

DEVELOPING A NEW SMARTPHONE APPLICATION: URBANBABY

Professor Andrew Perkins wrote this case solely to provide material for class discussion. The author does not intend to illustrate either effective or ineffective handling of a managerial situation. The author may have disguised certain names and other identifying information to protect confidentiality.

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INTRODUCTION

On Tuesday, January 17, 2012, Alex Lebedzeu, chief programmer for his two-person startup Pure Inverse Studios, sat staring at his smartphone. His partner, Pavel Petrenko, had just finished the final build for their new smartphone application (called an app), tentatively called UrbanBaby. As Lebedzeu scrolled through the different sub-menus, a wealth of information appeared on the screen — where to go, what to do, what it costs — all related to the difficult task of finding activities, restaurants and other forms of entertainment for children from the newly born up to young teenagers. What was an epiphany just four months ago Lebedzeu and Petrenko had developed into a user-friendly app designed to help parents spend quality time with their kids.

As Lebedzeu examined the finely tuned app, his smile lessened somewhat. While he and Petrenko initially focused on getting the app to actually work, Lebedzeu was beginning to consider the scope of rolling it out and getting anyone to actually use it. While an experienced computer programmer, Lebedzeu knew very little about promoting his apps beyond uploading them to online repositories and various app stores or promoting them on his own web blog. While he believed UrbanBaby had commercial potential, he realized that he and Petrenko had some very serious decisions to address in order to make their app a success.

THE HISTORY OF THE SMARTPHONE AND APPLICATIONS

A smartphone is “a mobile phone that is able to perform many of the functions of a computer, typically having a relatively large screen and an operating system capable of running general-purpose applications” (<http://oxforddictionaries.com/definition/english/smartphone>). While smartphones have existed since 1993, it was only after Apple released its original iPhone in 2007 that they became widely available to the consumer market. Prior to the iPhone, companies such as Blackberry manufactured smartphones that ran primarily on enterprise networks that were managed in-house by a particular company or firm. Following the explosive popularity of the iPhone, these companies began to manufacture and develop consumer-

targeted smartphones with varying success against the most popular consumer smartphone manufacturer, Apple.

Along with the development of consumer-targeted smartphones, manufacturers created mobile operating systems (MOS) for them. Currently, there are numerous competing platforms: Android (developed by Google), Apple's iOS, Microsoft's Windows Phone, Symbian (developed by Nokia), BlackBerry OS (developed by Research In Motion, or RIM) and various embedded Linux distributions (see Exhibit 1 for recent worldwide market share of mobile computer platforms). While manufacturers originally developed a MOS for a specific smartphone, they now followed a business plan where they supplied a cross-platform MOS to other hardware developers. The exception to this business model was Apple, who developed their own mobile operating system, iOS, in conjunction with their own hardware (the iPhone) and did not share or license iOS to other hardware companies.

APPLICATION DEVELOPMENT AND DISTRIBUTION

While MOS developers do create a small number of software apps in-house that run on a particular MOS, the vast majority of apps available to consumers are created by individual or third-party developers. With their vested interest to facilitate third-party development, each MOS developer provides a software development kit (SDK) to programmers to facilitate the creation of apps. SDKs tend to be low cost (if not free) as an incentive for programmers to develop for a particular MOS. Each SDK includes a suite of tools that allows programmers to create and test apps for a specific MOS. These tools include standardized design elements (such as generic buttons, wheels, sliders and other types of software controls); a programming language that allows developers to connect the user interface to a wide variety of "back end" software, hardware and data components (such as the location hardware on a phone or a remote database); and a hardware simulator that allows the programmer to test and debug their app without using an actual smartphone. Each SDK is different and is used to develop an app for a single MOS.

Once the programmer deems the app ready for public use, it is uploaded to a specific manufacturer's online distribution system. After a cursory process in which the manufacturer assesses the stability of the app and approves it for distribution, the general public can search for that app, or any other available for download, pay for it and install it on their smartphones. The best known online distribution system is Apple's iTunes, followed by the Android Marketplace (Android). iTunes and Android organize apps in a searchable database by type or use and facilitate payment for apps that are not free. Both Apple and Android (Google) share a portion of the profits from each download if the app is revenue generating.

