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Corporate Entrepreneurship and Innovation in Silicon Valley: The Case of Google, Inc.

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In May 2009, Sergey Brin and Larry Page, co-founders of Google, Inc., were trying to determine how they were going to navigate Google through the worst recession since the Great Depression. Their primary problem was how to maintain the company's culture of corporate entrepreneurship and innovation in the face of stagnant profits and a host of other issues. Google sought answers on how to increase corporate entrepreneurship and innovation during the worst economic environment that the company had ever experienced.

Introduction

In May 2009, Sergey Brin and Larry Page, co-founders of Google, Inc., watched Green Day in concert at the famous Shoreline Amphitheatre in Mountain View, California. The brilliant young entrepreneurs had many things on their minds. They tried to determine how they were going to navigate Google during the worst recession the United States had seen since the Great Depression (Willis, 2009). The Standard and Poor's 500 (S&P 500), one of the most popular indicators of the U.S. economy, had dropped to an intra-day low of 666.79 on March 6, 2009 from an intra-day high of 1576.09 on October 11, 2007 for a collapse of 57.7% (S & P 500 Index, 2009). Worldwide stocks had decreased on average by approximately 60%.

Warren Buffett, Chairman of Berkshire Hathaway and one of the most prolific investors of all time, foresaw the current economic turmoil in early 2008. Buffett stated, "Even though the numbers do not state it, the United States was in for a deep long-lasting recession" (Buffett, 2008).

By early 2009, U.S. retirement accounts also dropped by an average of 40% or $3.4 trillion (Brandon, 2009). Many U.S. retirees saw their pensions cut in half and many were forced to go back to work or rely on their families to support them.

Brin and Page had never witnessed anything like this in their young lives. Even the ever successful company they created in 1998, Google, Inc., was feeling the effects of

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This case is intended to stimulate class discussion rather than to illustrate the effective or ineffective handling of a managerial situation. *The company, names, and financials are all real.*

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the crisis. At its low point, Google's stock price dropped 51.35% from an intra-day high of $713.587 on November 2, 2007 to an intra-day low of $259.56 on November 20, 2008. The stock price picked up momentum recently and traded at $410 as of May 28, 2009.

As the young entrepreneurs listened to the Bay Area band Green Day, they pondered their next moves. Google had problems. The company's primary problem was how to maintain the culture of corporate entrepreneurship and innovation in the face of flat net profits from 2007 to 2008. As a result of this, the firm had to fire several employees for the first time in the company's history and eliminate products that made no money (Blodget, 2009). Furthermore, employees left for a variety of reasons (e.g., lack of mentoring and formal career planning, too much bureaucracy, low pay and benefits, high cost of living in the area, desire to start their own business, etc.).

In a little over 10 years, Google had grown to a company with over 20,000 employees. If Google wanted to continue its main strategy of growth through innovation, it would have to find a way to recruit the best employees and retain them (see Tables 1–3 and Figure 1).

Background of Founders

Google was founded by Larry Page and Sergei Brin, who met in 1995 while they were PhD students in computer engineering at Stanford University. Page was born in Lansing, Michigan on March 26, 1973 and was the son of a computer science professor at Michigan State University who specialized in artificial intelligence. Page's mother also taught computer programming at the Michigan State University (Thompson, 2001, p. 50).

Page spent his youth learning about computers and immersed himself into multiple technology journals that his parents read. Page had a very impressive educational background. He attended a Montessori school initially, and then went to a public high school. He later went on to earn a Bachelor of Science Degree (with honors) in computer engineering from the University of Michigan. Page was then accepted to graduate school at Stanford where he met Brin and began his study of website linkages. Nicola Tesla, a Serbian inventor who was a contemporary of Thomas Edison, was Page's inspiration. Tesla was superior to Edison in some respects; however, he failed at commercializing his inventions. Page wanted to do both.

In 1973, Sergey Brin was born in Moscow Russia. At age six, Brin and his family who were Jewish, fled Russia to the United States to escape anti-Semitism. Brin's father was a mathematics professor at the University of Maryland and his mother was a research scientist at NASA's Goddard Space Flight Center. Brin attended a Montessori high school and graduated with a degree in computer science and mathematics with honors from the University of Maryland. He then began to study computer science at Stanford University until he dropped out to form Google with Page. Brin was the more gregarious; however, both were strong willed and opinionated.

At Stanford they began their quest to "organize the world's information and make it universally accessible" (Miller, 2006, p. 10). Google began as a research project at Stanford University in January, 1995.

Page started his research under the tutelage of Dr Terry Winograd, a computer science professor at Stanford. His research focused on which web pages linked to a given page. His initial problem was trying to determine the number of citations in academic publishing. He called his research project "BackRub." Brin soon joined Page on the project. Page began exploring the web in March 1996 by using Page's Stanford home page. It was at this point that Page and Brin developed PageRank, an algorithm that ranked the importance of the sites that were relevant to the entry.

Table 1

Google—Income Statements 2004–08 (in Millions)

Period end date	2008 12/31/2008	2007 12/31/2007	2006 12/31/2006	2005 12/31/2005	2004 12/31/2004
Period length	12 Months	12 Months	12 Months	12 Months	12 Months
Revenue	21,795.55	16,593.99	10,604.92	6,138.56	3,189.22
Total revenue	21,795.55	16,593.99	10,604.92	6,138.56	3,189.22
Cost of revenue, total	8,621.51	6,649.09	4,225.03	2,577.09	1,468.97
Gross profit	13,174.04	9,944.9	6,379.89	3,561.47	1,720.26
Selling/General/Administrative expenses, total	3,748.88	2,740.52	1,601.31	854.68	483.9
Research & Development	2,793.19	2,119.99	1,228.59	599.51	395.16
Depreciation/Amortization	0.0	0.0	0.0	0.0	0.0
Interest expense (income), Net operating	0.0	0.0	0.0	0.0	0.0
Unusual expense (income)	1,094.76	0.0	0.0	90.0	201.0
Other operating expenses, total	0.0	0.0	0.0	0.0	0.0
Operating income	5,537.21	5,084.4	3,550.0	2,017.28	640.19
Interest income (expense), net nonoperating	0.0	0.0	0.0	0.0	0.0
Gain (loss) on sale of assets	0.0	0.0	0.0	0.0	0.0
Other, net	4.52	*–4.65*	3.46	4.14	*–5.09*
Income before tax	5,853.6	5,673.98	4,011.04	2,141.68	650.23
Income tax—total	1,626.74	1,470.26	933.59	676.28	251.12
Income after tax	4,226.86	4,203.72	3,077.45	1,465.4	399.12
Minority interest	0.0	0.0	0.0	0.0	0.0
Equity in affiliates	0.0	0.0	0.0	0.0	0.0
US GAAP adjustment	0.0	0.0	0.0	0.0	0.0
Net income before extra. items	4,226.86	4,203.72	3,077.45	1,465.4	399.12
Total extraordinary items	0.0	0.0	0.0	0.0	0.0
Net Income	4,226.86	4,203.72	3,077.45	1,465.4	399.12

Source: http://www.google.com/finance?fstype=bi&cid=694653.

Page and Brin did not create the algorithm with the intention of making money, but they wanted to have a significant impact on the world. As time went on they decided that they did not want to create their own company, but they wanted to sell their invention to one of the existing search companies (e.g., WebCrawler, AltaVista, Yahoo!, etc.). However, all of these companies stated that there was no money in search and rejected them.

