationale behind this structure and diversification strategy?

In 2017, Alphabet was the second most valuable technology company globally (with some \$650 billion in market cap), just behind Apple, but ahead of Microsoft, Amazon, and Facebook (in that order). Alphabet pursues unrelated diversification, and administers its conglomerate through the M-form structure (see Exhibit TN-4).

To manage its high degree of unrelated diversification more effectively, Google put in place a multi-divisional structure overseen by Alphabet, a corporate holding company. Alphabet's 10 business units start with Google's core businesses (search, ads, apps, YouTube, Android, Chrome, and Google maps) in a single unit joined by Google X (artificial intelligence, high-altitude balloons providing global internet connectivity), Waymo (self-driving cars), Nest (smart homes), Access & Energy (broadband fiber services), Verily (life sciences, smart contact lenses), Calico (longevity research), Side Walk Labs (urban innovation), Google Ventures (venture capital investments in early phase startups), and Google Capital (venture capital investments in later-stage startups, similar to corporate venture capital investments). This sweeping restructuring allows the sprawling conglomerate to separate its highly profitable search and advertising business from its "moon shots," such as providing wireless Internet connectivity via high-altitude balloons or developing contact lenses that double as a computer monitor and provide real-time information to the wearer.

Google continues to dominate the revenue streams for Alphabet—accounting for more than 90 percent of total revenues (see **Exhibit 1** in case). Google is a standalone strategic business unit within Alphabet and has its own profit and loss responsibility. Google is run by CEO Sundar Pichai. Although Google started as an online search and advertising company, it now offers software applications (Google Docs, word processing, spreadsheet, e-mail, interactive calendar, and presentation software) hosted on the cloud (Google Drive), and operating systems (Chrome OS for the web and Android for mobile applications), among many other online products and services.

The push towards unrelated diversification will be key for Alphabet as it moves to highly competitive industries, such as autonomous driving with Waymo. Investors will be able to see the direct investment into these businesses, allowing for Alphabet to enter markets that require large investments, and therefore create significant value for the firm. Direct investment into autonomous driving technology will help Waymo to create a leadership position in this space. As Alphabet moves forward, its leaders will need to gain new competencies in managing the shift from a focused technology company to a diverse conglomerate.

Teaching Tip: At this juncture, a good follow-up question is to discuss sources of value creation and costs for Alphabet with its M-form structure. The table shown in **Exhibit TN-5** is helpful in categorizing student answers and in guiding the discussion

Recent Updates

In the first half of 2017, Android held 67 percent market share in the U.S., while Apple's iOS held 31 percent. Globally, during the same time period, Android's lead over Apple's iOS was even wider: Android held 85 percent for smartphone operating systems, dwarfing Apple's 15 percent.^{1[i]}

In the fall of 2017, Google announced that it would acquire HTC's, a Taiwanese smartphone maker, engineering group that developed the Google Pixel phone for \$1.1 billion.^{2[i], 3[iii]} With this, Google is making a commitment to handset manufacturing, unlike in the Motorola deal which was more motivated by intellectual property considerations. Integrating HTC's smartphone unit within Google will allow engineers to more tightly integrate hardware and software. This in turn will allow Google to differentiate its high-end Pixel phone more from the competition, especially Apple's new release iPhone X and Samsung's Galaxy 8 line of phone, including the Note 8.