URBANBABY

The idea for the UrbanBaby app occurred when Lebedzeu was reading a parenting book. Noting the need for varied, interesting and potentially educational activities for his newborn child, Lebedzeu found the ideas in the book to be obvious, limited and potentially out of date. Further, Lebedzeu was an avid user of UrbanSpoon, an app that helped foodies and restaurant-goers find new and interesting places to dine out. UrbanSpoon allowed users to select from a list of restaurants based on style of cuisine, location and price range. Once a restaurant was chosen, UrbanSpoon displayed the location and directions on a map. UrbanSpoon was shown in an early iPhone television advertisement, jumpstarting awareness and making it one of the most popular apps for the iPhone. Users could also ask UrbanSpoon to choose a restaurant randomly, show restaurants nearby or include fewer constraints on search results, resulting in a larger number of choices. Finally, UrbanSpoon encouraged users to rate and review restaurants, upload pictures

and even submit changes to its database in the event information was inaccurate, out of date or the restaurant no longer existed.

Lebedzeu's experience with UrbanSpoon and the desire to seek out new and interesting activities with his soon-to-be toddler led to the creation of UrbanBaby. Similar to UrbanSpoon, UrbanBaby users could choose the type of activity, the potential cost of the activity and, importantly, the age of the child to generate a set of suitable activities. Users could also use the location technology within their smartphone to find activities within a few miles of their location (finding activities within walking distance, for example), upload images and reviews of activity or submit changes to the database. Importantly, and different from UrbanSpoon, UrbanBaby allowed users to submit new activities either online or via smartphone (see Exhibit 2).

POTENTIAL TARGET MARKETS

Once the tools of businesspeople and the very wealthy, by 2011 smartphones were perceived to be a near requirement for modern daily life. Combined with a large selection of third-party apps, users could continually add to the functionality of their smartphones. Consumers used their smartphones to text others, surf the Internet, play games, take pictures and videos, listen to music and talk to friends and family. On average, a smartphone contract in North America cost about \$60 per month, usually with a long-term (two- to three-year) contract. Breaking the contract could be expensive, so consumers tended to stick with their phones until near its end. Parents of young children also used smartphones to keep track of their kids, take photos and videos to share and archive and even gave them to toddlers to entertain themselves while travelling or eating.

While Lebedzeu and Petrenko believed there was an existing niche waiting to be filled, they were unsure who would really want to use UrbanBaby. One of the first things they needed to do, then, was to define potential target markets for their app. How this was to be accomplished was unclear. They believed that their target market was most likely younger, more technologically savvy, urban parents with newly born or young children. Beyond that, Lebedzeu and Petrenko didn't know what other characteristics of their target market might be important. Further, they didn't know if there were other potential target markets that they might be missing.

Lebedzeu and Petrenko did know that whatever target markets they focused on would need to be comfortable within an online social network. One of the strengths of UrbanSpoon was the community that had grown up around it. While it still generated information about restaurants and maintained the databases where that information resided, much of the new content and all of the reviews and personalized information were generated by users of the UrbanSpoon app. This vibrant group of foodies uploaded their own reviews of restaurants, took pictures of their food and commented on posts and reviews posted by others. Lebedzeu and Petrenko knew that they would need to facilitate and encourage the growth of a community around UrbanBaby, but they had very little experience in this area.

BUSINESS QUESTIONS

While the app worked perfectly, Lebedzeu and Petrenko foresaw a number of major obstacles to its adoption. As they considered these issues, they realized that decisions on each one affected other decisions, thus changing the strategic implications going forward. While Lebedzeu and Petrenko did come to somewhat of a hierarchy of importance for these issues, they couldn't agree fully on the specific order in

which to tackle them nor whether they agreed if these were all the issues related to the app that would be important. Their own list of relative importance of the issues is presented below.

1. **Lack of content.** Even though they expected users to create content for the app as they became more comfortable within the social network that hopefully was to grow up around it, Lebedzeu and Petrenko knew that the burden of creating the initial database of activities would fall on them. Currently, the database used to generate search results had been created “in-house” with Lebedzeu’s younger brother **searching local city guides and online search engines and using personal experience in order to populate it.** While Lebedzeu’s brother had been working hard over the summer for a small fee, and the database worked for the proof-of-concept app, he would be going back to school in a few weeks and would not be able to continue to develop it. Even if Lebedzeu’s brother could stay on the job, Lebedzeu and Petrenko knew there was no way he could generate content on the scale needed for the app to be useful outside the small geographic region where they lived. For the app to be popular enough to generate revenue, it needed to cover at least the larger metropolitan areas in Canada, if not the entire country. Further, Lebedzeu and Petrenko believed that expansion into the United States was the real goal. With this in mind, they had to find a solution to the content problem, and fast. Once they decided how they were going to generate the database, they had to figure out how to pay for it. Should they hire workers in other cities to do what Lebedzeu’s brother had been doing? **Were there databases that could be used to generate the content?** If so, how quickly could they expand to other cities? How much would that cost? Lebedzeu and Petrenko needed to figure out first what these options would **cost and then calculate some financial projections** to decide which option would be the best.