By 1996, Brin and Page had servers and computers stacked in their dorm room. Initially targeted at Stanford students, the two consulted with two former Stanford students that started Yahoo!, Jerry Yang and David Filo. They encouraged Brin and Page to create their own company. So the two decided to drop out of school and start their own business. In 1998, Sun Microsystems co-founder Andy Bechtolsheim, who also dropped out of Stanford to become a successful entrepreneur, wrote a check for $100,000 to Brin and Page and they formed a new company called Google, Inc.

Table 2

Google Cash Flow 2004–2008 (in Millions)

Period end date	2008 12/31/2008	2007 12/31/2007	2006 12/31/2006	2005 12/31/2005	2004 12/31/2004
Net income/Starting line	4,226.86	4,203.72	3,077.45	1,465.4	399.12
Depreciation/Depletion	1,212.24	807.74	494.43	256.81	128.52
Amortization	287.65	159.92	77.51	37.0	19.95
Deferred taxes	*–224.65*	*–164.21*	0.0	0.0	0.0
Noncash items	2,055.44	489.44	*–112.83*	656.47	682.66
Other noncash items	960.68	489.44	*–123.63*	634.43	470.32
Changes in working capital	295.32	278.8	43.96	43.74	*–253.21*
Accounts receivable	*–334.46*	*–837.25*	*–624.01*	*–372.29*	*–156.93*
Accounts payable	*–211.54*	70.14	95.4	80.63	*–13.52*
Taxes payable	626.03	744.8	398.41	87.4	*–125.23*
Other liabilities	41.43	70.33	30.8	39.55	22.0
Other operating cash flow	*–31.91*	*–39.74*	1.67	0.0	0.0
Cash from operating activities	7,852.86	5,775.41	3,580.51	2,459.42	977.04
Capital expenditures	*–2,358.46*	*–2,402.84*	*–1,902.8*	*–853.04*	*–355.9*
Purchase of fixed assets	*–2,358.46*	*–2,402.84*	*–1,902.8*	*–838.22*	*–319.0*
Purchase/Acquisition of intangibles	0.0	0.0	0.0	*–14.82*	*–36.91*
Other investing cash flow items, total	*–2,960.96*	*–1,278.75*	*–4,996.35*	*–2,505.16*	*–1,545.46*
Acquisition of business	*–3,320.3*	*–906.65*	*–402.45*	*–86.49*	*–21.96*
Purchase of investments	*–15,403.46*	*–16,031.57*	*–27,701.04*	*–12,675.88*	*–4,134.58*
Cash from investing activities	*–5,319.42*	*–3,681.59*	*–6,899.15*	*–3,358.19*	*–1,901.36*
Financing cash flow items	159.09	379.21	581.73	0.0	4.3
Other financing cash flow	159.09	379.21	581.73	0.0	4.3
Total cash dividends paid	0.0	0.0	0.0	0.0	0.0
Issuance (retirement) of stock, net	*–71.52*	23.86	2,384.67	4,372.26	1,195.03
Issuance (retirement) of debt, net	0.0	0.0	0.0	*–1.43*	*–4.71*
Cash from financing activities	87.57	403.07	2,966.4	4,370.83	1,194.62
Foreign exchange effects	*–45.92*	40.03	19.74	*–21.76*	7.57
Net change in cash	2,575.08	2,536.92	*–332.5*	3,450.3	277.88
Net cash—beginning balance	6,081.59	3,544.67	3,877.17	426.87	149.0
Net cash—ending balance	8,656.67	6,081.59	3,544.67	3,877.17	426.87

Source: http://www.google.com/finance?fstype=bi&cid=694653.

Growth of Google

Since its founding in 1998, Google was one of the most innovative companies in the world. The company ranked at the top with other leading companies like Apple in the development of innovative products and technologies. Corporate entrepreneurship and innovation was the heart and soul of the company's success.

Google initially set up its business in a garage at 232 Santa Margarita, Menlo Park, California in 1998. Later that year, Google was named Search Engine of Choice by *PC Magazine* in the Top 100 Sites of 1998 (Lowe, 2009, p. 282). In 1999, Google moved to a new office space in Palo Alto to make room for several new employees. Palo Alto was the location of Stanford University. The city was in the heart of Silicon Valley and was the location where the first semiconductor chip was created in 1956 by Fairchild Semiconductor.

Table 3

Google Balance Sheet 2004–08 (in Millions)

Period end date	2008 12/31/2008	2007 12/31/2007	2006 12/31/2006	2005 12/31/2005	2004 12/31/2004
Assets					
Cash and short term investments	15,845.77	14,218.61	11,243.91	8,034.25	2,132.3
Total receivables, net	2,642.19	2,307.77	1,322.34	687.98	382.35
Total inventory	0.0	0.0	0.0	0.0	0.0
Prepaid expenses	1,404.11	694.21	443.88	229.51	159.36
Other current assets, total	286.11	68.54	29.71	49.34	19.46
Total current assets	20,178.18	17,289.14	13,039.85	9,001.07	2,693.47
Property/Plant/Equipment, total—net	5,233.84	4,039.26	2,395.24	961.75	378.92
Goodwill, net	4,839.85	2,299.37	1,545.12	194.9	122.82
Intangibles, net	996.69	446.6	346.84	82.78	71.07
Long term investments	85.16	1,059.69	1,031.85	0.0	0.0
Note receivable—long term	0.0	0.0	0.0	0.0	0.0
Other long term assets, total	433.85	201.75	114.46	31.31	47.08
Total assets	31,767.58	25,335.81	18,473.35	10,271.81	3,313.35
Liabilities and shareholders' equity					
Accounts payable	178.0	282.11	211.17	115.58	32.67
Payable/Accrued	0.0	0.0	0.0	0.0	0.0
Accrued expenses	1,824.45	1,575.42	987.91	528.94	269.29
Notes payable/Short term debt	0.0	0.0	0.0	0.0	0.0
Current port. of LT debt/capital leases	0.0	0.0	0.0	0.0	1.9
Other current liabilities, total	299.63	178.07	105.51	100.87	36.51
Total current liabilities	2,302.09	2,035.6	1,304.59	745.38	340.37
Total long term debt	0.0	0.0	0.0	0.0	0.0
Deferred income tax	12.52	0.0	40.42	35.42	0.0
Other liabilities, total	1,214.11	610.53	88.5	72.05	43.93
Total liabilities	3,528.71	2,646.13	1,433.51	852.86	384.3
Common stock	0.32	0.31	0.31	0.29	0.27
Additional paid-in capital	14,450.34	13,241.22	11,882.91	7,477.79	2,582.35
Retained earnings (accumulated deficit)	13,561.63	9,334.77	5,133.31	2,055.87	590.47
Other equity, total	226.58	113.37	23.31	*–115.0*	*–244.03*
Total equity	28,238.86	22,689.68	17,039.84	9,418.96	2,929.06
Total liabilities and shareholders' equity	31,767.58	25,335.81	18,473.35	10,271.81	3,313.35
Total common shares outstanding	315.11	313.28	309.0	293.03	266.92

