

ABALTA WHITE PAPER SERIES

Dedicated Devices Aren't Dead

Exploring the Demand for Apps vs. Hardware



abalta
TECHNOLOGIES

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ABSTRACT

This paper explores the proposition that smartphone and apps will cannibalize consumer electronics hardware, including dedicated devices. The paper seeks to present a balanced view of the argument providing examples of this absorption while also providing evidence that divergence, versus convergence, exists. In addition, Abalta also presents the consumer point-of-view backed by primary research to also show that smartphones and dedicated devices can live harmoniously in the marketplace.

INTRODUCTION

To introduce the arguments in this paper, we will provide a short and simple analogy. An owner of an iPhone decides to run for exercise and starts her "program" running casually at first. She wants to record her progress in her new found sport and decides to download one of the \$1.99 apps available on the App Store. Over the next few months, she ends up becoming a more active and serious runner and decides to set her eyes on a 10K race. Her increased participation in the sport results in an increased focus on her equipment. She purchases new running shoes, apparel and upgrades from her GPS running app – purchasing a running watch with GPS. The new running watch seems to work for her better – it's lighter, easier to operate while running and seems to be a better fit for her needs.

In this paper, we will explore how the analogy above is indicative of a portion of the population that is resisting the complete convergence of dedicated devices and smartphones. And while the "app culture" upon us has certainly disrupted a number of technologies, the consumer electronics market is showing some resistance to being cannibalized by smartphones. We will present data highlighting the drivers of device demand that serve to remind ourselves that consumers are not homogenous and have varying technology needs.

Given Abalta's focus on location-based technologies, we will focus mainly on GPS and location-based solutions while offering some additional examples in other consumer electronics categories.

THE RISE OF THE APP

With the rise of a disruptive technology, a tendency exists to rapidly devalue the incumbent technology assuming that the new technology can easily integrate the old while delivering the same level of benefits to the end-user. Similar to the dawn of the web era in the 1990's that trumpeted the demise of many traditional industries, the new mobile revolution – led by an army of smartphones, tablets and apps – is threatening to supplant a horde of hard dedicated devices that have one sole purpose.

"In effect the hand-held consumer GPS device market is crumbling as functionality that once required a stand-alone gizmo is incorporated in smart phones." Forbes

"(The) 4.5 billion mobile applications in app stores this year has navigation devices, netbooks and even Nintendo starting to feel pressure in their numbers." The Street

"The curse of the smart phone continues to haunt Garmin and its once-dominant line of navigation gadgets." The Kansas City Star

For a couple dollars or less, a consumer can now choose an app with similar functionality to a dedicated navigation device. Same is true for other location-based technologies – such as running watches, golf rangefinders and bike computers. With the proliferation of GPS chips in smartphone platforms it would seem that dedicated GPS devices have been completely regulated to commodity status.

THE DOWNFALL OF DEVICES

The recent annual earnings release from the largest entity in the consumer GPS space, Garmin, may be the latest sign that the door on GPS hardware is closing. From 2009 to 2010, Garmin posted a 21% decrease in year-over-year revenues. The biggest contributor to this shortfall came from the company's Automotive/Mobile segment – which includes portable navigation devices and makes up half of the company's sales. Following a 15% decline in sales

in 2010, Garmin is forecasting another 20% drop in Automotive/Mobile sales in 2011. Based on these numbers it seems that the market is pushing back on the dedicated navigation device, the PND – demand has slowed, revenue is down and prices continue to be pressured. Unlike its competitors Magellan and TomTom, Garmin held off on releasing an application into the app stores, but earlier this year decided to finally release a navigation app that retails for \$34.99.

Do signals such as these point to the destruction of the device market?

The Wall Street Journal suggested that Garmin and TomTom shortfalls resulted from "increasing competition from smartphone applications" and Business Week explicitly stated that "revenues fell short of analyst estimates as consumers increasingly use their smartphones for

