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AI and the Legacy of Tim Cook

Time Period: Beginning of 2013

Scenario Setup

Tim Cook sips coffee in his office 6am while reading various innovation reports from Apple staff. He pauses to check the date, it is April 5th, 2013.

It has been exactly a year and a half since Steve's passing, and my position in the company feels smaller than it did when he filled it. Reading these reports every morning, I ask myself: how can I paint my mark on Apple following the legacy of Jobs? In my time with the company I have kept costs under control and improved the company's design and marketing practices to bring in huge profits. Although I have made considerable changes, my place in Apple's history is not one of renowned innovation. I aspire to head the next great project for Apple, but the path that is the right fit for the company isn't entirely clear.

He continues to scroll through a sea of report titles, pausing at a report labeled "Driverless Tech: The Future of the Auto Industry"; one of many on the subject of AI-led driving.

Apple's interest in self driving cars dates to before the creation of the original iPhone[1]. In 2008, the company chose to follow a different route, but now as we reach the frontier for AI

[1] Miller, et al. "Apple Reports First Drop in the Number of Self-Driving Cars on the Road in California." 9to5Mac, 24 Apr. 2019, 9to5mac.com/2019/04/24/apple-self-driving-car-california/.

technology in the U.S. this idea has become not only achievable but marketable. Self-driving cars are the future of the automobile industry; not just for personal use, but for rideshare companies like Lyft, Uber, and transportation companies as well.

Our company has the software and coding talent that traditional car companies do not, but we lack the manufacturing knowledge and resources to mass produce vehicles on our own. As Apple's CEO, I believe driverless technology could be Apple's next great investment. Additionally, this technology will allow us to introduce another product into our customers everyday lives, fitting into our mission of "Apple Everything".

While this venture may be fitting for Apple's business model, I question whether Apple's unique features will be able to compare to the advancements already made by competing companies. Regardless, I must be able to develop a plan of action that puts AI at the forefront of Apple's products if we are to keep up with future advancements personal technology. Could this be the next iPod or iPhone for our company? Or an opportunity even greater than that?

Company History

Apple has brought innovation to the tech industry since our creation. The company was founded in 1976 by Steve Jobs and Steve Wozniak, both college dropouts. The pair started developing Apple in their late 20's and began their partnership by building several hundred "computer boxes". Jobs and Wozniak successfully sold 50 of their first computer model to a local retailer, which they garnered the funding for by selling a van and two calculators. 50 Apple I computers sold in town quickly became 200 in San Francisco. Apple was a growing business, and Jobs wanted to grow exponentially[2].

In 1977, Wozniak began working on the Apple II computer[3]. Jobs consulted Mike Markkula, a retired tech professional, to grow the business. Markkula believed in Apple and bought a third of the company for $250,000. Jobs, with the help of Markkula, created a business plan, hired Mike Scott to be president, and pushed Apple to be a company with a brand and a vision. By June 1977 Apple II was in retail stores, and Apple had reached $1 million in sales.

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[2] Lewis, Scott, et al. "Apple Inc." International Directory of Company Histories, edited by Derek Jacques and Paula Kepos, vol. 132, St. James Press, 2012, pp. 31-36. Gale Virtual Reference Library, http://link.galegroup.com/apps/doc/CX4013300015/GVRL?u=euge94201&sid=GVRL&xid=d0184bb2. Accessed 30 Apr. 2019.

[3] Richardson, Angelique. "Apple Computer, Inc." *Apple Computers: This Month in Business History (Business Reference Services, Library of Congress)*, www.loc.gov/rr/business/businesshistory/April/apple.html.

In the days of the Apple II computer, information was stored on cassette tapes. Apple's first innovation was adding a disk drive to Apple II computers. This allowed consumers to develop software on their computers. By 1978 Apple was one of the fastest growing US companies, and had solidified themselves as consumer-friendly computer company. In 1979 Apple released the Apple II+, the Silentype printer, and VisiCalc spreadsheets. Apple successfully sold 35,000 computers in 1979 which was a growth of 400% when compared to 1978 sales.

Following their success in the late 1970's, Apple went public. On December 1980, Apple offered 4.6 million shares at $22 a share. These shares sold out within minutes prompting Apple to hold a second offering of 2.6 million shares. Just three months prior, however, Apple released the Apple III, marking the company's first major failure. The Apple III was not tested enough, and many units were defective, requiring Apple to halt production. The trouble of Apple III was a catalyst to company restructuring, and by 1983 Apple was the first company to sell $1 billion in personal computers.