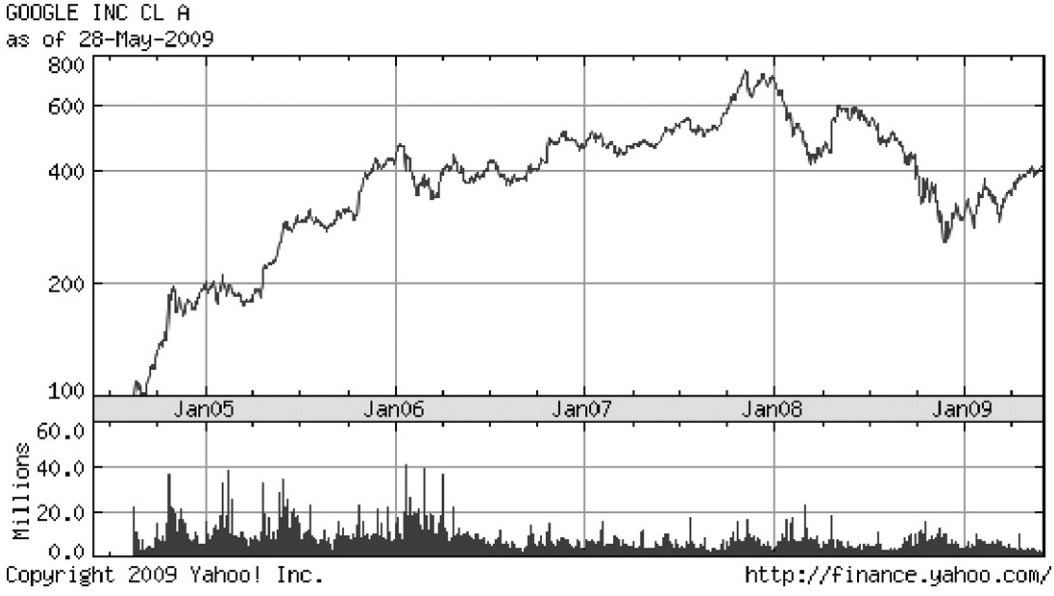
Source: http://www.google.com/finance?fstype=bi&cid=694653.

In 1999, Google received its first significant influx of capital, $25 million in venture capital financing from Sequoia Capital and Kleiner, Perkins, Caufield, and Byers, both located in Silicon Valley. Members of both firms sat on the board of directors of Google.

In 1999, the term "googler" was termed for "people who used Google." In August, 1999 Google moved to Mountain View, just south of Palo Alto. Google moved into an empty building next door to Silicon Graphics, a firm that was founded by a former Stanford electrical engineering professor, Dr. James Clark and seven graduate students and staff from Stanford. Clark would go on to found Netscape Communications, myCFO, and Healtheon. A review of the history of Google can be seen below (see Table 4).

Figure 1

Google's Stock Price from IPO through 28 May 2009



Stages of Growth

Hamel and Breen (2007) described the growth of Google into five stages:

Google 1.0. Brin and Page invented a search engine that searched the Web, won millions of eyeballs, but generated no real revenue.

Google 2.0. Google sold its search capacity to AOL, Yahoo!, and other major portals. These partnerships generated revenue and sparked a surge in search requests. Suddenly, Google started to look like a business.

Google 3.0. Google crafted a clever model for selling ads alongside search results called AdWords. Unlike Yahoo! and others, it eschewed banner ads, and took a newspaper's "church-and-state" view of advertising and content by clearly differentiating between ads and search results. Moreover, advertisers paid only when users actually clicked on a link. Google was well on its way to becoming the Internet's leading retailer of ad space.

Google 4.0. Google's initially controversial Gmail service, which served up ads based on a computer analysis of each incoming message, provoked a serendipitous bit of learning that led to the creation of AdSense. This breakthrough gave Google the ability to link its ads to virtually any sort of Web content, not just its own search results. AdSense gave webmasters a new way of monetizing content and vastly expand the scope of Google's business model.

Google 5.0. Google used its windfall from advertising to fund a flock of new services, including Google Desktop (a cluster of information utilities accessible directly from a

Table 4

Google's Corporate History

Aug-98	Sun co-founder Andy Bechtolsheim writes a check for $100,000 to an entity that doesn't exist yet: a company called Google Inc.
Sep-98	Google files for incorporation in California on September 4. Larry and Sergey open a bank account in Google's name and deposit check.
Dec-98	"PC Magazine" reports that Google "has an uncanny knack for returning extremely relevant results" and names it the search engine of choice.
Jun-99	Google's first press release announces a $25 million round from Sequoia Capital and Kleiner Perkins.
May-00	The first 10 language versions of Google.com are released targeting the Western European market from Spain up to Denmark. (New Market).
Jun-00	We forge a partnership with Yahoo! to become their default search provider. (Partnership)
Sep-00	We start offering search in Chinese, Japanese and Korean, bringing our total number of supported languages to 15. (New Market)
Oct-00	Google AdWords, the self-service ad program with keyword targeting, launches with 350 customers—revenue stream. (New Product)
Dec-00	Google Toolbar is released. It's a browser plug-in that makes it possible to search without visiting the Google homepage. (Innovation)
Feb-01	Acquires Deja.com's Usenet Discussion Service, adds search and browse features, and launches it as Google Groups. (Acquisition)
Mar-01	Google.com is available in 26 languages. (Foreign)
Jul-01	Image Search launches, offering access to 250 million images. (New Product)
Aug-01	Google opens its first international office, in Tokyo. (International)
Aug-01	Eric Schmidt becomes CEO, and Larry and Sergey are named presidents of products and technology, respectively.
Oct-09	A new partnership with Universo Online (UOL) makes Google the major search service for millions of Latin Americans. (Partnership)
Feb-02	The first Google hardware is released, the Google Search Appliance. (Related Diversification—Hardware)
Feb-02	Google releases a major overhaul for AdWords, including new cost-per-click pricing. (Innovation)
May-02	Partnership with AOL to offer Google search and sponsored links to customers using CompuServe, Netscape, and AOL.com. (Partnership)
Sep-02	Google News launches with 4000 news sources. (New Product)
Oct-02	Google opens its first Australian office in Sydney. (International)
Dec-02	Google launches Froogle to buy stuff (later called Google Product Search). (New Product)
Feb-03	Acquires Pyra Labs, the creators of Blogger. (Acquisition)
Mar-03	We announce a new content-targeted advertising service called AdSense. (New Product)
Apr-03	Acquires Applied Semantics, whose technology bolsters AdSense. (Acquisition)
Apr-03	Google launches Google Grants, an advertising program for nonprofit organizations to run ad campaigns for their cause. (New Product)
Dec-03	Google launches Google Print (later renamed Google Book Search), indexing small excerpts from searched for books. (New Product)
Jan-04	Google launches Orkut as a way to tap into the sphere of social networking. (New Product)
Mar-04	Google formalizes its enterprise unit with the hire of Dave Girouard to run the enterprise search business. (Related Diversification)
Mar-04	Google introduces Google Local (later part of Google Maps), offering business listings, maps, and directions. (New Product—Maps)
Jul-04	Acquires Picasa, a digital photography company. (Acquisition)
Aug-04	Google's Initial Public Offering of 19,605,052 shares of Class A common stock with opening price of $85 per share. (IPO)
Oct-04	Google opens an office in Dublin, Ireland. (International)
Oct-04	Google launches SMS (short message service) to send search queries to GOOGL or on a mobile device. (Related Diversification—Phone)
Oct-04	Google opens new engineering offices in Bangalore and Hyderabad, India. (International—Outsourcing)
Oct-04	Google Desktop Search is introduced so users can search for files and documents stored on their own hard drive. (New Product)
Oct-04	Acquires Keyhole, a digital mapping company whose technology will later become Google Earth. (Acquisition—Maps)
Dec-04	Google opens an R&D center in Tokyo, Japan to attract bright Asian engineers. (International—Outsourcing)
Feb-05	Google Maps goes live. (New Product—Innovation—Maps)
Mar-05	Google launches code.google.com, a new place for developer-oriented resources, including all of our APIs. (New Product)
Mar-05	Acquires Urchin, a web analytics company whose technology is used to create Google Analytics. (Acquisition)
Apr-05	Google Maps features satellite views and directions. (Innovation—Maps)
Apr-05	Google Local goes mobile, and includes SMS driving directions. (Related Diversification—Phone)