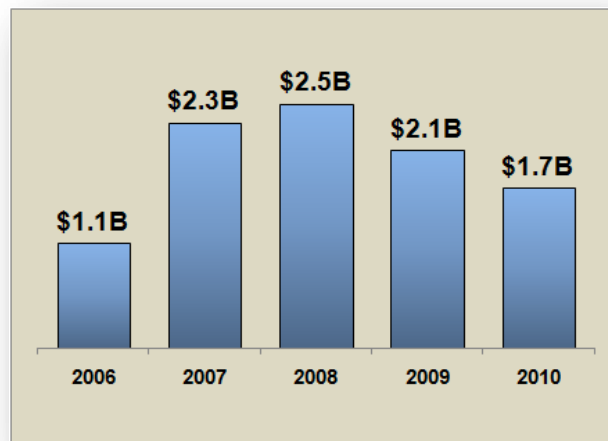


Figure 1: Garmin Auto/Mobile Revenues

navigation.” But digging deeper into Garmin’s financials we see Garmin’s other divisions, specifically the Outdoor and Fitness segments, enjoying solid growth and strong margins. These segments posted a 15% revenue increase collectively in 2010. And, according to the company’s projections the fitness segment is projected to grow an additional 25% in 2011. This would seem to contradict the presumption that apps are cannibalizing devices. And, while these segments are much smaller than the PND market, is the App Store not full of running, golfing, and outdoor applications offered at a mere fraction of what these devices cost? How could these device segments continue to thrive in the face of rapid adoption of smartphones?

EVIDENCE AGAINST CONVERGENCE

EXAMPLE 1: Digital Cameras

The camera has been at the cornerstone of convergence debate for nearly a decade now. In 2000, J-Phone launched the J-SH04 in Japan and signaled a new era of integration for the next few years. This calendar year, the installed base of camera phones globally will top 1.5 billion units. This total is more than the entire shipments of digital and conventional cameras shipped in the history of photography. While the growth in shipments of digital cameras has slowed in recent years, worldwide shipments of digital-still-cameras topped 120 million units in 2010 – a record for the industry. In addition, DSLRs have witnessed a surge in growth in the last two years as well. The Camera and Imaging Products Association (CIPA), the main trade association for Japanese photography companies, is projecting that Japan’s camera companies will ship 15.5 million units of DSLRs and other interchangeable-lens cameras in 2011. This represents an increase of 20% over last year’s record of 12.9 million shipped units.

With the latest wave of smartphones sporting 5-plus megapixel cameras, it would be difficult to argue that the shipments of digital cameras would be unaffected. Likely the smartphone has caught up in many respects to the digital camera and is covering the needs of many consumers. However, the incredible growth of the DSLR segment likely encapsulates the overall argument presented in this paper – that a dedicated device, such as the DSLR, is providing a greater value to the user in terms of the quality and experience versus that of a smartphone. Some consumers may be willing to give up some attributes for the portability and convenience of carrying an all-in-one device, but the dollar votes show that a considerable portion of the market still values a dedicated device experience.

EXAMPLE 2: Sports & Fitness GPS Solutions

Next we will look at two specific consumer electronic segments – running and golf GPS devices. Both have seen dramatic increases in consumer adoption in the last few years as “GPS” became a household term, distribution increased and a variety of brands entered these segments.

Reflecting back to Garmin's latest annual release, over the last four years the company's Outdoor/Fitness segment – which includes running, biking and outdoor GPS devices – has experienced average yearly unit growth rate of 18%. Over the same period, the market witnessed the exponential climb of smartphone adoption and tallied nearly 8 billion app downloads globally in 2010. Additionally, the company is enjoying a healthy 67% gross margin in the Outdoor/Fitness category according to the latest annual earnings release – showing that consumers have been willing to pay premiums in this space.

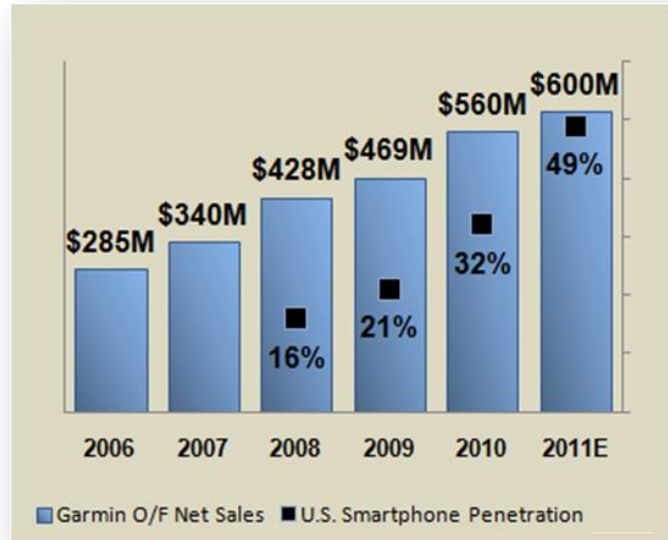


Figure 2: Garmin Outdoor/Fitness Division Sales Vs. US Smartphone Penetration

Now that Garmin is splitting out Fitness and Outdoor segments separately, in Q1 2011 we also see that the Fitness business grew 30% with statements from Management focusing on the worldwide popularity of these devices, especially of high-end cycling products. The Outdoor segment continues to climb in Q1 with year-over-year growth of nearly 12%. Both of these segments continue to rise in the face of downloads of apps that provide similar features and functionality to Garmin's dedicated devices.