Additional Resources

1. Articles

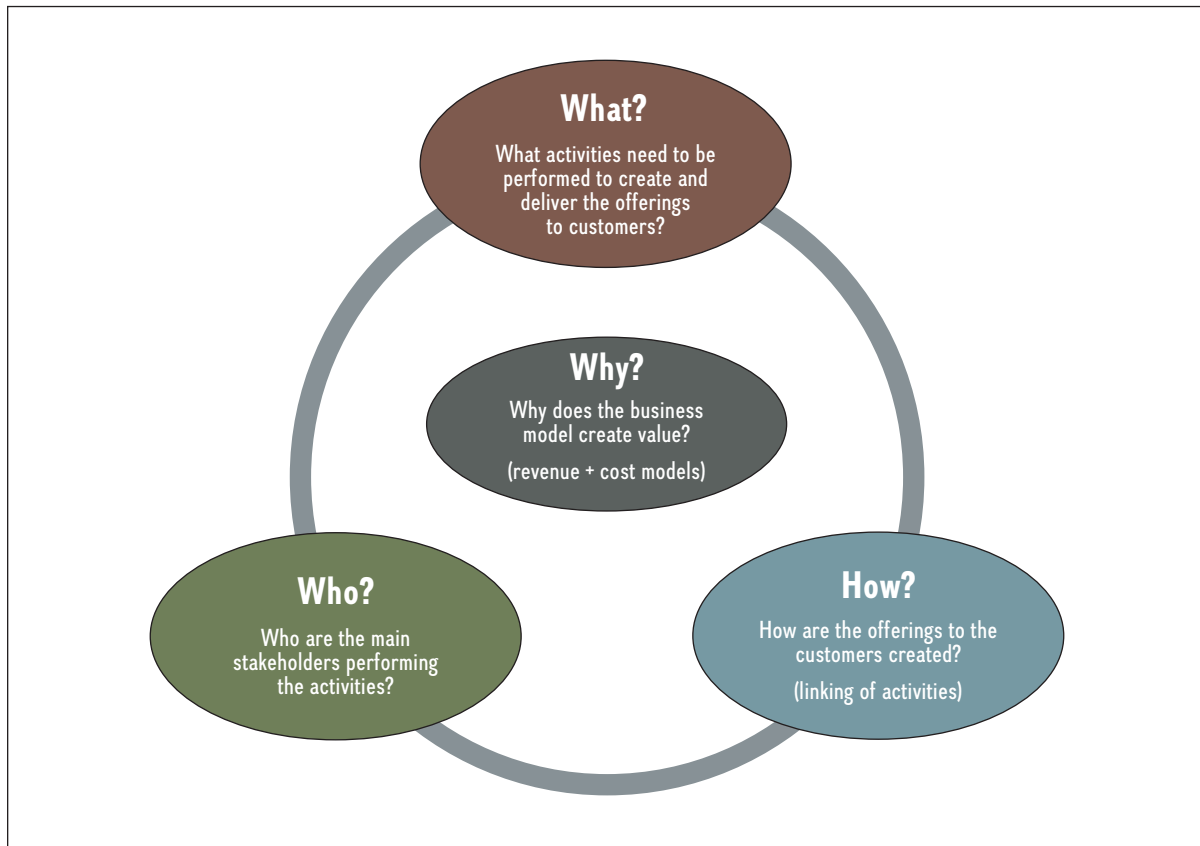
- Van Alstyne, M. W., G. G. Parker, and S. P. Choudary, "Pipelines, Platforms, and the New Rules of Strategy," *Harvard Business Review*, April 2016.
- R. Amit and C. Zott, "Creating Value through Business Model Innovation," *MIT Sloan Management Review*, 53, no. 3 (Spring 2012): 41–49.

- J. Nicas, D. Strumpf, and D. Mattioli, "Google Jumps Back Into Hardware With \$1.1 Billion HTC Deal," *Wall Street Journal*, September 20, 2017, <http://on.wsj.com/2yGFXx5> .
- D. Gallagher and J. Wong, "What Google Wants With HTC's Smartphone Business," *Wall Street Journal*, September 21, 2017, <http://on.wsj.com/2huxdWP>.