Table 4

Continued

May-05	Google releases Blogger Mobile, enabling mobile phone users to post and send photos to their blogs. (Related Diversification—Phone)
May-05	Google launches Personalized Homepage (now iGoogle) enabling users to customize their own Google homepage. (New Product)
Jun-05	Google Mobile Web Search is released, specially formulated for viewing search results on mobile phones. (Related Diversification—Phone)
Jun-05	Google launches Google Earth: a satellite imagery-based mapping service. (New Product—Innovation—Maps)
Aug-05	Google launches Google Talk, which enables Gmail users to talk or IM over the Internet for free. (New Product)
Sep-05	Google opens new R&D center in China. (International—Outsourcing)
Sep-05	Google Blog Search goes live to facilitate finding current and relevant blog postings. (New Product)
Oct-05	Google launches Google.org, a philanthropic arm of the firm, to address energy and environmental issues. (Diversification—Charity)
Oct-05	Google introduces Google Reader, a feed reader. (New Product)
Nov-05	Google releases Google Analytics, formerly Urchin, for measuring the impact of websites and marketing campaigns. (Innovation)
Nov-05	Google opens our first offices in São Paulo, Brazil and Mexico City, Mexico. (International)
Dec-05	Gmail for mobile launches in the United States. (Innovation—Phone)
Jan-06	Acquires dMarc, a digital radio advertising company. (Acquisition—Unrelated Diversification)
Jan-06	Google launches Google.cn, a local domain version of Google in China. (International—Multi-domestic Competition)
Jan-06	Google introduces Picasa in 25 more languages. (New Market)
Feb-06	Google releases Chat in Gmail, using the instant messaging tools from Google Talk. (New Product)
Feb-06	Google launches Google News for mobile launchers. (New Product—Phone)
Mar-06	Acquires Writely, a web-based word processing application that subsequently becomes the basis for Google Docs. (Acquisition)
Mar-06	Google launches Google Finance, our approach to an improved search experience for financial information. (New Product)
Apr-06	Google launches Google Calendar, complete with sharing and group features. (New Product)
Apr-06	Google releases Maps for France, Germany, Italy and Spain. (New Market)
May-06	Google releases Google Trends, a way to visualize the popularity of searches over time. (New Product)
Jun-06	Google announces Picasa Web Albums, allowing Picasa users to upload and share their photos online. (Innovation)
Jun-06	Google announces Google Checkout, a fast and easy way to pay for online purchases. (New Product)
Jun-06	Gmail, Google News, and iGoogle become available on mobile phones in eight more languages. (New Markets—Phone)
Aug-06	Google releases Apps for Your Domain, a suite of applications including Gmail and Calendar for any size organization. (New Product)
Aug-06	Google Book Search begins offering free PDF downloads of books in the public domain. (Innovation)
Oct-06	Acquires YouTube. (Acquisition)
Oct-06	Acquires JotSpot, a collaborative wiki platform, which later becomes Google Sites. (Acquisition)
Dec-06	Google releases Patent Search in the U.S., indexing more than 7 million patents dating back to 1790. (New Product)
Jan-07	Google partners with China Mobile, world's largest mobile telecom carrier, to provide mobile searches in China. (International—Partnership)
Feb-07	Gmail is opened up to everyone, no longer by invitation only. (New Market)
Feb-07	Google launches Google Apps Premier Edition, bringing cloud computing to businesses. (Innovation)
Feb-07	We introduce traffic information to Google Maps for more than 30 cities around the US. (Innovation-Maps)
Jun-07	Google partners with Salesforce.com, combining that company's on-demand CRM applications with AdWords. (Partnership)
Jul-07	Acquires Postini. (Acquisition)
Aug-07	Google launches Sky inside Google Earth, including layers for constellation information and virtual tours of galaxies. (New Product—Maps)
Sep-07	Google introduces AdSense for Mobile, giving sites for mobile browsers the ability to host same ads as on computers. (Innovation—Phone)
Sep-07	Google adds Presently, a new application for making slide presentations, to Google Docs. (New Product)
Nov-07	Google (with Open Handset Alliance) announces Android, first open platform for mobile devices. (Related Diversification—Phone)
Nov-07	Google.org announces RE < C, an initiative designed to create electricity from renewable sources. (Unrelated Diversification—Energy)
Mar-08	Acquires DoubleClick, which provides internet ad services. (Acquisition)
May-08	Google releases Google Health to the public, allowing people to manage their medical records and health information online. (New Product)
Jul-08	Google releases first downloadable iPhone app. (Related Diversification—Phone)
Sep-08	Unveils G1, the Google Phone on the Android operating system, available through T-Mobile. (Forward Vertical integration—Hardware)

Table 4

Continued

Oct-08	Google introduces Google Earth for the iPhone and iPod touch. (New Market)
Jan-09	Google launches Picasa for Mac. (New Market)
Feb-09	Google introduces Google Latitude, that lets users share their location with friends. (New Product—Maps)
Feb-09	Adding new languages enables Google Translate to accommodate 41 languages, covering 98% of Internet users. (Innovation—New Markets)

Source: Google Milestones (2009). Retrieved on March 31, 2009. http://www.google.com/corporate/history.html.

user's PC screen), Google Book Search (an ambitious plan to digitize the books from the world's greatest libraries), Google Scholar (a tool for searching academic papers), and Google Chrome, a new Internet search browser.

The company also purchased a number of other firms over the years including, Keyhole (which became Google Earth), Writely (which became Google Docs), YouTube, and Android (which went on to become the Android Operating System for Google's new phone launch called the Android in 2008).

In 2008, Google had more than $4 billion in revenues with the majority of it coming from the company's AdWords business model or click-through advertising. AdWords was one of the most revolutionary developments in the media world since television itself, said author John Battelle (2009): "AdWords was what made Google . . . Google." AdWords was what generated the ads—or "Sponsored Links," you see on a Google results page. You only have to pay for the link when someone actually clicks on the link and goes to the advertiser's web site. It was called "pay-per-click."

Strategies at Google

Google's primary corporate strategy was related diversification. Google achieved its diversification strategy through corporate entrepreneurship and innovation and acquisitions. This enabled Google to increase its offerings and decrease its competition. As the industry leader, Google used offensive strategies by constant innovation of its product lines and expansion into other industries like mobile phones, maps, blogging, news, health, etc.

Google provided internet users with the most relevant search results on as many topics as possible. This included going international to outsource and expand markets by providing its products in foreign languages. Google's business level strategy was a broad differentiation strategy, because it offered features that other search engines did not, such as translating from one language into another, while still providing the most relevant search results.

Philanthropy at Google

Philanthropy was widespread at Google. The company gave 1% of its equity and yearly profits to philanthropy. Google's five primary areas that it focused on were: (1) Google.org, which used Google's information and technology to build products and advocate for policies that address global challenges; (2) Engineering Awards and Programs that

supported the next generation of engineers and maintained strong ties with academic institutions worldwide pursuing innovative research in core areas relevant to its mission; (3) Information and Tools to Help You Change the World that were used to promote causes, raise money, and operate more efficiently; (4) Charitable Giving that supported efforts in the local communities and around the globe; and (5) Google Green Initiatives where Google gave back to the community through financing humanitarian efforts in Africa and research on alternative fuels and global warming (Google.org, 2010) (see Table 5).