After some searching, Lebedzeu and Petrenko met with **getClarity**, a database company that focused on integrating a number of proprietary and publicly available databases to be able to search in ways not previously available to the public. getClarity offered Lebedzeu and Petrenko a data package that would cover a number of child-oriented activities: amusement and recreation, education, movies, museums and other places of interest. However, this data would still need to be coded for child interest. Exhibit 3 represents the offer sheet.

2. **MOS focus.** In North America, most consumers believed that Apple’s iStore was the most popular, had the largest user base and was the best developed distribution system for apps. While this was true due to Apple’s early entry into the app distribution market, Apple’s main competitor, Android, was catching up in North America and, importantly, was much more popular than Apple in the rest of the world due to the release of numerous smartphones across many different brands that all used Google’s Android OS (see Exhibit 1). Lebedzeu and Petrenko originally designed UrbanBaby on the Apple iPhone and were not strong programmers in the Android OS. However, with the competitive environment suggesting that Android was about to become a major player in North America and already the dominant OS internationally, Lebedzeu and Petrenko needed to decide whether to reduce focus on the Apple version of the app and spend their time learning how to program the app in Android OS. They figured it would take them six months to get up to speed on the Android OS and another three months of programming to get the app working properly. Unfortunately, they didn’t know how focusing on the Android app would affect revenues due to the Apple iStore popularity in North America.
3. **Naming issues.** While they hadn’t discussed it directly, both Lebedzeu and Petrenko knew that their current brand name, UrbanBaby, might be problematic. First, because of its similarity to UrbanSpoon, they were worried that at best there might be confusion between the two apps and at worst UrbanSpoon might sue to protect its brand name. However, the extent to which app names were

protected wasn't clear nor was the policy with the distributors. Further, the URL <http://www.UrbanBaby.com/> was already a popular web presence that targeted urban parents and supported a large and active online community that discussed parenting issues, especially in New York and San Francisco. Lebedzeu and Petrenko thought that the opportunity might exist to partner with either UrbanSpoon or UrbanBaby.com or potentially to sell the app to one of those previously existing companies.

MARKETING STRATEGY

As Lebedzeu and Petrenko discussed the issues with the app and its development, they realized that a number of tactical choices had not yet been addressed. First, they needed to decide how they would price the app. According to their research, most apps were released first as a free version with a paid version that included more features. Further, Apple and the other manufacturers provided advertising that could be integrated into the app, which might generate revenue even in the free version. However, this created a number of issues. First, which features should be left out of a free version? Considering how important Lebedzeu and Petrenko thought the social component of the app to be, what features would be deemed valuable enough to users to pay for but would not hinder the growth or development of a social network around the app? Second, what should the full version of the app cost? While apps generally cost anywhere from US\$1 to US\$10, some were much more expensive, but they tended to be very specialized. Further, UrbanSpoon was a free app, supported by ad revenue, and had been very successful. Lebedzeu and Petrenko needed to know if their target market was willing to pay for the app, how much they were willing to pay or if including advertisements would affect the experience of using it. They were having difficulty making ad revenue predictions, however.

Next, Lebedzeu and Petrenko had to decide how to position and promote the app in the marketplace. As social networking was an important component, they knew that it would help to access social networking sites and advertise there. There were also numerous parenting blogs and websites where potential customers might hang out. Lebedzeu and Petrenko also needed to decide how to position the app in the marketplace so that it best appealed to their target markets and, finally, how to promote the app.

Finally, Lebedzeu and Petrenko needed to decide the timing of the rollout of their app. Once in the Apple iStore, people would be free to download and try it. Unfortunately, with coverage limited to Canada, the vast majority of parents in North America would have no use for UrbanBaby until content was improved. Thus, content needed to be generated quickly in order to appeal to a large enough market. Of course, generating content would cost money, something in short supply for both Lebedzeu and Petrenko.