Apple started truly reinventing what a home computer was by introducing an early version of the computer "mouse", and the Macintosh in 1984. Computers previously had been intimidating, and Jobs provided a solution by building a "people's computer". Macintosh sale began extremely high; however, as the product matured sales began to flatline. In 1985, Jobs left the company due to executive disagreements, and Apple began to misstep.

Apple grew for a couple years after Jobs left, but by 1990 Apple was no longer an industry giant. This was mainly a result of strong competition within the tech industry, and lawsuits. From 1990 to 1993, Apple tried to boost profit and beat competition by introducing cheaper computers to the market. In 1993, John Sculley, the CEO, was replaced by Michael Spindler. Spindler, in 1996, was then replaced by Gil Amelio. By 1996, Apple's share price had dropped to $14, and Apple's market share had fallen to less than 4%. In 1997, Amelio was removed as CEO, and Jobs replaced him as an interim CEO. Jobs had spent the last couple years creating a company called NeXT Software. Apple bought NeXT Software because they needed an operating system. At that time, Jobs had a vision for Apple.

1997 began by Jobs removing 19 products from Apple's product line, and he pushed the company to focus only on desktop and portable computers. Jobs in 1988 unveiled the iMac, a computer which was sleek, affordable, and functional. Jobs' reorganization of Apple cut their costs, and allowed them to be profitable once again. By 1999 Apple's stock price had risen to $99 per share, and Apple was a major player in the tech industry once again.

In 2001, Apple changed the tech industry by introducing the iPod. This device featured large amounts of storage, portable music playing and revolutionized the music industry. The iPod was a major success for the company and cemented Apple's role as an innovator for consumer electronics. From 2001 to 2005, Apple tripled their sales from $5.3 billion to $13.9 billion. Furthermore, iPods had a 75% market share in the portable/digital audio player market. In 2001, Apple was able to open their first retail store in Virginia, and by 2005 Apple had opened 125 retail stores worldwide.

In 2007, Apple revolutionized the phone industry by releasing the iPhone. Within six months of releasing the iPhone, Apple had sold their millionth product. In 2010, Apple released the iPad which became the leader in the tablet market place. Unfortunately, Apple's success was stifled when Jobs died of pancreatic cancer in 2011. I began my tenure as CEO that same year. Since then I have strategically developed the company. I advanced Apple computers, phone, TV, tablets, watches, and operating system (OS) technologies. Apple's history is one of innovation, leading the industry, and entrepreneurship. I believe that artificial intelligence has the potential to grow Apple like the Macintosh and iPod did.

Apple Everything

Since Apple launched the first Macintosh computer, Jobs began a mission to deliver Apple products in every facet of daily life. Starting with the personal computer, moving to the world's first smartphone and eventually to Apple TVs and Watches. Apple wants to combine both necessity and luxury by delivering premium products for every facet of our consumer's daily lives.

Customers who buy all of the products Apple offers can leverage the cross-tech compatibility of those devices. Apple now offers the streaming service Apple Music to compete against companies like Pandora and Spotify. The future for "Apple Everything" looks to capitalize on new breakthroughs in personal technology. As more companies develop smart homes, smart fridges, and other smart devices, Apple may want to create its own version to maintain the idea of Apple Everything. This notion extends to smart cars as well since our competitors, Google and Tesla, have begun developing self-driving technology.

Apple's Opportunities

Although Apple is one of the most well-known companies in the world, we must continually innovate to satisfy our customer base and stay ahead of the competition. Apple must find new opportunities and leverage its strengths to overcome any threats we may face in coming years.

Exhibit A: SWOT Analysis

SWOT Analysis: Apple	
Strengths	Weaknesses
Loyal Customer Base Brand Recognition High Profit Margins Incompatibility Large Cash Reserves	Incompatibility Dependence on Low Variety of Products Lack of Promotion
Opportunities	Threats
Apple Car Artificial Intelligence Blockchain	Counterfeit Apple Products Increasing Competition Lawsuits Rising Costs

Apple's opportunities mainly relate to the future of technology and can be broken into three main fields[4].

