In-Depth Analysis of Apple Ecosystem

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Objectives

- The objective of this engagement was to look across all industries (horizontal perspective) to understand the following:
  - Determine key weaknesses of the Apple ecosystem that Android can exploit
  - Determine opportunities for “riding” the Apple ecosystem to gain quick adoption
  - Identify phablet features and functionality within the Apple ecosystem
  - Identify market size and opportunity of all major vertical industries
  - In depth analysis of the 3 major vertical industries that represent that most opportunity for Android

EXECUTIVE SUMMARY

“Riding” the Apple Ecosystem Across Verticals

- SDKs: Develop custom SDKs for the healthcare, education and POS verticals. This will increase the mobile functionality within each industry, which will attract more developers to Android.
- Mimic Key Hardware: Create hardware features that mimic the iPad, which will enable software developers to easily certify their applications are compatible with all Android devices
  - Aspect Ratio (9.4” x 6.6”)
  - Resolution (2048 x 1536)
  - Similar button and port locations
- Upgrade Tablet Camera: Android should develop a tablet with a high quality HD camera that is targeted toward B2B applications (i.e. doctors for medical records)
- Quality in Supply Chain: Support a closed supply chain that allows Android to control the price of parts, manufacturing, capacity and air freight (note: this may require expensive initial investments for exclusivity agreements)
- Predictable Launch Dates: Organize a standardized launch date with all Android tablet manufacturers, so that all new products are introduced at the same time of year (this is important for software developers).
- Donations: Donate Android tablets to schools and hospitals (as this has been important for Apple) to create positive PR and get tablets in the hands of end users, which create a need for software developers to establish industry-specific applications that are certified compatible with Android tablets
- B2B Content: Android should partner with content providers and open platform companies to develop e-books for their tablet. Furthermore, Android should create a wider variety of e-textbooks to appeal to schools (Apple currently has limited topics).

Exploiting Weaknesses in the Apple Ecosystem

- Ensure software developers for Android are able to easily integrate push notifications with Android devices (as well as any industry specific applications)
- Ensure Android devices are able to easily integrate with external devices that are important to the 3 major verticals and work with key hardware vendors:
  - Medical: EKG scanners, heart rate monitors, and other key equipment
  - POS: Bar code scanners, credit card sliders, and related equipment
  - Education: Electronic white boards
- Focus marketing efforts on Android's compatibility with external devices within the 3 major verticals (which will help the end user visualize Androids functionality in the present and future of mobility within their industry)
- User profile management is easier with Android than Apple for 3 verticals.
- Mobile Device Management is particularly an advantage to Education and Medical

Overview of Apple Ecosystem – Key Dimensions Compared

The Apple ecosystem is complex and consists of multiple internal and external factors. Below is a comparison of iOS and Android based on 11 key categories:

Categories	iOS	Android
Software Development		
Hardware Features		
Integration		
Security		
Content		
Supply Chain		
New Product Introductions		
Training and Support		
Marketing/Brand		
Contributions to Charity		
Blogs/Forums		

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Note: based on scale of 1 to 5

Market Size of Key Segments & Android Switching Opportunities Purchased by Company/Organization

	Global Market	Device	Switch From Apple to Android – Potential Market Estimate	Comments
Education				
College	1.1 Million Units	Primarily Tablet	Small	Strong student and faculty pull will make this difficult market to exploit for Android
K-12	6.1	Tablet	1.8 Million Tablets	If Android partners with appropriate Education Publisher and multiple user profiles in Android.
On-Line	1.2	Tablet	.2 Million Tablets per year	Tablets seem to be popular for this market, but driven by cost (and brand). Android offers low cost Tablet
POS				
Retail - Mass	3.1	Phablet is primary	.4 million Tablets per year	Android enters Retail Mass with Phablet first and easier to integrate than external devices than Apple. Apple however has little of this market
Retail - Upscale	1	Tablet	Small	Little
Retail- Health/Beauty,etc.	.5	Tablet	Small	Android enters Retail Mass with Phablet first and easier to integrate than external devices than Apple. Apple however has little of this market
Restaurants	5.3	Tablet (9 inches Wi-Fi)	0	Apple does not compete here
Medical				
Nurses	4.9	Tablet	1.2 Million	Need to partner with EPIC or other EMR
Doctors	2.6	Phablet	1 Million	Doctor wants a small form factor (7 inches) because he is especially sensitive to the weight and size. Significant if introduced quickly by Android
Paramedics	.4	Tablet	Small	Significant use of Tablets by Paramedics today
Therapists	2.5	Tablet	1.5 Million	Many go to homes and need access to a mobile device. Need to access external devices and less brand loyal to Apple

Market Size of Key Segments & Android Switching Opportunities Purchased by Company/Organization