Competition

Google operated in markets that changed rapidly. Google faced the possibility of new and disruptive technologies and faced formidable competition in every aspect of their business, particularly from companies that sought to connect people with information on the web. The company considered Microsoft Corporation and Yahoo! Inc. to be their primary competitors (see Table 6).

Google faced competition from other web search providers, including start-ups as well as developed companies that were enhancing or developing search technologies. Google competed with Internet advertising companies, particularly in the areas of pay-for-performance and keyword-targeted internet advertising. The company also competed with companies that sold products and services online because these companies were trying to attract users to their web sites to search for information about products and services. Google also provided a number of online products and services, including Gmail, YouTube, and Google Docs, which competed directly with new and established companies offering communication, information, and entertainment services integrated into products or media properties.

Google competed to attract and retain relationships with users, advertisers and Google Network members, and other content providers in different ways (see below, Google's 2008 Annual Report):

- *Users*. Competed to attract and retain users of their search and communication products and services. Most of the products and services Google offered to users were free, so the company did not compete on price. Instead, the company competed in this area on the basis of the relevance and usefulness of search results, features, availability, and ease of use of products and services.
- *Advertisers.* Google competed to attract and retain advertisers. Google competed in this area principally on the basis of the return on investment realized by advertisers using the company's AdWords and AdSense programs. Google also competed based on the quality of customer service, features, and ease of use of its products and services.
- *Google Network members and other content providers.* Google competed to attract and retain content providers (Google Network members, as well as other content providers for whom the company distributed or licensed content) primarily based on the size and quality of its advertiser base, and its ability to help these partners generate revenues from advertising and the terms of the agreements.

Silicon Valley

Culture and Location

Google was located in the heart of Silicon Valley, Mountain View, California. According to Randy Komisar, an entrepreneur-turned-venture capitalist at Kleiner, Perkins, Caufield, and Byers, "In Silicon Valley we have created a culture that attracts the sort of

Table 5

Google Philanthropic Initiatives

Google.org

Google.org used Google's strengths in information and technology to build products and advocate for policies that address global challenges.

Google Flu Trends—A tool that uses aggregated Google search data to estimate flu activity in near real-time for 20 countries.
Google PowerMeter—A home energy monitoring tool that gives you the information you need to use less electricity and save money.
Earth Engine—A computational platform for global-scale analysis of satellite imagery to monitor changes in key environmental indicators like forest coverage.
RE < C—An effort to develop utility-scale renewable energy at a price cheaper than that of coal.
Google Crisis Response—A team that provides updated imagery, outreach through our web properties, and engineering tools such as the Person Finder application, in the wake of natural and humanitarian crises.
All For Good—A service, developed by Google and other technology companies, that helps people find volunteer opportunities in their community and share them with their friends. All for Good provides a single search interface for volunteer activities across many major volunteering sites and organizations.

Engineering awards and programs

Google supported the next generation of engineers and maintained strong ties with academic institutions worldwide pursuing innovative research in core areas relevant to its mission.

Google Research—Awards for world-class, full-time faculty pursuing research in areas of mutual interest.
BOLD Scholarships—Diversity internships to encourage those who are historically under-represented in the technology industry to explore a new career opportunity.
Google Code University—Tutorials and sample course content so computer science students and educators can learn more about current computing technologies and paradigms.
Google PhD Fellowship Program—Recognition for outstanding graduate students doing exceptional work in computer science, related disciplines, or promising research areas.
Google RISE Awards (Roots in Science and Engineering)—Awards to promote and support science, technology, engineering, mathematics (STEM) and computer science (CS) education initiatives.
Google Scholarships—Scholarships to encourage students to excel in their studies and become active role models and leaders.
Summer of Code—Stipends to student developers to write code for various open source software projects.

Information and tools to help you change the world

Google tools were used to promote causes, raise money, and operate more efficiently.

Google for Nonprofits—Information on free Google tools for creating awareness, fundraising, and operating more efficiently.
Google Grants—In-kind online advertising for nonprofit organizations.
Apps for EDU/Nonprofits—Free communication, collaboration, and publishing tools, including email accounts, for qualifying nonprofits.
Checkout for Nonprofits—A tool to increase online donations for nonprofit organizations.
Custom Search for Nonprofits—A customized search experience for nonprofit organizations.
Sketchup for EDU—A product allowing educators to create, modify, and share 3D models.
YouTube for EDU—An educational channel for two- and four-year degree granting public and private colleges and universities.
YouTube for Nonprofits—A designated channel, premium branding, and additional free features to drive nonprofit fundraising and awareness.
YouTube Video Volunteers—A platform to connect nonprofit organizations with volunteers who can help them to create videos.
Google Earth Outreach—Resources to help nonprofits visualize their cause and tell their story in Google Earth and Maps.
Google MapMaker—A tool that allows users to contribute, share and edit map information for 174 countries and territories around the world.

Table 5

Continued

Charitable giving
Googler-led giving to support efforts in our local communities and around the globe. Corporate Giving Council—A cross-Google team that coordinates support for Googler-led partnerships on causes such as K-12 science/math/technology education and expanding access to information. Holiday gift—A $22 million donation in 2009 to a couple dozen deserving charities from around the globe in order to help organizations who have been stretched thin by increasing requests for help at a time of lower donations. Gift was in lieu of giving holiday gifts to clients and partners. Community Affairs—Investments in local communities where Google has a presence, creating opportunities for Googlers to invest their time and expertise in their communities, engage in community grant making, and build partnerships with stakeholders in the community. Google employee matching—Up to $6,000 company match for each employee's annual charitable contributions and $50 donation for every 5 hours an employee volunteers through the "Dollars for Doers" program.
Google green initiatives
Google implemented innovative and responsible environmental practices across the company to reduce its carbon footprint, to ensure efficient computing, and to help its employees be green.

Source: Philanthropy at Google. Accessed May 18, 2010, http://www.google.org/googlers.html.

people who prosper in ambiguity, innovation, and risk taking" (Harris, 2009). Other parts of the United States have also been successful at building innovative technology corridors like Boston, Massachusetts and Austin, Texas.

Silicon Valley was often called South San Francisco, but was really comprised of about 60 miles of suburbs immediately to the south of the city of San Francisco. Some of the more prominent cities and companies included (North to South) South San Francisco (Amgen and Genentech), San Mateo (YouTube), Redwood Shores (Oracle Corporation, Electronic Arts, and Sun Microsystems), Menlo Park (most venture capital firms), Palo Alto (Hewlett-Packard and Facebook), Mountain View (AOL, Intuit, RedHat, Symantec, and VeriSign), Sunnyvale (Yahoo!, Ariba, NetApp, and Advanced Micro Devices), Santa Clara (Applied Materials and Nvidia Corporation), Cupertino (Apple, Inc.), San Jose (McAfee, eBay, Adobe Systems, and Cisco Systems), and Los Gatos. Hundreds of prestigious high technology companies were located here (see Figure 2 and Table 7).