Looking ahead, Apple should invest in research and develop new technologies, or synergize old ones, in three key areas:

1.) artificial intelligence
2.) blockchain technology
3.) autonomous driving

Artificial intelligence already plays a key role in Apple's products but can be further developed. Siri is one of the oldest and most recognized artificial intelligence programs that is widely distributed. While Siri was the first to market, Google and Amazon have leveraged their massive amounts of consumer data to build better artificial intelligence algorithms. This represents a threat to the viability of Siri, but also an opportunity for Apple to further invest in artificial intelligence and create the innovative products which came to define our company.

Blockchain technology is relatively new and may not appear to apply to any of Apple's current products but could break ground on new products and technological trends. Blockchain technology revolutionized the way users can trust one another through the internet and is proving to change the financial industry[5]. The technology has had major impacts in cybersecurity. This field could be attractive to Apple; as the future heads towards more devices, security will reign supreme and investing in a new platform to discover potential security benefits is a valuable opportunity.

Autonomous driving looks to change the way people travel and the urban centers they inhabit. Researchers suggest that by 2050, deaths due to traffic accidents could fall 90% due to the widespread implementation of self-driving cars. Because self-driving cars would allow passengers to read, sleep, or relax during commutes, longer commutes could become acceptable; the urban landscape could shift towards more urban sprawl and longer commutes. For Apple, this indicates a market need in the future that could sustain Apple's competitive edge for decades.

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[4]Smithson, Nathaniel. "Apple Inc. SWOT Analysis & Recommendations." *Panmore Institute*, 14 Feb. 2019, panmore.com/apple-inc-swot-analysis-recommendations.

[5] Tung, Liam. "Apple Says Artificial Intelligence and Machine Learning 'Critical Area' as It Promotes AI Chief." *ZDNet*, ZDNet, 21 Jan. 2019,

Apple's competitors, Google and Tesla, have invested in self-driving projects, signaling the opportunity for Apple to enter the market. Apple can implement its own Mac OS into its self-driving cars to maintain the Apple brand and continue the strategy of "Apple Everything" which has already brought success. Like the iPhone before it, an Apple Car could constitute the break into a new industry filled with potential profits. Furthermore, Apple can leverage its $187.05 billion brand[6] to establish a new luxury car that rivals Tesla, while utilizing cross-product compatibility with all other Apple devices.

Apple's Competitive Advantage

Exhibit B: VRIO Analysis

VRIO MODEL	
Valuable	Apple creates many valued products and is one of the most valuable companies in the world
Rare	By finding a niche market with luxury electronic technologies, Apple is one of the few companies to offer its type of product
Costly to Imitate	It is costly for competitors to imitate Apple products, and Apple has spent year developing its retail base, so it would take large investments over main years for competitors to properly imitate
Organized to Capture Value	Apple has strong incentives, through bonuses and advancement opportunities, which allow it to leverage its ability to innovate through employees

Apple utilizes a meta-scarcity by transforming its brand into a luxury good which indicates social standing around the world. The data backs us up; although Apple only retains less than 20% of

[6]https://www-statista-com.libproxy.uoregon.edu/statistics/326052/apple-brand-value/

the global smartphone market, we account for 87% of the market's profits, indicating high margins compared to our competitors. Apple's formula for success relies on 5 factors which differentiate Apple as a luxury brand from the likes of Samsung, Google, or Microsoft[7]:

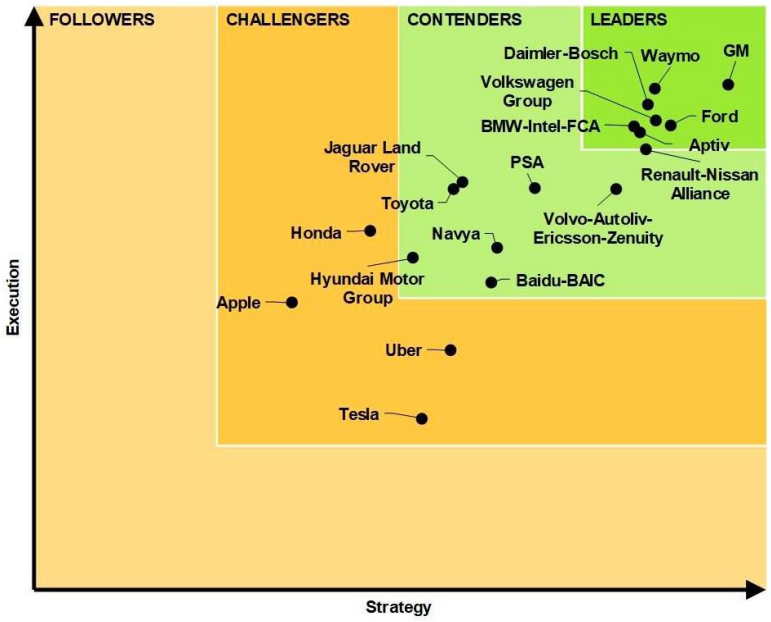
1. An Iconic Founder
    - Steve Jobs is hailed as a genius of our time and his death was mourned across the world. His death immortalized his figure and Apple's brand burned brighter and has penetrated further as consumers still hold onto the idealized vision of Steve Jobs in Apple
2. Artisanship
    - Apple's simple designs embody luxury by creating sleek appearances and easy to use products.
3. Vertical Integration
    - The creation of the Apple Store cemented Apple as a luxury brand by imitating other luxury brands with certified stores like Rolex, Louis Vuitton, and Gucci
4. Global
    - Luxury products fail unless we can infiltrate the global market since there are a limited number of luxury good buyers within any country. Apple has breached national boundaries and become one of the most well-known brands across the world.
5. Price Premium
    - Apple charges a high price premium for its goods, and consumers are willing to pay that price premium.

By transforming Apple from an electronics producer to a massive firm that emanates luxury, Apple has created a variety of valuable products that meet market demand. None of Apple's competitors have attempted, or been able to recreate the image of a luxurious technology brand and Apple has a dominant market share for these products. Apple has spent years creating its brand and developing both the technology and infrastructure through Apple stores. The investment in large fixed costs (*Refer to Exhibit A2)* by Apple over a decade have made it hard for competitors to imitate Apple's strategy.

Competitive Rivalry

Exhibit E: Competition Map for AI-led Driving

[7] Galloway, Scott. *The Four*. Penguin USA, 2018.



Tesla

Currently, Tesla is not a direct competitor of Apple. But if Apple chooses to enter the autonomous vehicle market, Tesla is a formidable competitor which can quickly and consistently innovate in the automotive industry. Tesla revolutionized the automotive industry by introducing luxury electric vehicles and already offers one of the most advanced driver assistance systems in the market.

Tesla's challenges lie within its logistical capabilities. The breadth of innovative projects Elon Musk, CEO of Tesla, currently handles contributes to Tesla's problems concerning flexibility, operational effectiveness, and liquidity. Apple acquiring Tesla could be one possibility which leverages Tesla's automotive expertise and Apple's operational capabilities.

Tesla: SWOT Analysis

Strengths	**Weaknesses**
● Strong brand reputation ● High level of innovation ● Advanced driving assistance capabilities	● Operational capabilities lead to delays in car deliveries ● Lack of car deliveries in turn leads to a cash deficit

● Talented workforce ● High demand	● Large amount of debt
Opportunities	**Threats**
● Diversify product portfolio ● Strategic alliance with other firms ● License products ● Develop new giga-factories	● Growing competition from car manufacturers and technology companies alike ● Funding new production to sustain high levels of demand without stocking-out

Ford

Ford Motor Company is one of the world's largest car manufacturers with a global market share of 6%, and a domestic market share of 20%. Today, Ford has begun to pivot from a strict car and truck manufacturer to a more diverse portfolio of activities. Ford currently has a blueprint with three stages for the future of its products and services:

1. In the near-term, Ford is looking to increase automotive capabilities of its vehicles including blind-spot assistance and lane-keeping capabilities.
2. In the mid-term, Ford expects to play an integral role in developing and providing autonomous vehicles that still allow some driver control.
3. In the long-term, Ford imagines a new transportation model revolving around smart cars and infrastructure which will revolutionize the transportation industry.

As of now, Ford has only begun investment and development of autonomous vehicle technology. Ford could prove to be a large competitor if Apple chooses to enter the self-driving car industry because it already owns car manufacturing capabilities, brand recognition, and a large customer base. Apple could reach a strategic alliance with Ford, where Apple develops the self-driving software and Ford builds the cars.