	Global Market	Device	Switch From Apple to Android – Potential Market Estimate	Comments
CSR				
Hotel/Resorts	1	Tablet	.3 Million	Mostly for guests and upscale Hotels. Wi-Fi in place and Hotels had the highest use of Android Tablets (10% of Tablet usage). Price and Brand are key
Ships	1.2	Tablet	Small	Most Ships looking to enhance passenger experience. However, most cruise lines are not equipped to meet Wi-Fi needs and would be limited to ships activities (very low cost Tablet). Little Apple in this market
Kiosks	2.4	Tablet	Small	Typically retail establishments or Malls and Large Retailer. Typically specified by Kiosk manufacture looking for low costs. Market slow to evolve although interactive kiosks are predicted to be area of growth (though only 14% growth for 2015, per some analysts. Apple not in this market
Mobile CSR	3.1	Depends	1.5	Mobile CSRs (such as Rotor Rooter adding Tablets for customer service calls). Seems a diffuse market but 60% related to installation, repair or services performed. External Device integration is important
Sales & Marketing				
- Insurance	2.4	Tablet	1 Million	US, EU, India and Brazil have laws on signature but use is slow. Android has bigger screen
-Pharmaceutical	1	Tablet	.4 Million	Strong use of digital tools. Very strong growth. Android can introduce moderate priced
-Real Estate	1.2	Depends	.7 Million	Late adopters with price sensitivity. Integration with external devices and apps
-Loan Processing	1.3	Tablet		US, EU, India and Brazil have laws on esignature but use is slow. Apple not in this market
-Financial	1.9	Tablet	1.3 Million	Mostly US and European Union. Need larger size over Apple for presentations
-Other Field Sales	.9	Depends	.5 Million	Typically manufacturing, wholesale and professional services Need more rugged

APPLE ECOSYSTEM

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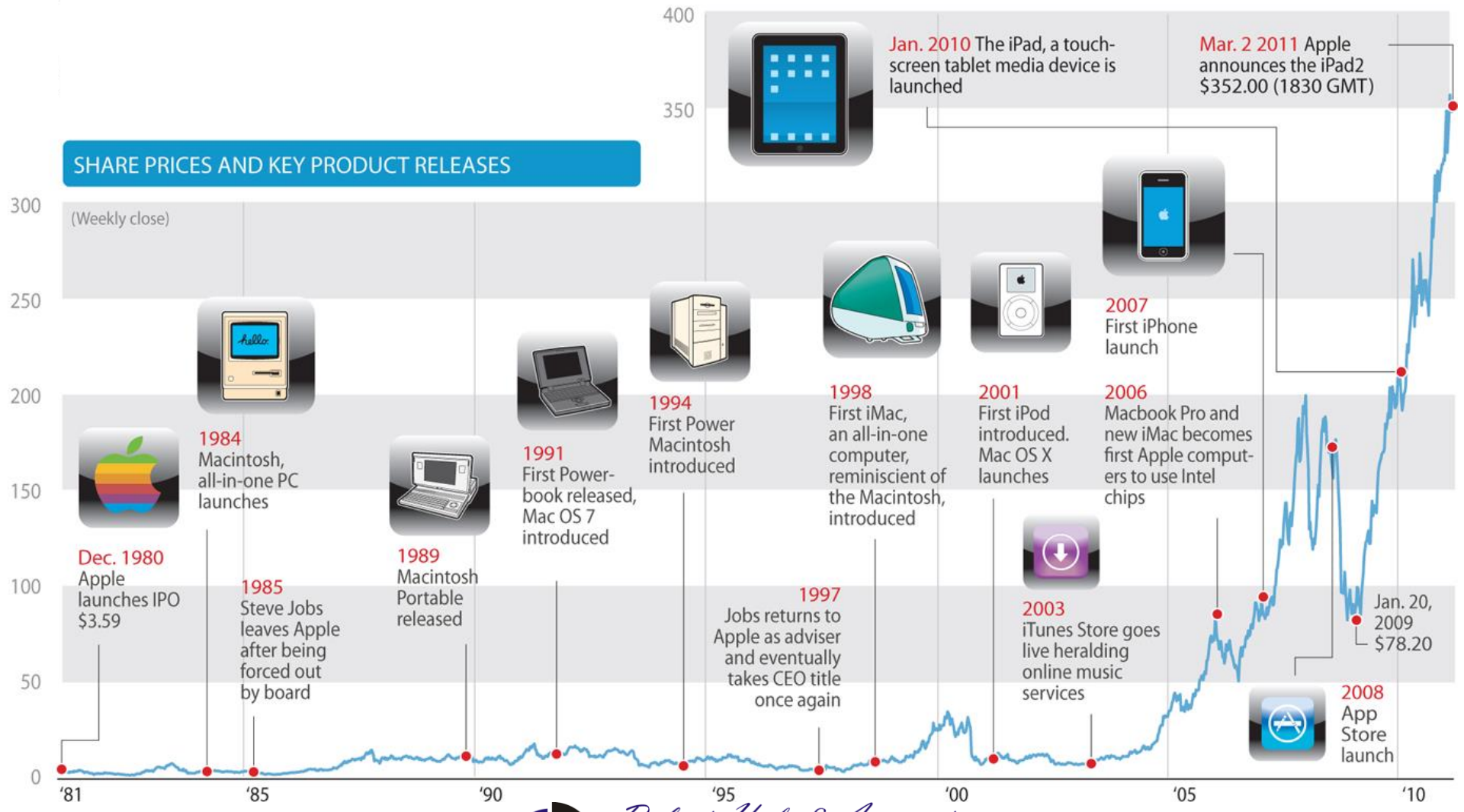
History of the Apple Ecosystem