Cost of Living

Silicon Valley was one of the most expensive places to live in the United States. During the recent housing boom, the average house in the region sold for $800,000. Prices differed depending on the city. For example, during the height of the housing boom an average house in San Jose sold for $710,000. However, by 2009, the price had fallen to $475,000 or a 33% plunge. Real estate in Palo Alto held up better than other parts of Silicon Valley. The average price of a home at the housing peak was $1.2 million versus $1.1 million in early 2009. Several factors contributed to Palo Alto's resilience: (1) The city was sunny and beautiful; (2) its proximity to Stanford; (3) the limited amount of

Table 6

Yahoo! Financial Ratios 2004–08

Liquidity ratios					
Liquidity indicators	2008	2007	2006	2005	2004
Quick ratio	1.97	1.12	1.7	1.79	1.1
Current ratio	2.78	1.41	2.54	2.86	3.46
Operating cash flow ratio	.007	.302	.638	.919	.583
Debt to equity	.217	283	.257	.265	.295
Profitability ratios					
Profitability indicators					
ROA	3.27	5.56	6.73	18.95	11.08
ROE	4.07	7.06	8.48	24.21	14.61
ROI	.12	7.15	9.79	12.9	10.59
EBITDA margin	12.29	21.64	25.49	50.46	37.24
Revenue per employee	528589	487362	563656	536497	469046
Net profit margin after tax	(2.31)	7.35	9.96	36.1	20.9
Asset management ratios					
Asset management					
Total asset turnover	.55	.59	.58	.53	.47
Receivables turnover	6.79	7.02	7.78	8.75	9.35
Accounts payable turnover	43.83	48.86	71.63	88.74	89.01

housing available (no space for new homes); (4) its proximity to all of the top high-tech companies in the region (Google and Apple were 15 minutes away), and (5) the prestigious K-12 school system. Steve Jobs, CEO of Apple Inc.; Steve Young, former star quarterback of the San Francisco 49ers; and Page all lived in Palo Alto.

The average per capita personal income in the United States was $39,751; however, in Silicon Valley salaries were 30% above the average. While this may sound encouraging, the cost of living in Silicon Valley was significantly higher than most places in the United States. For example, if you made $100,000 a year in Dallas, Texas and took a job at Google and moved to Palo Alto you would have to make a salary of $252,226 to afford the same lifestyle. The high cost of living was a barrier that the company had to overcome when recruiting employees.

Education and Employees

There were a number of universities and colleges in the San Francisco area; however, there were only two world class research universities: Stanford University and the University of California at Berkeley. Some of the brightest minds from all over the world came to Silicon Valley to work and/or attend these schools. San Jose State University, which was also located in Silicon Valley, was also a major feeder of engineers to high tech companies in the region. Furthermore, several of these engineers went on to become

Figure 2

Map of Silicon Valley

Source: Silicon Valley Cities and Counties, Retrieved May 19, 2009, http://www.siliconvalleyonline.org/cities.html

leaders in their respective companies (e.g., Gordon Moore, founder of Intel Corporation in 1968).

The region was a breeding ground for some of the brightest minds in the world. The area had a forward looking energy. People were more entrepreneurial because they had witnessed great wealth creation. According to Bill Powar, one of the founders of VeriSign, "I worked at Visa for 30 years, but when the internet was created we saw an opportunity to create the first internet security system that is still used today." Powar made millions on the initial public offering and retired.

Table 7

Leading Public Companies in Silicon Valley

Company	Symbol
Agilent Technologies, Inc.	A
Apple	AAPL
ACTEL	ACTL
Adobe Systems	ADBE
ADAPTEC	ADPT
AFFYMETRIX	AFFX
Align Technology	ALGN
Altera Corp	ALTR
Applied Materials	AMAT
Applied Micro	AMCC
Advanced Micro Devices	AMD
Applied Signal Tech	APSG
ARIBA	ARBA
Aruba Networks	ARUN
Atheros Comms	ATHR
Bigband Networks	BBND
BROCADE COMM	BRCD
Cadence DESIGN	CDNS
Chordiant Software	CHRD
Credence Systems Corp	CMOS
Coherent	COHR
CISCO Systems	CSCO
CYPRESS Semiconductor	CY
Cybersource	CYBS
Data Domain	DDUP
DSP Group	DSPG
EBAY	EBAY
Electrs For Imaging	EFII
Echelon	ELON
Equinix	EQIX
Electronic Arts	ERTS
Extreme Networks	EXTR
Foundry Networks, Inc.	FDRY
FINISAR	FNSR
Gilead Sciences	GILD
Google-A	GOOG
Granite Construction, Inc.	GVA
Harmonic	HLIT
Hewlett-Packard Company	HPQ
Integr Device Tech	IDTI
Informatica	INFA
Intel	INTC
INTUIT	INTU
IPASS	IPAS
INTERSIL-A	ISIL
Intuitive Surgical	ISRG
Integr Silicon Sol	ISSI
INTEVAC	IVAC
Interwoven, Inc.	IWOV
Sun Microsystems	JAVA
JDS Uniphase	JDSU
Juniper Networks	JNPR
KLA-Tencor	KLAC
Linear Technology	LLTC
LAM Research Corp	LRCX

Table 7

Continued

Company	Symbol
LSI Corporation	LSI
MICREL	MCRL
MCAFEE, Inc.	MFE
Monolithic Power	MPWR
Macrovision SOLNS	MVSN
Nanometrics Inc	NANO
NETFLIX	NFLX
NEKTAR Therapeutics	NKTR
National Semiconductor	NSM
NETAPP	NTAP
NETGEAR	NTGR
NVIDIA	NVDA
Novellus Systems	NVLS
OMNICELL	OMCL
OPLINK COMMS	OPLK
Openwave Systems	OPWV
Oracle	ORCL
Omnivision Tech	OVTI
Palm	PALM
Verifone Holdings, Inc.	PAY
PDL Biopharma	PDLI
PMC-SIERRA	PMCS
Power Integrations	POWI
Pericom Semicondctr	PSEM
Quantum Corporation	QTM
Rackable Systems	RACK
Robert Half International, Inc.	RHI
RAMBUS	RMBS
Silicon Graphics, Inc.	SGIC
Silicon Image	SIMG
SYMYX Technologies	SMMX
Sandisk	SNDK
Synopsys	SNPS
Synnex Corporation	SNX
Sunpower-A	SPWR
Silicon Storge Tech	SSTI
SymanteC	SYMC
Symmetricom	SYMM
Synaptics	SYNA
Tivo	TIVO
Trident Microsystem	TRID
Trimble Navigation	TRMB
Tessera Tech	TSRA
Varian Medical Systems, Inc.	VAR
Varian	VARI
VMWARE, Inc.	VMW
Verisign	VRSN
Xilinx	XLNX
Yahoo	YHOO

Access to Capital and Legal Infrastructure

Money was another key variable for the success of Silicon Valley. Sand Hill Road in Menlo Park was famous for the large number of venture capital firms in a very small area. During the dot.com boom, real estate there was the most expensive in the world. A small number of employees worked in very small office buildings that were often hidden by trees and bushes. At Kleiner, Perkins, Caufield, and Byers, one of the premier venture capital firms in the world, bottlebrush trees hid the name of the firm. Other prestigious venture capital firms there were Sequoia Capital, Interwest Partners, Kohlberg Kravis Roberts, Draper Fisher Jurveston, etc. This proximity to venture capital gave Google a competitive advantage since venture capital firms liked to be close to their investments and sit on their boards.

As Silicon Valley grew, the number of law firms specializing in funding, litigation, resolving disputes, high tech companies, and intellectually property grew enormously. Many of these firms were located in San Francisco and Palo Alto.

Corporate Entrepreneurship and Innovation

Corporate entrepreneurship (Guth & Ginsberg, 1990) is a term used to describe entrepreneurial behavior inside established mid-sized and large organizations. Corporate entrepreneurship can be formal or informal activities aimed at creating new businesses in established companies through product and process innovations and market developments (Zahra, 1991). Innovation is a key ingredient of corporate entrepreneurship where one can take an idea or invention and create something new of value. For example, an innovation of the toothbrush is the electric toothbrush.

Rule and Irwin (1988) stated that companies established a culture of innovation through: the formation of teams and task forces; recruitment of new staff with new ideas; application of strategic plans that focused on achieving innovation; and the establishment of internal research and development programs that were likely to see tangible results.