Another example in the recreational sports category is Nike whose Nike+ app is ranked as the #1 paid app in its respective category with an installed base of an estimated 4 million users. While the Nike+ application has enjoyed considerable success in the Apple App Store since the advent of the iPhone, Nike has chosen to launch a new dedicated device in conjunction with TomTom – The Nike+ SportWatch GPS. The Nike+ app costs \$1.99. The SportWatch GPS, \$199. While it still remains to be seen what the popularity of this device will be, this serves as an example of a consumer-oriented industry leader who is pushing a portfolio that encompasses both apps and hardware. And while many of the features and functions found on dedicated devices are readily available on a number of apps in the running segment, the device provides an experience for those who either a) don't own a smartphone or b) require more than an app can provide.

In addition, Nike has firmly integrated hardware into its mobile strategy as well with peripherals that interact with apps – specifically the Nike+ foot pod and the Polar Wearlink heart monitor. Nike has realized that the hardware is necessary to provide greater accuracy and precision to those who require it, and since these elements are modular, those who do not can enter the domain with a low-priced app purchase. Nike has designed a full portfolio that includes both apps and hardware to appease differing consumer segments.

So why are dedicated devices in running, outdoor and golf categories experiencing growth? And, why are consumer focused companies like Nike jumping into hardware as well as software? The short answer is that some consumers seem to be signaling that they require the experience a dedicated device provides. The attributes that define a dedicated experience – the form size, weight, functions, battery life, readability, etc. – are requirements for some. Using running devices as an example, consider the wrist versus bicep orientation, the weight of the device, and the operation of keys while running. For golf and outdoor devices power consumption and ruggedness are both key issues and possibly ones that a smartphone cannot necessarily placate. Certain consumer segments are likely paying a large premium because the smartphone form, function and interface are not delivering the ideal experience.

CONSUMER INSIGHTS: AN ABALTA STUDY

To provide additional insight into consumer perceptions of device and smartphones, Abalta commissioned a research study with a sample in April 2011 to delve further into the needs within these two representative consumer segments – runners and golfers. Abalta chose these particular segments for the following reasons:

- Popularity of golf and running applications within app stores
- Availability of dedicated devices with specialized features for running and golfing
- Size of these segments with respect to the overall population
- Alignment with Abalta's focus on location-based applications and devices

The sample specifically consisted of 244 golfers and runners who also own smartphones.

#1: Solid Demand for Dedicated Devices

To provide a balanced view of the demand for apps and hardware, we will highlight the obvious that substantial consumer support is evident for the convergence of electronics devices into smartphone platforms. However, based on the survey data, we also see a solid percentage of respondents – who are exclusively smartphone owners – supporting a more divergent storyline and showing resistance to the cannibalization of devices by smartphones. One of the first high level insights from the study show that consumers are not wholly accepting the smartphone as the single point for all for their electronic device needs. 36% of the smartphone owners

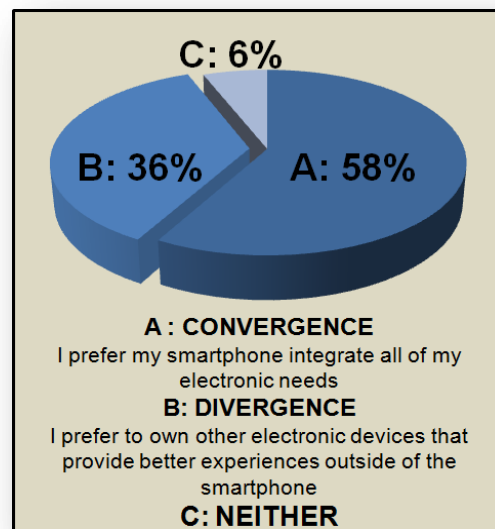


Figure 3: Percentage of smartphone owners that agree with statements above

in our sample expressed a need for separate devices apart from their smartphone. Figure 3 provides a graphical summary of the respondents' attitudes towards convergence based on statements provided.

#2: App and Device Appeal Differs Greatly By Activity

Another insights surfaced from the study relating to appeal of dedicated devices versus application within a particular activity and, furthermore, by participation levels within each activity. Again, the respondent base is comprised exclusively of smartphone owners. As seen in Figure 4 and 5, we have classified the respondents into three participation levels – infrequent, casual, regular and frequent – based on their involvement in their respective sport. We then compared this variable with the ownership of and preference for apps and devices. The result shows a distinct gap between in the appeal of devices and apps between runners and golfers.