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Source: Apple, Inc

Software Development

Ecosystem Dimension

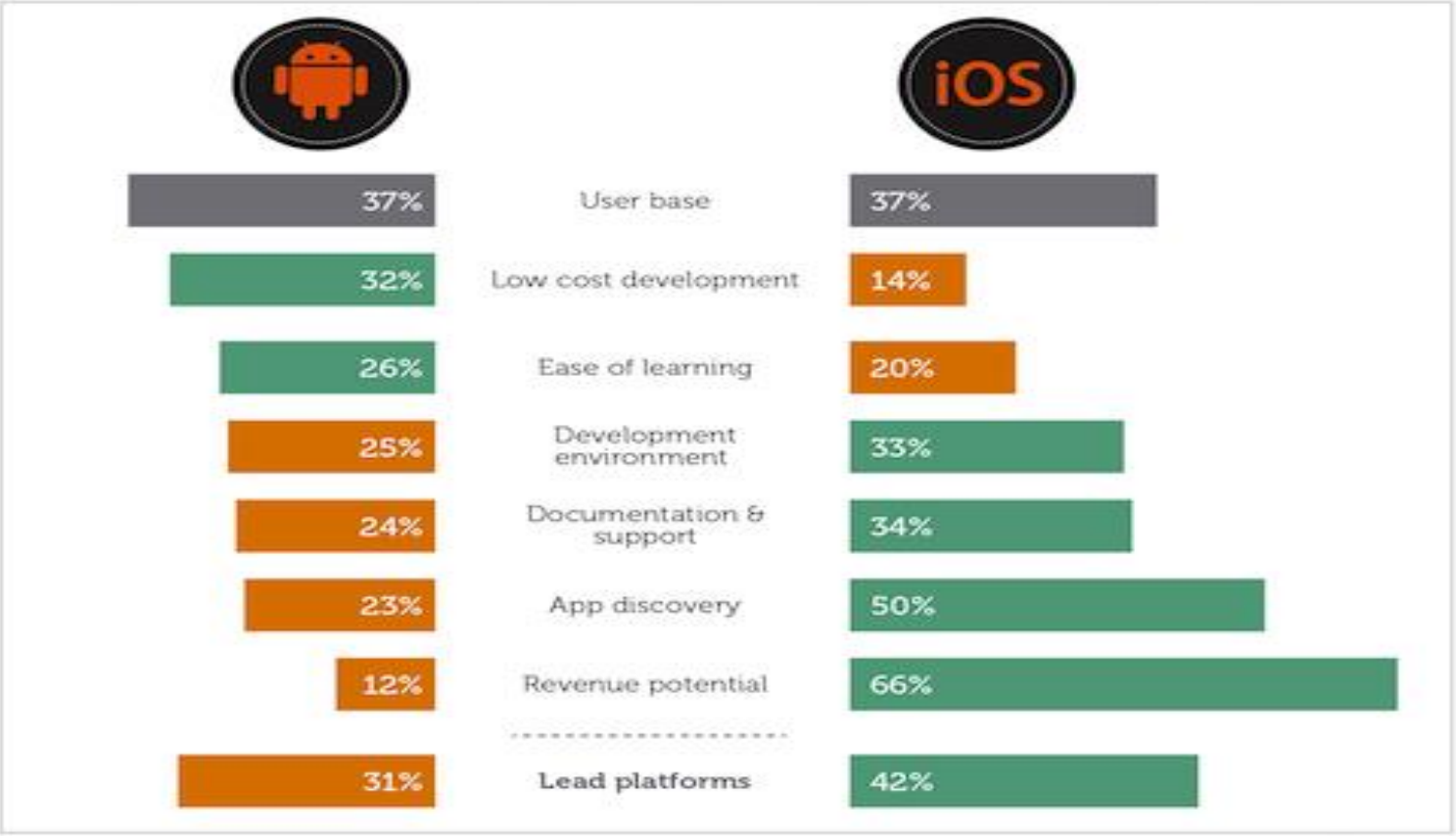
- Apple's ecosystem has provided developers with custom B2B software development kits (SDKs), such as the HealthKit (which through a partnership with Mayo Clinic provides developers easy access to health-related data from a variety of apps)
- Android brings new product to the market throughout the year, while the Apple ecosystem tends to have only one launch date per year (typically in the fall), which slows the product's time to market
- Apple has a "closed" ecosystem for developers, which increases the amount of required development reviews before a product can go to market
- Apple has difficulties developing applications that are dependent on push notifications