The roots of corporate entrepreneurship proliferated at 3M Corporation. 3M was the first company that introduced "organizational slack" as a key factor enabling their engineers and scientists to spend 15% of their time on projects of their own design. As a result of this many inventions came out of 3M (e.g., Post it Notes and Scotch Tape).

Corporate Entrepreneurship and Innovation at Google

Google's mission was not based on money alone; rather it was to improve the world. The heart and soul of Google was based on entrepreneurship and innovation. The philosophy of the company started at Stanford University. Stanford had a program dedicated to the formation of technology oriented ventures called the STVP or the Stanford Technology Ventures Program in the School of Engineering. The school had a rich 100-year history of students and faculty that created fledging organizations like Federal Telegraph and Telephone, Hewlett-Packard, Varian Associates, SRI International, Yahoo!, Cisco, Sun Microsystems, Silicon Graphics, Varian Medical Systems, and VMware.

Stanford encouraged their professors to create companies based on their research. According to Dr. Thomas Lee, the founder of Stanford's Integrated Circuits Laboratory, "Entrepreneurship is built into the DNA of Stanford." When Lee arrived, he said that colleagues told him that he would have to do a startup. He said there was a kind of peer

pressure on campus to start a business. The President, John L. Hennessey, had prospered as an entrepreneur in MIPS Computer Systems (now MIPS Technologies) and Silicon Graphics (Harris, 2009). Stanford also encouraged their professors to take equity stakes in companies. This culture fostered entrepreneurial ventures throughout the region. In the 2009 student business plan competition there were 235 entries, double the amount during the dot.com boom.

Google's management model was similar to other high-tech companies like Microsoft, Apple, and Cisco. Google bought many of the buildings around its original office. The make-up, location, and culture of the company were similar to that of a college or university. It was not uncommon to see many bicycles around the campus traveling from building to building along with people playing volleyball outdoors.

According to current CEO Eric Schmidt (2009), "I looked at Google as an extension of graduate school; similar kinds of people, similar kinds of crazy behavior, but people who were incredibly smart and who were highly motivated and had a sense of change, a sense of optimism. It was a culture of people who felt that they could build things; they could actually accomplish what they wanted and ultimately people stay in companies because they can achieve something."

Brin and Page created a company that had some of the brightest minds in the world. Similar to a top flight university, they hired the brightest minds, worked in small teams, received feedback, and their mission was to improve the world. The culture of Google had similar values as academia in the sense that everything was questioned. Ideas were critiqued by your peers not just your managers. At Google, position and hierarchy seldom won an argument, and the founders wanted to keep it that way (Hamel & Breen, 2007).

Another factor that contributed to the success of Google was their flat, open organizational structure. Typical corporate models had many layers of management and strategy was driven top down. However, at Google, the company was highly democratic and employees were encouraged to question anyone. Strategy tended to come from bottom up. Company President, Eric Schmidt, stated that he talked with many employees every day about their various projects. The culture and structure of Google initiated from Brin and Page's attitude, "We do not like authority and we do not like being told what to do." Brin and Page understood that breakthroughs come from questioning assumptions and smashing paradigms (Hamel & Breen, 2007).

In order to increase the effectiveness of communication, the company developed an intranet, called "MOMA," or "Message Oriented Middleware Application." MOMA was a Web page and threaded conversation for each of the company's several hundred internal projects, making it easy for teams to communicate their progress, garner feedback, and solicit help. The company also created a program called Snippets, a site where all Google engineers could post a summary of their activities. Any Googler could search the Snippets list to locate individuals working on similar projects, or to simply stay abreast of what was happening (Hamel & Breen, 2007).

Google also had a policy of giving outsized rewards to people who came up with outsized ideas, a team-focused approach to product development, and a corporate credo that challenged every employee to put the user first (Hamel & Breen, 2007).

Support From Top Management

Google sought out the best and brightest from all over the world. Google was committed to having one of the most open and entrepreneurial environments in the world.

Figure 3

Example of an Employee's Desk at Google

Evidence of this could be seen in a recent study of MBA graduates who were interviewed about which company they wanted to work for and Google was number one, where 20% of all MBA graduates said they wanted to work for Google after graduation (CNNMoney.com, 2009).

Corporate Culture and Employees

The most critical factor in stimulating entrepreneurship within Google was the culture. Keys to success included forming an innovative and loose structure with quality employees. It was also essential to reward entrepreneurship and innovation (Figure 3).

Google's hiring process was based upon the belief of Brin and Page that A-level talent wanted to work with A-level talent and B-level talent tended to hire B-level talent or lower. This can ruin an organization. As a result, Google's hiring process could be painful to applicants. Interviews often extended several weeks and potential employees were often given scientists' Mensa-level problems to solve on the spot. Decisions on candidates were made by veteran associates and executives. It was an admittedly brutal process, but it weeded out anyone who was merely average (Hamel & Breen, 2007).

Brin and Page tried to keep the layers of management to a minimum. They also tried to keep the communication channels narrow so people could act quickly. They disliked taking orders from people and hated being managed. According to Brin and Page, "Our management philosophy amplified that quality employees who are motivated do not need to be managed." Similar to academia, Google gave their employees a lot of freedom.

Google's web site stated that its philosophy was, "Never Settle for the Best." Google's persistence, along with enormous amounts of energy and ambition brought about its success. The company's website listed "Ten Things Google Has Found to be True":

1. Focus on the user and all else will follow.
2. It is best to do one thing really, really well.

3. Fast is better than slow.
4. Democracy on the web works.
5. You do not need to be at your desk to need an answer.
6. You can make money without doing evil.
7. There is always more information out there.
8. The need for information crosses all borders.
9. You can be serious without a suit.
10. Great is not good enough.

(Source: http://www.google.com/corporate/tenthings.html, Accessed May 17, 2009).

Page and Brin placed heavy emphasis on providing a relaxed and fun work environment. They believed that employees should create their own hours and work them as they felt they were most productive. Google's staff worked 80% of their hours on regular work and the other 20% on noncore projects (organizational slack). The company estimated that it developed 10–12 new service offerings every quarter. According to Marisa Mayer (2009), Vice President of Search Product and User Experience and the first female engineer hired at Google, "The 20% was one of the keys to our success. It gave the engineers the ability to work on whatever they were passionate about. You never know when you are going to create great products. That was why we gave them the opportunity to be creative. That was how Google News and Gmail were born. You have to try a number of different things. Certainly we are in the business of searching and advertising, but basically we are in the business of innovation. Our innovation strategy has been threefold: (1) allow small teams to work together, (2) allow ideas to come from everywhere, and (3) give employees 20% free time to work on any projects they have a passion for. These have all contributed to our success."

Google prided itself on its open, social environment but many people felt that Google had turned increasingly "corporate." The environment in which engineers were able to create their own products and services was decreasing since it had to go through a full review process that could take months before the product was released to market. Although engineers enjoyed being creative, they might as well create a product/service that they can monetize on their own.

Despite these factors, Google had problems related to the rapid growth of the company. As of May 2009, Google had over 20,000 employees. This had a negative effect on the company's ability to maintain an entrepreneurial culture. The most often heard complaint was that the employees' skills were not being utilized. As one Ivy League graduate stated, "I have an Ivy League education and I was hired to shuffle papers in Human Resources. I quit after six months."