2. Videos

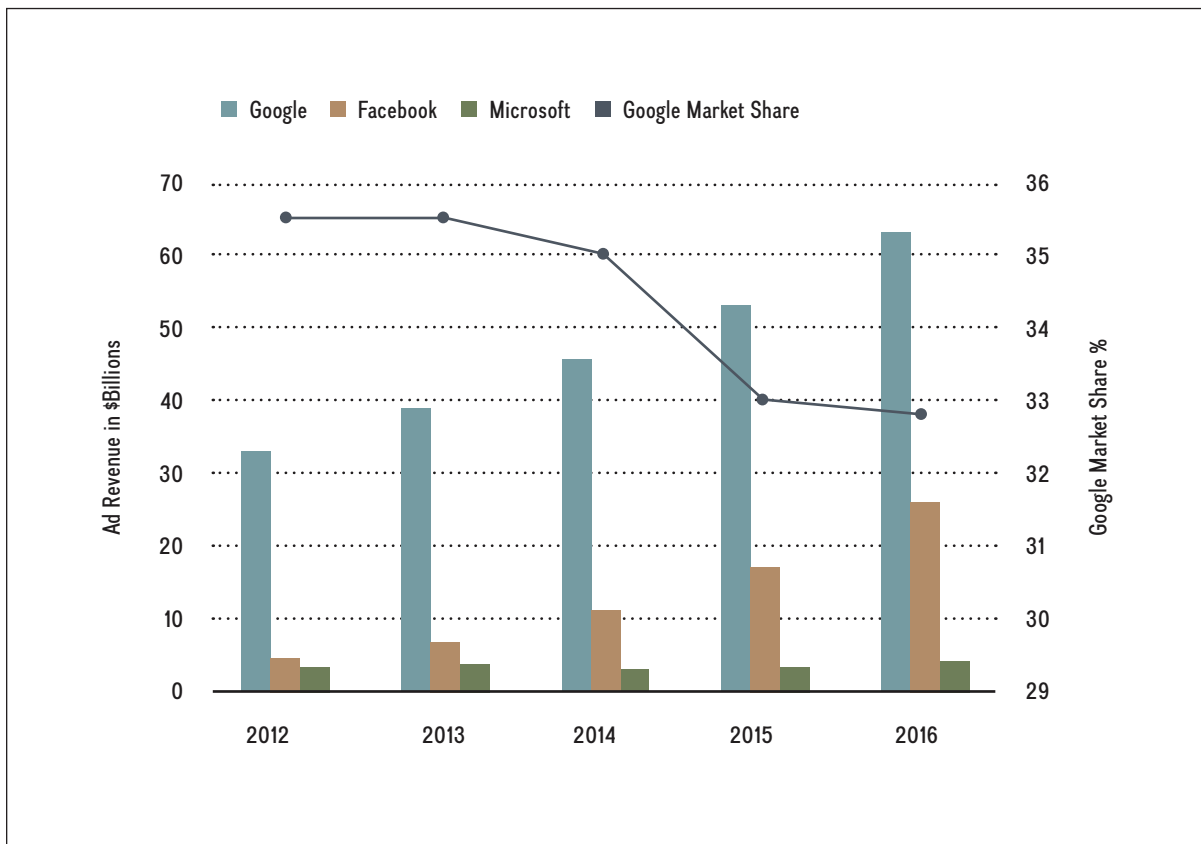
- "It's Here. Meet Your Google Assistant." https://www.youtube.com/watch?v=W_BeK48-Bzc (0:30).
- "Google Year in Search 2016" A short video of things that happened in 2014 summarized from what people searched. https://www.youtube.com/watch?v=KIViy7L_lo8 (2:00). "Nest's Tony Fadell," A Video of Nest's Founder Tony Fadell Discussing How its Thermostat is Different <http://fortune.com/2015/01/15/glass-to-exit-google-x-report-to-nests-tony-fadell/> (2:38).
- "Where's Google Going Next?" TED interview with Larry Page. http://www.ted.com/talks/larry_page_where_s_google_going_next?language=en (23:30)
- "Inspiring Google Story—Larry Page." Larry Page discussing risk and failure in decision to found Google with Sergey Brin versus completing Ph.D. at Stanford. https://www.youtube.com/watch?v=f_eiMKp4QW8 (6:53).