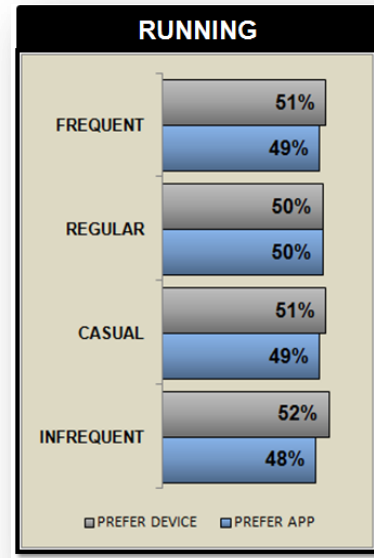


Figure 4: Preference by Level of Participation

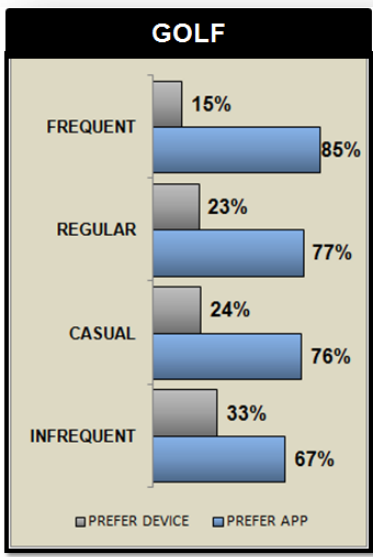


Figure 5: Preference by Level of Participation

While dedicated devices and apps are equal in their appeal to runners, the appeal among golfers is far less balanced – with applications far outweighing devices for this particular activity. In addition, we see a correlation between participation levels and appeal with those who frequently golf preferring smartphone apps. The differences in appeal between these two activities likely stem from the differences in the use cases of the smartphone/device within the activity. Additional insights are garnered in the next section as we explore the drivers for app and dedicated device purchases. Though the appeal between apps and device may differ between activities, the purchase drivers are consistent between activities as our next insight shows.

Given the disparity in the stated needs between these two segments, golfers and runners, it is difficult to draw general conclusions regarding the needs of consumers without first considering the specific category or activity in which the user participating. The degree to which apps will cannibalize devices is greatly dependent on the use case and perceptions that the consumer

maintains within these activities. The value the user places on apps or dedicated devices can be affected by number of factors including the following:

- **Form Factor and User Interface:** The user requires a more specific form or interface to be functional and useful during the particular activity.
- **Accuracy and Quality:** The user requires greater robustness within the specific activity and maintains a perception that a disparity in accuracy/quality exists between applications and devices.
- **Convenience:** The user is presently using a smartphone during the course of the activity and prefers the convenience of integrating the product into the smartphone versus carrying a separate device.
- **Durability:** The activity requires a more durable product form and the user maintains a perception that differences existing between apps and devices

For those brands wishing to enter the device or app space, it would be important to fully delve into the use case and the perceptions held by target customers to determine their preference for apps versus devices within the context of their activity. As we have seen with the golf example above, this segment is much more willing to trade-in their devices for apps likely because the form and experience are very similar between both. However, runners likely have more unique needs – especially with regard to form and function – that support a higher value in a dedicated device. These attributes are further explored in the section below covering the drivers behind app and device purchases.

#3: Purchase Drivers Differ Greatly Between Apps and Devices

Using the respondents’ stated preference for apps or devices, we probed further to better understand purchase drivers. Respondents were asked to provide their rationale for their stated preference from a comprehensive list of twelve different attributes. The graphs to the right summarize the top five selected attributes for each of the two sports – golfing and running. Given the variances in the responses between each sport, we chose to provide the list for each sport independently.

In general, the main difference in the purchase drivers between apps and devices centers around convenience versus quality. Apps are more appealing given the convenience – both in terms of the all-in-one convenience of the smartphone as well as the ease at which these products can be purchased.