Implications for Android

- Android needs to work with Google to develop key SDKs for the key verticals
- Android needs to have predictable hardware release dates. B2B ecosystem wants to slow down the number of introductions
- Apple has a "closed" ecosystem for developers, which increases the amount of required development reviews before a product can go to market
- Develop key applications with push notifications

Percent of Software Developer's Ranking Each Platform Top, Among Developers Using Both Android & iOS (n=1,200)

Software Developers, especially in B2B, do not feel Android offers comparable revenue opportunities (which is critical for creating partnerships):



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Source: Developer Economics (2013)

Key Quotes to Support Software Development

Company Name	Title	Quote
Segue Technologies, Inc.	Lead Developer	*"Apple has difficulties with push notifications, so Android has the clear advantage in that category if that's something that will be important to your end user."*
Mayo Clinic	Senior Analyst	*"We believe Apple's HealthKit will revolutionize how the health industry interacts with people. We are proud to be at the forefront of this innovative technology with the Mayo Clinic App."*
Payer+Provider Syndicate	Senior Analyst	*"Self-device makers will be able to focus on more hardware-based product differentiation, as HealthKit will standardize the user experience."*
Mindfire Solutions	Software Developer	*"Android code is much more robust, which makes it more difficult to write."*
Open Sky Software	Sales Engineer	*"Apple is easier to work with from a compatibility standpoint because all of their iPad models have a very similar look, so they're all going to be similar with how the code looks on the screen."*

Hardware Features

Ecosystem Dimension

- Every model of the iPad has had similar button locations, screen resolution, and aspect ratio (all of which are factors that make developing easier)
- The Apple iPad has always lacked the port diversity that Android is known for (i.e. many models don't come with a USB, SD or HDMI), which limits the end user or forces them to purchase conversion devices
- HD Cameras are becoming more important within multiple B2B industries (i.e. doctors taking pictures for medical records), which gives an edge to Android whose device manufacturers have been known for higher quality cameras (i.e. zoom, lens, etc.)

Implication for Android

- Android should develop a tablet that has similar hardware features to the iPad, so that software developers are able to easily certify compatibility with B2B applications
  - Screen resolution
  - Aspect ratio
  - Button locations
  - Port locations
- Android should develop a tablet with a high quality HD camera that is targeted toward B2B applications (i.e. doctors for medical records)

Key Quotes to Support Hardware Features

Company Name	Title	Quote
AllScript	Sales Manager	*"If Android really wants to become relevant in the healthcare industry, I believe they should focus on creating hardware that excels at security and privacy. This is a huge issue for healthcare providers and it goes beyond just being HIPAA compliant."*
Custom Software Lab	Business Development Manager	*"Another hardware feature to focus on within the healthcare industry would be a high quality HD camera, because doctors are beginning to take more pictures for medical record purposes."*
DreamBox Learning	Business Development Manager	*"The kids these days are referred to as "digital natives" because they've grown up their whole lives with video games and technology. Therefore, with regard to the education industry, graphics and engaging color display is very important for tablets."*
Blackboard	Sales Manager	*"Graphics, color and display resolution will play an important role for tablets in the education industry."*
iTransition	Sales Manager	*"A key to simplifying code writing is screen resolution, which gives an edge to Apple. Their models have all had similar screen resolutions, so the display on the screen should look similar amongst varying devices."*
Silicus	Business Development Manager	*"Android can be more difficult to work with because all of their various devices have different button and port locations, along with varying aspect ratios. When developing with Apple, the code is always very similar because the models have consistent buttons, ports and aspect ratios, which makes things easier."*
Actsoft Inc.	Software Developer	*"Aspect ratio is definitely important if you're going to be creating an application that will require both horizontal and vertical functionality."*

Integration With External Devices

Ecosystem Dimension

- External devices (i.e. wearable's, cases, scanners, etc.) are becoming more and more prevalent within many B2B industries (i.e. bar code scanners in retail, EKG scanners in healthcare, etc.). The Apple ecosystem has limitations to what external devices they can integrate with, so Android provides more flexibility for developers.
- The Apple ecosystem operates out of a closed system, which makes it difficult to integrate non-iOS applications or software. The closed system also requires more internal meetings for software developers when integrating, which can increase time to market.
- Apple has more difficulty integrating with applications that require constant push notifications

Implication for Android

- Ensure Android devices are able to easily integrate with external devices that are important to the 3 major verticals and work with key hardware vendors
  - Medical: EKG scanners, heart rate monitors, and other key equipment
  - POS: Bar code scanners, credit card sliders, and related equipment
  - Education: Electronic white boards

Key Quotes to Support Integration with External Devices

Company Name	Title	Quote
E-Zest Solutions	Software Developer	*"External devices are important for many industries, such as healthcare. Google is attempting to leverage their technology (i.e. Google Glasses or Google Lens) with the Android platform to take advantage and provide valuable healthcare applications."*
Claricode	Sales Engineer	*"Google and Android are focusing on wearables (external devices) at a platform level, which means that Google's goal is to make Android accessible to a wide variety of devices. This can be very valuable in B2B markets, such as healthcare or retail."*