EXHIBIT TN-1 The Why, What, Who, and How of Business Models Framework



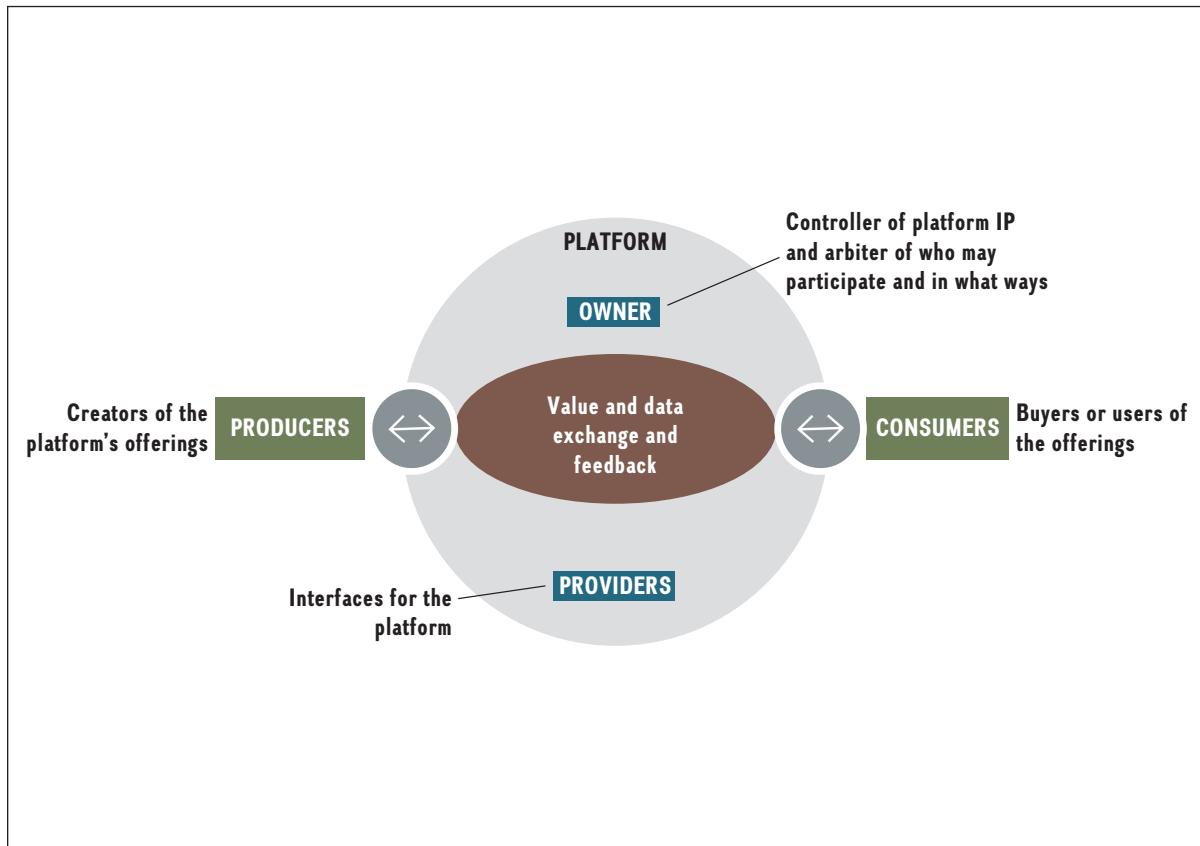
Source: Adapted from Amit, R. and C. Zott, "Creating value through business model innovation," MIT Sloan Management Review, vol. 53, no. 3, 2012, 41-49.

EXHIBIT TN-2 Google Ad Revenue vs Competitors, 2012-2016



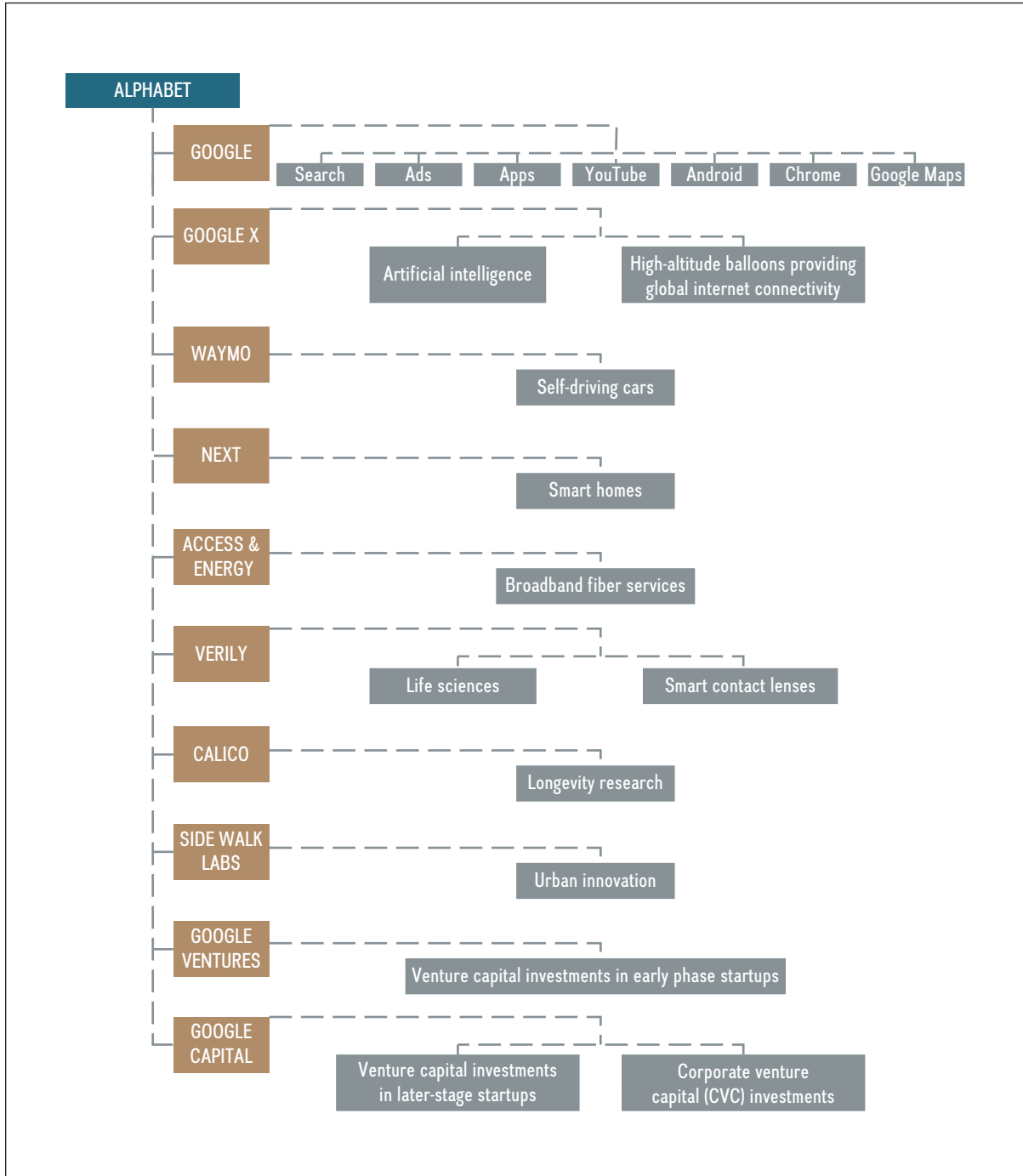
Source: Depiction of data from "Google privacy-policy change faces new scrutiny in EU," *Wall Street Journal*, accessed January 24, 2017.