Ford: SWOT Analysis

Strengths	**Weaknesses**
● Strong brand reputation ● Large market share ● Strong financial position	● Heavy dependence on American markets ● High costs compared to competitors

● Expertise in van manufacturing which is growing due to the growth of deliveries for e-commerce	● Slow innovation process, and inability to respond to trends in a timely manner ● Lack of global network
Opportunities	**Threats**
● Develop products and services other than car and truck manufacturing ● Growth through international market penetration ● Electric cars ● Mobility solutions services	● New entry of high tech firms ● High level of competitive rivalry ● Trends indicating newer generations buy cars less often than previous generations ● Services like Uber and Lyft taking potential Ford customers

Google

Apple and Google compete in many areas, most notably mobile phone operating systems with Android and iOS. Google and Apple will also compete in the self-driving car industry as well, as many large companies are looking to get into this market. Google began working on self-driving cars in 2009 and have hired many people who have worked on self-driving cars for longer. Google appears to be working on both developing their own cars and retrofitting current cars to become self-driving. Google is also one of the few companies that has more cash on hand then Apple. As of 2013, Google has around $58.7 billion of cash[8] compared to Apples $40.5 billion[9]. Google will be able to make an investment in the long run which could threaten Apple.

Google: Swot Analysis

Strengths	**Weaknesses**
● Significant financial and software resources ● Large economies of scale ● Global company	● Little relative experience building cars ● Potential bureaucracy issues ● Privacy issues

[8] "Alphabet Cash on Hand 2006-2019 | GOOGL." *Macrotrends*, www.macrotrends.net/stocks/charts/GOOGL/alphabet/cash-on-hand.

[9] "Apple Cash on Hand 2006-2019 | AAPL." *Macrotrends*, www.macrotrends.net/stocks/charts/AAPL/apple/cash-on-hand

Opportunities	Threats
● Many car companies would be interested in potential partnerships ● Could integrate android software ● Could provide comprehensive mobility solutions	● Competition from car companies ● Other large tech firms could potentially be a competitor ● Smaller start ups are able to adjust faster

APTIV

Aptiv is a US auto supplier and self-driving software company. Aptiv has had operations in China since 1993 which will be a big advantage for them as some studies report that by 2040 ⅔ of the autonomous car driving miles will be done in China. They are a public company but are smaller than Google or Apple which could make them more nimble or able to adjust to industry changes then some of the bigger players. They also have decades of experience building car parts which tech companies do not have.

APTIV: SWOT Analysis

Strengths	Weaknesses
● Has automotive experience in China ● Can make both cars and software ● Has ability to make acquisitions	● History of financial restatements and high corporate emissions ● Less recognizable brand
Opportunities	**Threats**

● Could partner with a rideshare company ● Be a early entrant into big foreign markets ● Be one of the first companies with a product to consumers	● Competition from big tech firms ● Could be acquired by a bigger company

Blue Ocean Strategy

As I consider our future in AI, I want to ensure that Apple is successful in this venture. Because of my history in the technology industry I know that new features and technology for AI is being developed daily. AI relies on devices being connected to the Internet of things and having an operating system that can process all available data. Apple has innovated the consumer electronic marketplace and our company has the potential to specialize in many sectors. However, Apple must choose which markets to be a part of and service. For Apple to be successful our AI technology must be uncontested by competition, capture new demand, and align with Apple's mission of "Apple Everything".

Apple's car team has explored a wide range of specialized technologies including silent motorized doors, augmented reality displays, improved LIDAR sensors that don't protrude from

the top of the car, and windows with adjustable tints[10]. While all these options are viable, deep integration of iOS can only be achieved by Apple. The ability for Apple to integrate our services with a car allows for apple to have uncontested demand. By making the Apple operating system available for car companies we satisfy all three goals of being in the AI industry.

Autonomous driving has yet to come into fruition commercially. Outside of consumer uses, ride-hailing companies like Lyft and Uber are looking for a way to dismiss their human drivers as an intermediary. On top of that, the use of driverless technologies can reduce costs for cities in public transportation. Some reports estimate that AI-led driving will add $7 trillion to the global economy and greatly improve road safety; however, it may also lead to the devastation of industries such as gas stations, taxis and trucking[11]. Apple has always found success by capitalizing on consumer patterns, and the company is aligned to produce high quality items. Integrating AI into any industry will require partnership, or horizontal and backwards integration.