Content

Ecosystem Dimension

- The Apple ecosystem includes iTunes, which is a stronger and more established market place than Android is able to offer for music
- The Apple ecosystem has created an advantage within the e-book market by creating their iBooks (textbooks and novels for the iPad) available on iTunes, which is very valuable to the education industry. The iBooks allows schools to take advantage of interactive learning with touch screens and multimedia files.
- Some types of content that the Apple ecosystem provides (i.e. movies, apps) is also available within the Android marketplace

Implication for Android

- Android should plan to partner with an open platform player. To compete with Apple in the create, distribute and consume parts of the e-textbook business, publishing platform providers such as Adobe must become more engaged in the educational market, and continue to push HTML 5 (cross-platform capabilities).
- Android should work with appropriate content developers to create their own e-books. The iBook options are also in their infancy, as the store has a minimal selection at this point. The available titles are focused on introductory topics like Algebra I, Biology, Chemistry, and Physics. Therefore, Android could take advantage by providing a wider variety of e-textbooks.

Key Quotes to Support Content

Company Name	Title	Quote
Apple Store	Sales Manager	*"iTunes creates a huge advantage for Apple. It's an easy to use and well known platform for everybody to download their music to their devices."*
B3NET Inc.	Software Specialist	*"E-books are becoming more and more important within the education industry because they allow K-12 students to have more interactive learning experiences. Apple has a leg up in this niche market because of their iBooks."*
Saritasa	Business Development Manager	*"Apple might provide some content that Android doesn't, but for the most part standard media content is easily available for both Android and iOS."*

Supply Chain

Ecosystem Dimension

- The closed system that Apple operates in allows them to control nearly every piece of the supply chain from design to retail, which because of its volume (and occasional ruthlessness) has allowed Apple to get huge discounts on parts, manufacturing, capacity and air freight
- An operational edge allows Apple to handle massive product launches without having to maintain large profit-sapping inventories
- Apple is able to maintain 25% margins on their iPad, while selling their product at a competitive price
- The shortened supply chain for the Apple ecosystem allows Apple to speed the time to market for existing devices (note: new product launches are slower for Apple)

Implication to Android

- Support a closed supply chain that allows Android to control the price of parts, manufacturing, capacity and air freight (note: this may require expensive initial investments for exclusivity agreements)

Key Quotes to Support Supply Chain

Company Name	Title	Quote
Gene Munster	Senior Analyst	*"Apple has been able to maintain reasonable prices for their iPad while still maintaining a 25% margin, which is a huge compliment to their supply chain system."*
Quanta Computer Inc.	Product Manager	*"Apple has been known to offer exclusivity agreements for large sums or money to ensure key technology manufacturers only work with Apple. This has allowed them to gain tremendous advantages within their closed supply chain."*
Rocket Science Consulting	Consultant	*"Operations expertise is as big an asset for Apple as product innovation or marketing."*
3M Co	Logistics Coordinator	*"An operational edge is what enables Apple to handle massive product launches without having to maintain large, profit-sapping inventories."*
Gartner	Supply Chain Analyst	*"We've considered Apple one of the world's best supply chains for years."*

New Product Introductions

Ecosystem Dimension

- The Android operating system consists of multiple tablet manufacturers, all of whom have their own agenda when it comes to new product launches (i.e. marketing, launch dates, etc.), which can disrupt the Android ecosystem when multiple new product introductions are happening at different times throughout the year. The Apple ecosystem is consistent with one launch date for their new product (usually in the fall).
- It can be difficult to compare revenue streams because it's not as simple as saying Apple revenue vs. Android revenue (because Android consists of multiple manufacturers), but a good proxy comparison can be Apple vs. Google. In that scenario, Apple tends to make between three to five times as much revenue as Google. (Note: Apple sees wild spikes in their revenue due to seasonal holidays and their dependence on retail operations, while a majority of Google's revenue is based on Ads, which are much more consistent).

Implication for Android

- Organize a standardized launch date with all Android tablet manufacturers, so that all new products are introduced at the same time of year (this is important for software developers).

Key Quotes to Support New Product Introductions

Company Name	Title	Quote
Intel	Sales Manager	*"At Apple, not many people from other divisions know about the development process, which is where you hear the term closed ecosystem. This closed ecosystem can be helpful to Apple, but in this case it also slows new product introductions because they require additional reviews and meetings between divisions."*
Foxconn	Sales Manager	*"Several manufacturers are involved when developing marketing and launch strategies for Android. In the past, their strategies may have been too obtuse and unfazed the tablet world."*

Marketing/Brand: Details

Ecosystem Dimension

- Apple has a reputation of highly innovative, well designed, and well-functioning products and sound business performance. The Apple brand is valued at $76 billion and was the second most valuable brand in the world in 2012.
- Not only does Apple have a very strong brand, but they only have one product line for their iOS devices. Meanwhile, Android has multiple device manufacturers, which is diluting their various brand images.
- Apple tends to market themselves to your every day person, while Android devices are marketing more towards “tech geeks” (which has allowed Apple to gain a large share of the B2B tablet market)
- Apple targets people in the real world, which helps them get iPads into the hands of more end users in most B2B verticals