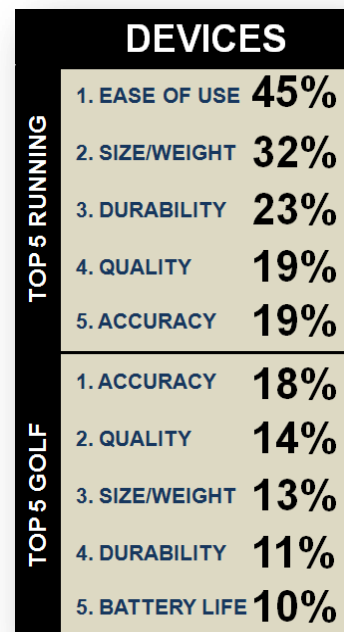


Figure 6: Device Purchase Drivers

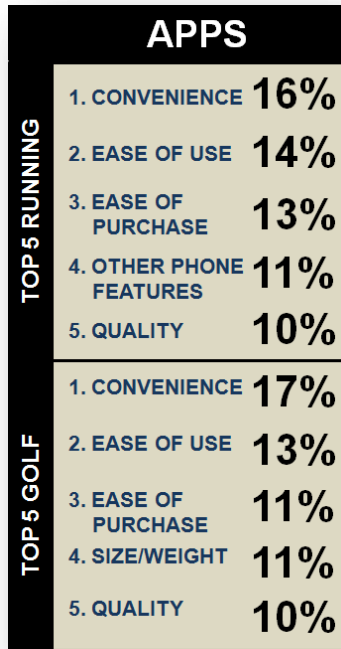


Figure 7: App Purchase Drivers

Further along the lines of convergence, these consumers appreciate the ability to use other features on the smartphone, such as music players. In contrast, consumers who own or prefer devices tend to require more robustness in their experiences. Our data shows that this group maintains a perception that devices produce a higher quality, more accurate experience. Neither quality or reliability and accuracy ranked in the top set for those who prefer apps. For running in particular, those who prefer devices are clearly signaling that attributes around the physical form and size are critical in their decision to purchase a dedicated device (watch) versus a smartphone app.

CONCLUSIONS

The examples and extracts above provide evidence that certain consumer segments continue to demand dedicated devices and are resisting smartphone convergence. As with the personal analogy presented at the onset of this piece, we need to remind ourselves that the market is not homogeneous, but fragmented with various consumer segments with differing needs and interests. Based on the data presented, the market does not homogeneously require one device to be the Swiss Army knife for all of their electronic needs – some segments still need cameras, gaming systems, and GPS devices that provide higher quality or a better experience for their specific need.

In the case of products aimed at the recreational sports community. Our data shows that the appeal of dedicated devices differs greatly between activities, thus requiring greater awareness of the consumers’ needs within each segment. Those segments that find apps appealing are driven by the low entry prices and convenient access. Those segments that value the dedicated device experience will look past the convenience of an all-in-one device to one that can deliver the quality and robustness they expect. As such they are willing to pay a premium for a dedicated device that is specialized for that particular sport versus an application that conforms to the form, function and interface of a smartphone.

In conclusion, the arguments and findings presented in this paper are summarized within the following points:

1. Smartphone applications are growing the overall market for location-based products, but they are also pressuring the market for dedicated devices. This pressure will be more focused on the entry-level device tiers. As both segments compete for customers this pressure will result in a lower overall market for dedicated devices and additional price pressure for manufacturers.
2. Growth in outdoor and fitness segments is also occurring during a time of exponential growth in the smartphone space – providing evidence that the decline in PND sales may be as a result of saturation versus cannibalization.
3. Abalta's research reminds us that consumers are not homogenous and have varying needs. A portfolio of dedicated devices *and* apps are needed to satisfy the consumer market completely for the foreseeable future.
4. Apps have expanded the overall market with a lower barrier to entry for the consumer. In addition, apps hold greater appeal for segments that do not place a large amount of relative value in the quality of the experience and therefore will compete effectively for entry and low-end consumers of dedicated devices. Certain consumer segments will find additional utility in dedicated devices and will continue to pay a premium over apps for an experience that more fully satisfies their needs.
5. Given the perceived quality and accuracy of dedicated devices to certain consumer segments, device manufacturers should integrate these attributes into their core marketing messages to help thwart app cannibalization. Likewise, app developers should focus on convenience, ease of purchase and smartphone feature integration to increase their share of the market over devices.
6. Both app developers and dedicated device manufacturers need to continue to innovate and produce a compelling product value proposition over the competitive segment. Differentiation is possible for device manufacturers given the examples and research presented in this white paper. Delivering a dedicated device with marginal benefits and a large price differential over a competitively placed app will enable greater cannibalization.

ABOUT ABALTA

Abalta Creates Experiences

In our eight years, Abalta has launched over 150 individual programs for 50 different customer brands globally. From dedicated GPS devices to consumer smartphone applications to connected automotive systems we have supported our customers in delivering innovative and engaging experiences to their end-customers. Abalta has helped our customers grow in their respective fields with a deep awareness of the market combined with an unrivaled technical aptitude in software and systems in our domain. We encourage you to visit our website at www.abaltatech.com or follow us on Twitter @abaltatech to learn more about our capabilities and experience.



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