The driverless car is not a single device that will be commercially available at a specified date; rather, it is a collection of features that will disrupt many industries. Like the creation of the original car, the autonomous car will suffer from the constraints of less modern systems such as the roads or availability of fuel. The takeoff of the self-driving car as a commercial product will depend on a variety of macro- and micro-environmental factors faced by companies in this industry.

Cook leans back in his chair and starts imagining the possible features Apples iOS system would enable for consumers. He believes that a future is not that far off where cars talk to each other, phones can be used like keys, or cars being tailored to each customers preference.

Cook's Decision

Tim finishes his notes, realizing he has been staring at the computer for a long time now. He glances at the clock, it reads 2:30 pm.

Oh no I'm going to be late for the board meeting!

He grabs his flash drive and begins rushing towards the board room.

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[10] MacRumors Staff on April 17, 2019. "Apple Car: It's No Secret, Apple's Actively Working on Car Tech." *Apple, Mac, IPhone, IPad News and Rumors*, 17 Apr. 2019, www.macrumors.com/roundup/apple-car/.

[11] Davies, Alex. "What Is a Self-Driving Car? The Complete WIRED Guide." Wired, Conde Nast, 12 Dec. 2018, www.wired.com/story/guide-self-driving-cars/.

Self-driving cars are about to be the next big thing for Apple, and this may be the project that leaves a lasting impression of my leadership on the company. We are positioned well to start this venture, but will the company believe in the potential of AI? I guess the board's reaction will say enough. I can't help but be excited to step into the future, but as with any big change, there will be a lot of risk involved. However, Apple has arguably taken huge risks with every great invention. I can only hope I am as convincing as Steve was.

Tim takes a deep breath and opens the doors to the meeting…

Exhibit A2: Balance Sheet

Annual Data | Millions of US $ except per share data		2013-09-30
Cash On Hand		$40,546
Notes And Loans Receivable		-
Inventory		$1,764
Other Current Assets		$6,882
Total Current Assets		$73,286
Property, Plant, And Equipment		$16,597
Long-Term Investments		$106,215
Goodwill And Intangible Assets		$5,756
Other Long-Term Assets		$5,146
Total Long-Term Assets		$133,714
Total Assets		**$207,000**
Total Current Liabilities		$43,658
Long Term Debt		$16,960
Other Non-Current Liabilities		$20,208
Total Long Term Liabilities		$39,793
Total Liabilities		**$83,451**
Common Stock Net		$19,764
Retained Earnings (Accumulated Deficit)		$104,256
Comprehensive Income		$-471
Other Share Holders Equity		-
Share Holder Equity		**$123,549**
Total Liabilities And Share Holders Equity		**$207,000**

Exhibit F: Balanced Scorecard

	Objectives	Measures	Targets	Initiatives
Financial	Set commercial goals Develop revenue model for either software or iCar	Company financials Costs associated with developing car//software	Create a profitable autonomous driving product	Create marketable self-driving software/cars by 2023
Customer	Improve customer image of AI	Customer surveys	45% of consumers would consider using an autonomous vehicle	Emphasize the luxury of a “traveling-room” type car
Internal Processes	Create self-driving car or software	Ability to develop necessary technologies	Develop car or leasable software by 2023	Form a strategic partnership or develop an autonomous car
Learning & Growth	Differentiate software/car from competitors	Compare features and customer reviews	Select distinguishing features for Apple’s technology	Develop car or software that integrates Apple’s unique features and AI technology Solidify competition against Waymo and GM

Exhibit G: Ford Balance Sheet

Annual Data | Millions of US $ except per share data		2013-12-31
Cash On Hand		$36,568
Notes And Loans Receivable		$77,481
Inventory		$7,708
Other Current Assets		-
Total Current Assets		$131,585
Property, Plant, And Equipment		$27,616
Long-Term Investments		$23,663
Goodwill And Intangible Assets		-
Other Long-Term Assets		$5,847
Total Long-Term Assets		$70,594
Total Assets		**$202,179**
Total Current Liabilities		$19,531
Long Term Debt		$114,688
Other Non-Current Liabilities		$40,886
Total Long Term Liabilities		$156,503
Total Liabilities		**$176,034**
Common Stock Net		$40
Retained Earnings (Accumulated Deficit)		$23,386
Comprehensive Income		$-18,230
Other Share Holders Equity		-
Share Holder Equity		**$26,145**
Total Liabilities And Share Holders Equity		**$202,179**