Implication for Android

- Focus marketing efforts on Android’s compatibility with external devices within the 3 major verticals (which will help the end user visualize Androids functionality in the present and future of mobility within their industry)

Key Quotes to Support Marketing/Brand

Company Name	Title	Quote
Data Art Inc.	Software Developer	*“Apple tends to market themselves to more of the general public, while Google Android tends to market themselves to more "tech geeks". I think this is how they've created such a large advantage in the tablet space.”*
Aria Systems Inc.	Software Developer	*“The iPad just seems to be the cool or sleek brand right now. They've marketed themselves better, so people want to be using the iPad. So, they've gained a B2B advantage because consumers are already using their devices.”*
Adventus	Business Development Manager	*“The fact of the matter is that Apple has established itself as a trusted brand, it has created a product that is a status symbol to own, and it prides itself on the ease of use of its products.”*

Contributions and Donation

Ecosystem Dimension

- The Apple ecosystem is involved in a charitable matching program for non-profit industries (i.e. education and health services) where Apple matches any donation made by company employees, which has generated millions of dollars for non-profit organizations within those industries ($2.6 million in matching program in 2011)
- The apple ecosystem has also provided multiple monetary and technology donations to the education industry (i.e. Apple pledged $100 million in iPads, desktops, laptops and other education tools to President Obama's ConnectEd program)
- Donating iPads to education programs has allowed the Apple ecosystem to generate positive publicity as well as literally get iPads into the hands of end users

Implications for Android

- Donate Android tablets to schools and hospitals (as this has been important for Apple) to create positive PR and get tablets in the hands of end users, which create a need for software developers to establish industry-specific applications that are certified compatible with Android tablets

Key Quotes to Support Contributions and Donations

Company Name	Title	Quote
McQuillen Technical Consulting	Senior Analyst	*"Apple is doing a lot to contribute to the education industry. They recently pledged $100 million in devices to President Obama's ConnectEd program, which is genius. It allows them to receive great PR while also literally getting tablets into the hand of the end user."*
Cambium Learning Group	Sales Manager	*"Google has donated $100 million to education programs in the past, but their PR benefits are lost because their brand isn't as synonymous with Android as Apple is with iOS. Apple has the luxury of their closed ecosystem, so there's an easy brand name association."*

EDUCATION

Apple Eco-System within Education

Mobile Education System	Strategic Focus	Activities
Device Manufacturer	High	▪MacBook ▪iPad ▪iPhone ▪iPod Touch ▪Many tools and features of products adapt well to educational needs e.g. iLife digital authoring tool on MacBook, iWork on iPad. ▪Learning Labs – cabinets housing multiple devices in classrooms.
Service and Content Provider	Medium	▪ Educational apps – thousands focusing on learning and education: - Most used in informal settings. - Curriculum guides map the apps to areas of the US curriculum. - Other types of apps help student or teachers organize for learning - track assignments, take notes, and study for finals and teachers can give lessons and monitor progress.
Distributor	High	▪ Educational app section in App Store and new Special Education section introduced in Oct. 2010. ▪ Volume purchasing plan available for educational apps, giving educational institutions discounts for bulk purchases. ▪ iTunes U – designed for and aimed exclusively at education: - Offers users public access to content from world class institutions. - Currently 350,000 content items, ranging from lectures and presentations to syllabi and campus maps. - All content is free and can be accessed via a Mac or PC, or wirelessly downloaded onto iPhone or iPad. - University sites can be managed to give public access and internal access. - 300m+ downloads - One of the world's most popular online educational catalogues.

Key Issues

- Configuration Management: the IT leaders we spoke to said that configuring their fleets of iPads and then purchasing and updating apps across the devices is by far their biggest challenge--and that Apple Configurator and Profile Manager are not adequate tools for large-scale deployments. Being able to easily manage these tasks is the key reason the directors mention for turning to MDM solutions and one of the key features they evaluate when considering an MDM.
- Batch Installer: We saw one that would push apps out, but still required some activity at the recipient end to finish the install. We can't ask a first-grader to do that," he says. Tognetti's team ends up doing those updates manually. "It has been a real pain for us," he says. "We have chosen to limit the number of updates we do to three times a year, instead of when the apps' developers push out updates.“
- Security and Content Control: Can’t download unauthorized videos and games with security settings for teachers and parents (depending on whether used at home or at school)

Key Ecosystem Players to Target

Company Name	Industries	Solutions	Type	HQ Location	Reason for Selection
Blackboard	Education	Interactive Learning, Communication	Service & Solution Provider	Washington D.C.	Significant experience with interactive learning apps
DreamBox Learning	Education	K-12 Learning Apps (currently iOS only)	Service & Solution Provider	Bellevue, WA	Significant experience with interactive learning apps (open to Android discussion)
Cambium Learning Group	Education	Interactive Learning	Service & Solution Provider	Dallas, TX	Significant experience with interactive learning apps
Verivo	Higher Education	Mobile App Development	Service & Solution Provider	Waltham, MA	Significant experience with mobile apps in higher education
Jenzabar	Higher Education	ERP, Learning Management System (LMS), Enrollment	Service & Solution Provider	Boston, MA	Industry leader in management systems for higher education institutions

To Compete with Apple

Apple has launched a major foray into the educational market by targeting key areas of the content value chain: creation, distribution, management and consumption. By building up the supply of e-textbooks and other learning materials, controlling the marketplace in which they are sold, offering a platform for enterprise portal development, and selling the hardware that provides optimal consumption, Apple hopes to gain the same market impact that it did for the music business.