Small, Self-Managed Teams

The majority of Google's employees worked in teams of three engineers when working on product development. Big products like Gmail could have 30 or more people with three to four people on a team. Each team had a specific assignment (e.g., building spam filters or improving the forwarding feature). Each team had a leader; however, leaders rotated on teams. Engineers often worked on more than one project and were free to switch teams. According to Shona Brown, Google's VP for operations, "If at all possible, we want people to commit to things, rather than be assigned to things" (Hamel & Breen, 2007).

Reward Structure

Google was called a playground on steroids where there were 18 cafes staffed with seven executive chefs. Google was known for offering its staff incredible free perks: volleyball court, gyms, gourmet lunches, and dinners (although leaving after eating dinner was frowned upon), Ben & Jerry's Ice Cream, yoga classes, employees could bring their dogs to work, onsite masseuse, office physician, laundry service, travel back and forth to work, etc. This made Google one of the most sought-after companies to work for. Google offered great perks to their employees because they wanted the brightest and most qualified employees focusing their attention on their jobs all of the time.

Google employees earned a base salary that was on par with, or slightly lower than, the industry average; however, the standard deviation around that average was higher at Google than it was at most other companies. At Google, annual bonuses amounted to 30% to 60% of base salary, but the financial upside could be much, much bigger for those that came up with a profit-pumping idea (Hamel & Breen, 2007).

Google understood that entrepreneurs were motivated by money. Therefore in 2004, they created the "Founders Awards." These were restricted stock options (sometimes worth millions) that were given quarterly to teams that came up with the best ideas to increase the profitability of the company. The largest such award to date went to a team led by Eric Veach. His team created a new advertising algorithm, dubbed "SmartAds" and won $10 million (Hamel & Breen, 2007).

Decision Point

As Brin and Page sat through the concert they thought, "Look at Green Day. These guys have been successful for years and they still ROCK!! If Green Day can do it, so can Google." But Brin and Page realized that in order to accomplish their goals they would need to figure out how to solve their corporate problems. Their primary problem was how to maintain their culture of corporate entrepreneurship and innovation in the face of flat net profits from 2007 to 2008. Additionally, a multitude of other issues faced the company: (1) a decrease in advertising revenue (2) the firing of several employees for the first time in the company's history and the elimination of products that made no money, and (3) the loss of employees for a variety of reasons (e.g., lack of mentoring and formal career planning, too much bureaucracy, low pay and benefits, high cost of living in the area, desire to start their own business, etc.). If Google wanted to continue its main strategy of growth through innovation, it would have to find a way to recruit and retain the best employees.

Google had to figure out how to maintain its culture of corporate entrepreneurship and innovation in an era of stagnant profitability. Furthermore, the company had grown to over 20,000 employees. How could it maintain its culture with so large an organization?

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Note to Instructors for Corporate Entrepreneurship and Innovation in Silicon Valley: The Case of Google, Inc.

Introduction

The case examined the current situation facing Google during the heart of the financial crisis in May 2009. The economy was in its worst condition since the Great Depression. The S&P 500 index dropped 57% at its low point. Google was not immune to the problems that occurred in the economy. Its net income was flat from 2007–08. The company laid off employees and there were problems with existing employees.

The main problem that Google faced was how to maintain their culture of corporate entrepreneurship and innovation in the face of an economic meltdown.

The case began with a look at the current global economy. This was vital to understanding the situation that Google faced. The case then moved into the backgrounds of the founders Sergey Brin and Larry Page. This was followed by the chronological growth of Google, the strategies the firm used to grow, and the competition that the firm faced. The case also looked at Google's philanthropic initiatives and keys to success.

Financial statements were provided so students could perform financial ratio analysis and evaluate the company's financial disposition. Students were also required to make recommendations on what Google should do in the future based on the financial and strategic information in the case.

The case will be appealing to students due to the youth of the founders, culture of the firm, and the many products that the students use from Google.

Key Issues and Discussion Points

The case gives students the ability to see that they have the ability to create a new business even if they are in school. The case also serves as a benchmark for students to follow if they choose to create their own technology company. The case requires students to evaluate both the strategic and financial aspects of Google during one of the worst economic environments since the Great Depression. The following questions can be used to stimulate discussion.

Questions

1. What are the major problems facing Google in 2009?
2. Given the economic environment in 2009 as described in the case, what implications, opportunities and threats does this context pose for Google currently? What about in 2012?
3. Based on the content of the case, what was the primary Strategic Inflection Point for Google? Why did you select this point?
4. A. Calculate the key profitability, liquidity, and asset management ratios for Google over the past five-year period and compare them with Yahoo! Based on the financial ratios what advantages does Google have over Yahoo!? What vulnerabilities does Google have versus Yahoo!?
   B. Is Google financially healthy? Why or why not?
5. What were Google's keys to success?
6. What recommendations would you make to Google? Why?

Potential Audience and Uses

Students will find the case interesting due to the nature of the company. Students will have used several of Google's products (e.g., search engine, Google Earth, YouTube, Gmail, etc.) in some form almost every day.

The case can be used in undergraduate and graduate entrepreneurship and strategic management courses. The estimated time to read and answer the questions for the case is between 6 and 8 hours. Since the case covers material on financial statements, before teaching the case, students should be familiar with analyzing a company's financial statements. Learning objectives in the case include:

- to evaluate the strategies that Google used to grow the company from a small entrepreneurial startup to a company that went public;
- to perform financial analysis on the company and evaluate the firm's financial ratios and its overall financial disposition;
- to evaluate and learn Google's keys to success;
- to make recommendations to increase corporate entrepreneurship and innovation.

Suggested Teaching Approach

The heart of this case is the ability to solve the critical problem of increasing corporate entrepreneurship and innovation within a depressed economic environment. A variety of other issues that contributed to Google's troubles were facing the company.

It is recommended that the instructor take the students on a journey. What are the problems facing Google in 2009? How is this related to the current financial crisis facing the nation as discussed in the case (see Brandon, 2009; Buffett, 2008; Christie, 2009)? The instructor should then move on to examine the threats and opportunities that are available to Google in the face of the crisis. The instructor should ask the students what is the strategic inflection point for Google in the case. Once this is examined, students should perform a financial ratio analysis of the company to determine the financial health of Google. The case then outlines the various strategies that the firm has used to achieve success.

A review of corporate entrepreneurship and innovation (Guth & Ginsberg, 1990; Morris, Kuratko, & Covin, 2008; Zahra, 1991, 2005) should take place. The instructor should discuss the keys to success with the students. Hamel and Breen (2007) outline the methodology that Google used in the past in order to achieve success through corporate entrepreneurship and innovation.

Schmidt (2009) describes the success of Google quite well. There are excerpts of his interview located on YouTube.com (see http://www.youtube.com/watch?v=u02h9LYYmuc). Instructors can use this interview after discussing the recommendations to Google.

Outside or Supplementary Information

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Role of the Author

The case was initiated by the author's desire to learn more about Google and their model of success through corporate entrepreneurship and innovation. The author has family from Silicon Valley and has visited the area approximately 20 times over the past 8 years. The author married a woman from Palo Alto, who has a stepson that works in Silicon Valley whose best friend used to work at Google. The author has visited most of the public high tech companies located in Silicon Valley and interviewed several people from these companies about the culture and various companies in the area, including Google.

During visits to Silicon Valley the author would talk to a variety of people. Some of them were included in quotes in the case. The author would especially like to thank the late Diane Lee, former VP Product Development and Warren Belfour (both from Oracle) for information on this case. Over the past eight years, the author has learned a great deal about the culture from talking with people from the area and getting a good feel for the excitement and forward thinking attitude of Silicon Valley. Secondary research was collected from company reports, periodicals, newspapers, magazines, and industry reports.