Exhibit H: Tesla Balance Sheet

Annual Data | Millions of US $ except per share data		2015-12-31	2014-12-31	2013-12-31
Cash On Hand		$1,219.536	$1,923.66	$848.901
Notes And Loans Receivable		-	-	-
Inventory		$1,277.838	$953.675	$340.355
Other Current Assets		-	-	-
Total Current Assets		$2,782.006	$3,180.073	$1,265.939
Property, Plant, And Equipment		$3,403.334	$1,829.267	$738.494
Long-Term Investments		-	-	-
Goodwill And Intangible Assets		$12.816	-	-
Other Long-Term Assets		$78.38	$54.583	$30.072
Total Long-Term Assets		$5,285.933	$2,650.594	$1,150.991
Total Assets		**$8,067.939**	**$5,830.667**	**$2,416.93**
Total Current Liabilities		$2,811.035	$2,107.166	$675.16
Long Term Debt		$2,068.378	$1,876.981	$598.974
Other Non-Current Liabilities		$1,658.717	$642.539	$294.496
Total Long Term Liabilities		$4,173.2	$2,811.791	$1,074.65
Total Liabilities		**$6,984.235**	**$4,918.957**	**$1,749.81**
Common Stock Net		$0.131	$0.126	$0.123
Retained Earnings (Accumulated Deficit)		$-2,322.323	$-1,433.66	$-1,139.62
Comprehensive Income		$-3.556	$-0.022	-
Other Share Holders Equity		-	-	-
Share Holder Equity		**$1,083.704**	**$911.71**	**$667.12**
Total Liabilities And Share Holders Equity		**$8,067.939**	**$5,830.667**	**$2,416.93**

Exhibit I: Alphabet Balance Sheet (Waymo)

Annual Data | Millions of US $ except per share data		2013-12-31
Cash On Hand		$58,717
Notes And Loans Receivable		-
Inventory		-
Other Current Assets		-
Total Current Assets		$72,886
Property, Plant, And Equipment		$16,524
Long-Term Investments		$1,976
Goodwill And Intangible Assets		$17,558
Other Long-Term Assets		$1,976
Total Long-Term Assets		$38,034
Total Assets		**$110,920**
Total Current Liabilities		$15,908
Long Term Debt		$2,236
Other Non-Current Liabilities		$3,381
Total Long Term Liabilities		$7,703
Total Liabilities		**$23,611**
Common Stock Net		$0.672
Retained Earnings (Accumulated Deficit)		$61,262
Comprehensive Income		$125
Other Share Holders Equity		-
Share Holder Equity		**$87,309**
Total Liabilities And Share Holders Equity		**$110,920**

Exhibit J: Aptiv Balance Sheet

Annual Data | Millions of US $ except per share data		2016-12-31	2015-12-31	2014-12-31	2013-12-31
Revenue		**$12,274**	**$10,864**	**$15,499**	**$15,051**
Cost Of Goods Sold		$9,527	$8,691	$12,471	$12,274
Gross Profit		**$2,747**	**$2,173**	**$3,028**	**$2,777**
Research And Development Expenses		-	-	-	-
SG&A Expenses		$924	$803	$1,036	$916
Other Operating Income Or Expenses		-	-	-	-
Operating Expenses		$10,735	$9,629	$13,741	$13,424
Operating Income		**$1,539**	**$1,235**	**$1,758**	**$1,627**
Total Non-Operating Income/Expense		$-539	$-238	$-143	$-161
Pre-Tax Income		**$1,000**	**$997**	**$1,615**	**$1,466**
Income Taxes		$167	$161	$255	$240
Income After Taxes		**$833**	**$836**	**$1,360**	**$1,226**
Other Income		-	-	-	-
Income From Continuous Operations		**$868**	**$852**	**$1,380**	**$1,241**
Income From Discontinued Operations		$458	$683	$60	$60
Net Income		**$1,257**	**$1,450**	**$1,351**	**$1,212**
EBITDA		**$2,037**	**$1,590**	**$2,307**	**$2,137**
EBIT		**$1,539**	**$1,235**	**$1,758**	**$1,627**
Basic Shares Outstanding		273	285	300	311
Shares Outstanding		274	287	302	312
Basic EPS		**$4.60**	**$5.08**	**$4.50**	**$3.90**
EPS - Earnings Per Share		**$4.59**	**$5.06**	**$4.48**	**$3.89**