EXHIBIT TN-3 The Players in a Platform Ecosystem



Source: Adapted from Marshall W. Van Alstyne, Geoffrey G. Parker, and Sangeet Paul Choudary, "Pipelines, Platforms, and the New Rules of Strategy," *Harvard Business Review*, April 2016.

EXHIBIT TN-4 Alphabet's Multidivisional Structure (M-form) with Its Strategic Business Units, Including Google's Businesses



Source: Rothaermel, F.T. (2018), *Strategic Management*, 4th edition. Burr Ridge, IL: McGraw-Hill.

EXHIBIT TN-5 Vertical Integration and Diversification: Sources of Value Creation and Costs

Corporate Strategy	Sources of Value Creation (V)	Sources of Costs (C)
Vertical Integration	<ul style="list-style-type: none"> • Can lower costs • Can improve quality • Can facilitate scheduling and planning <hr/> <ul style="list-style-type: none"> • Facilitating investments in specialized assets • Securing critical supplies and distribution channels 	<ul style="list-style-type: none"> • Can increase costs • Can reduce quality • Can reduce flexibility <hr/> <ul style="list-style-type: none"> • Increasing potential for legal repercussions
Related Diversification	<ul style="list-style-type: none"> • Economies of scope • Economies of scale • Financial economies <ul style="list-style-type: none"> • Restructuring • Internal capital markets 	<ul style="list-style-type: none"> • Coordination costs • Influence costs
Unrelated Diversification	<ul style="list-style-type: none"> • Financial economies <ul style="list-style-type: none"> • Restructuring • Internal capital markets 	<ul style="list-style-type: none"> • Influence costs

Source: Rothaermel, F.T. (2018), *Strategic Management*, 4th edition. Burr Ridge, IL: McGraw-Hill.

Endnotes

- 1 IDC, Smartphone OS Market Share, 2017 Q1 <https://www.idc.com/promo/smartphone-market-share/os>
- 2 J. Nicas, D. Strumpf, and D. Mattioli, "Google Jumps Back Into Hardware With \$1.1 Billion HTC Deal," *Wall Street Journal*, last modified September 20, 2017, <http://on.wsj.com/2yGFXx5>.
- 3 ID. Gallagher and J. Wong, "What Google Wants With HTC's Smartphone Business," *Wall Street Journal*, last modified September 21, 2017, <https://www.wsj.com/articles/what-google-wants-with-htcs-smartphone-business-1505983282>.