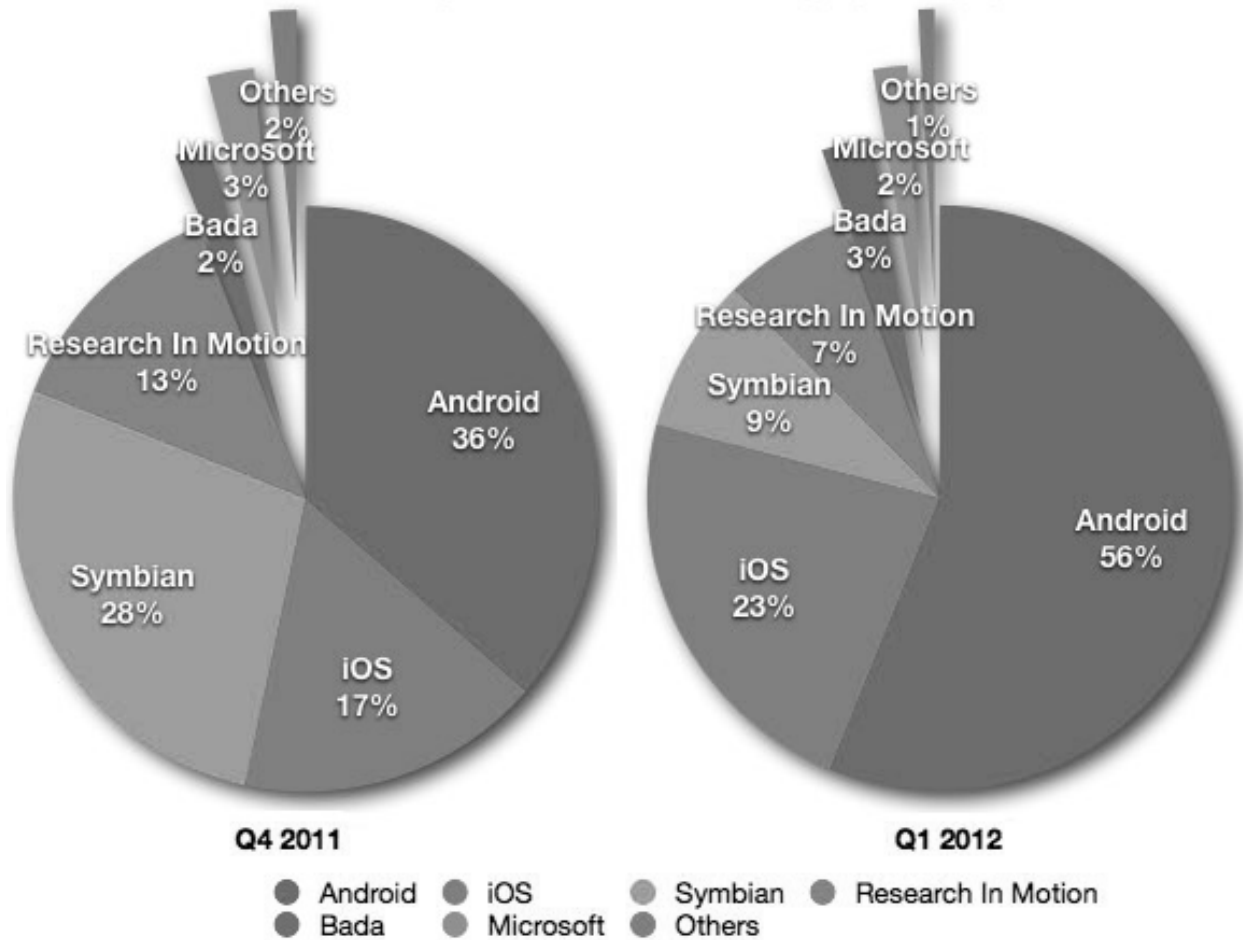
CONCLUSION

As Lebedzeu continued to work through the different areas of the UrbanBaby app, he realized that each of the decisions he had to make relied on other choices and decisions across the strategic field. He needed to prioritize his choices and decide how those initial decisions would affect subsequent strategic and tactical choices.

Exhibit 1

CURRENT MOBILE OS MARKET SHARE 2012

Worldwide Smartphone Sales to End Users by Operating System



Source: http://www.macobserver.com/tmo/article/apple_claims_7.9_of_mobile_phone_market_in_q1

Exhibit 2

SCREEN CAPTURES OF THE URBANBABY PHONE APPLICATION



Source: Alex Lebedzeu and Pavel Petrenko

Exhibit 3

GETCLARITY DATA PROPOSAL

**Data Proposal**

For: Alex and Pavel, Complete Inverse

By: Greg Purdy, getClarity Inc.

This proposal is for supplying the data relating to the businesses operating in the categories outlined below for all of Canada. You are able to select which categories you would like to purchase and the data can also be separated by and provided by province. All records include a full four digit SIC code.

Data Available by Category for Canada

• Amusement and Recreation Services	42,210
• Educational Services	40,967
• Social Services	43,951
• Motion Pictures	12,220
• Museums, Galleries, Botanical	2,262

Total Records	141,610
• Cost per Record	\$0.07
• Cost to Geo-Code per Record	\$0.03

Total Cost for all Records	\$9,912.70
Total Cost to Geo-Code all Records	\$2,832.20
Total for Records + Geo-Coding	\$12,744.90

***Note – All applicable taxes will be added to the prices quoted.**

Source: GetClarity, used with permission.