However, the key weaknesses that can be exploited are:

- Closed Development of iBooks: Apple must deal with the educational industry's practical need for "openness" by offering a Windows version of its iBooks Author platform for e-textbooks. Support of HTML5 or epub 3.0 could offer one solution for e-textbooks, but a closed development environment does little to win the hearts and minds of students and educators, as well as to spur innovation.
- Android needs to Partner with key Open Platform providers: To compete with Apple in the create, distribute and consume parts of the e-textbook business, publishing platform providers such as Adobe must become more engaged in the educational market, and continue to push HTML 5 (cross-platform capabilities).
- Work with appropriate content developers: The iBook options are also in their infancy, as the store has a minimal selection at this point. The available titles are focused on introductory topics like Algebra I, Biology, Chemistry, and Physics.

HEALTHCARE

Apple Eco System Faces Issues

Key Advantages

- Application that integrates with Apple: Epic's iPhone application, called Haiku, became available on Apple's AppStore. "Haiku provides authorized clinical users of Epic's Electronic Health Record with secure access to clinic schedules, hospital patient lists, health summaries, test results and notes. Haiku also supports dictation and In Basket access. Haiku works on both the iPhone and iPod touch," according to the app's description on the AppStore.
- However, many of the smaller EMR based doctor practices software (e.g. ADP, practice fusion, etc. have developed to iPad). Android will need to work with the EMR medical software community (EPIC, Cerner, Siemens, etc.) to build applications for Android. (EMR is being adopted fairly quickly at small doctor practices).
- Doctors familiar with iOS are the key drivers of tablet adoption for Doctor use in Hospitals

Key Disadvantages

- Doctors want Phablet…phone too small (and Apple does not seem like it will introduce a Phablet because of its mini-tablet).
- Integration of apps is difficult on iOS (such as integration with a secure messaging application into EMR management systems)

Doctor Perceptions of iPad Features

Table 3 – iPad benefits and barriers mean scores.

Item	Mean
Weight	4.25
Shape – carry	4
Surface – disinfect	5
Combo – handling	4
Ruggedness	3.25
Text and Graphics	4.75
Screen resolution	4.75
Screen brightness	4.75
Virtual keyboard	3.25
Battery strength	4.5
Heat	4.75
Content layout	4.75
Text entry errors	3.3
Workplace training	3
Workplace tech support	3
Network connection	4.25
Network speed	3.7
Workplace culture	3

Note: Based on a study of
50 Physicians who used iPad in hospital

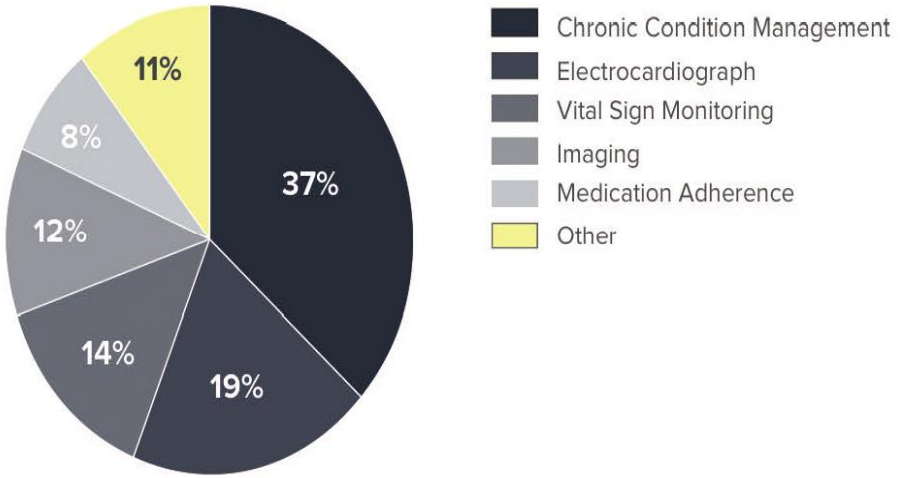
Apple Eco-System within Healthcare

- The Apple ecosystem for the healthcare industry is based on medical applications for adoption by hospitals and health organizations:

Non-Health Professional Targeted

App Store	#Medical apps	#Apps	#Downloads	OS support
Apple App Store	>16,000	700,000	35 billion	iOS
Happtique	>10,000	>10,000	NA	Multiple
Google Play	>8,000	700,000	25 billion	Android
Opera Mobile Store	>1,200	60,000	700 million	Multiple
Windows Phone Store	>1,100	126,000	900 million	WP
BlackBerry App World	>800	100,000	3 billion	BlackberryOS
GetJar	>50	760,000	3 billion	Multiple
Nokia Store	N/A	120,000	6 billion	Multiple
Mobango	N/A	100,000	1 billion	Multiple
China Mobile Market	N/A	130,000	800 million	Multiple

Health Professional Targeted



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Source: Berg Insight

Go To Market Strategy Summary (Prioritized)

	Key Issues	Key Android Advantages	Key Activities
Patient Care	-Ensure Android Android works with MyChart (Epic) and Cerner's Platform	More Satisfied Patients -Elderly patients want bigger screen – 12 inch (80% of patients) -Android stronger brand with elderly market than Samsung (RHA survey)	-Work with Epic to Test MyChart on Android Tablet -Create Arrangements with GPOs -Target large healthcare care systems in East and West Coast of US -Develop current network of ISVs
Home Health Care	-Price Sensitive Market -Want Smaller, Mobile Tablet Form Factor -Some require integration with EMR (but a minority of market at least 2014 – 2015)	Product Features -Anti Microbial Screen/Screen Protection (no ruggedization is needed) -8 inch Tablet Other -Android Printer integration (many traveling nurses have Android printers and need to print schedule, etc.)	-Direct Market to large Health Care Providers (top 50) about 40% of Market -Smaller providers need to go through ISVs/Distributors
Therapist/Case Workers	-Significant percent need ERM (but many do not) -Many different types of Therapists with differing feature needs	-Therapists more likely to use Android products than doctors. -No real advantage over other Android products	-Get into GPOs -Target market largest market of therapists (psychologists)
Doctors	-Strong preference for Apple -Apple has a product that works with ERM (Epic) although no data input is allowed (Cantu). -Voice Integration is being developed by Apple for EMR application	-Phablet: Doctors want a 7 inch screen and ability to talk (very strong) but Apple will likely introduce a Phablet. -Samsung not working with EPIC on EMR (but working with other EMR providers) so Android would be alternative -Integration of other apps with EMR is easier with Android (Epic has challenges with iOS)	-Need to work with Epic on an Android and foot print for Phablet (already have apps for smart phone so should be easy). Epic willing to develop to one Form Factor -Need to Target Doctors (give away to key influencers, etc.).
Telemedicine	-Little Adoption right now, but expected to grow significantly over	-Android strong brand within medical devices	-Work with health accelerators to identify key partners.

Key Ecosystem Players to Target

Company Name	Industries	Solutions	Type	HQ Location	Reason for Selection
Epic	Healthcare	EMR, Clinical Services, Mobile Platforms	Service & Software Provider	Madison, WI	Significant experience with EMR and mobile solutions
Cerner	Healthcare	Healthcare, EMR, Medical Devices, Pharmacies	Service & Software Provider	Kansas City, MO	Significant experience with EMR and mobile solutions
AllScripts	Healthcare	EMR, Healthcare, Ambulatory, Homecare	Service & Software Provider	Chicago, IL	Significant experience with EMR and mobile solutions
McKesson	Healthcare	Pharmaceutical, Medical, Hospital Information Systems	Service & Software Provider	San Francisco, CA	Significant experience with EMR and mobile solutions
NextGen	Healthcare	EMR, Hospital System, HQM, Integration, Patient Homecare	Service & Software Provider	Horsham, PA	Significant experience with EMR and mobile solutions

POS
(RETAIL & RESTAURANT)

Robert Hale & Associates
BUILDING BRAND AND MARKET SHARE

Apple Ecosystem within POS

- Apple does not have a strong presence for their iPad within the POS vertical
- Some important ecosystem needs for the restaurant and retail verticals are as follows:
  - Develop applications for entertainment of restaurant customers, such as TV, social media interaction, games, text tables in restaurant, etc., where revenue can be extracted
  - Integration with POS system for restaurants (although no purchases yet through these systems) it will eventually be and therefore require order applications based on menu
  - Integration with POS systems and external devices for retail businesses (i.e. bar code scanners and credit card sliders)

Key Ecosystem Players to Target

Company Name	Industries	Solutions	Type	HQ Location	Reason for Selection
Micros	Restaurants, Retail, Bars, Casinos, Cruise	POS	Service & Software Provider	Columbia, MD	Industry leader for POS software
PAR Technology	Restaurant, Hotel, Spa, Retail	POS, Tablets	Service & Software Provider	New Hartford, NY	Significant experience with POS software
AccuPOS	Retail, Restaurant	POS	Service & Software Provider	Los Angeles, CA	Significant experience with POS software
Sunrise POS	Retail, Restaurant	POS	Service & Software Provider	New Port Beach, CA	Significant experience with POS software
Agilysys	Restaurants, Hotels, Casinos, Cruise	POS, Inventory & Procurement, Workforce Management	Service & Software Provider	Las Vegas, NV	Significant experience with POS software