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ABSTRACT

Social media is the use of the Internet and mobile technologies to share user-generated content. At a broader level, social media has been providing an increasing amount of the information that is presented to very wide audiences. However, hyper-local media is a form of such social media that tries to target a comparably narrow but focused group of audience with timely and related content. OpenAnchorage presents our vision of a hyper-local information site. It was developed to collect community information created by the local providers and present this information on a local area map where interested users can select the data relevant to their hyper-local geographic area. OpenAnchorage website simultaneously requires a process of providing both new technology and new content.

The research design is an iterative analysis-adjustment and adaption-data collection with an integrated process of using Business Model Canvas and Customer Development Stack. The goal of this project is to determine the potential business model or models that will serve our site best by using this innovative, iterative, experiment approach. The desire is that, eventually, the site will be able to get a critical mass of participation, to generate socio-economic values to serve our community, and to support its own long-term sustainability.

Keywords: Social media, hyper-local, business model, customer development

INTRODUCTION

Some forms of social media use the Internet and mobile technologies to share user-generated content. At a broad level, these forms of social media provide wide-ranging information that is presented to very wide audience. Hyper-local media, on the other hand, is a form of social media that provides specific content to a narrowly focused audience. For example, *EveryBlock* (n.d.) is

designed to encourage local community members and neighbors to communicate and interact through the sharing and discussing of neighborhood-specific news and activities. *Color* (Mies, 2012) and *Tackable* (Team Tackable, n.d.) are apps that provide a capability for live sharing of photos and videos. *Best of app* allows users to search for, or submit, such items as the best eating, drinking, and experiences on a block-by-block basis. These types of websites and apps obtain their information from local news sources and public data such as crime reports and restaurant health inspection reports. Others rely on content submitted by individuals within the appropriate geographic area of demographic group. Many of them display their content on maps.

Open Anchorage presents our vision of a hyper-local information site (Nowers, Yen, & Kanamori, 2011). This project was developed to collect community information created by local providers and present this information on a local area map where interested users can select the data relevant to their hyper-local geographic area or specific interest. Our website simultaneously requires a process of providing both new technology and new content. Its introduction involves many different groups. In addition to the content providers, it also involves consumers and advertisers, display designers, and infrastructure providers. The long-term success of hyper-local information providers may be contingent on three conditions: the reliability of the provided content, the sustainability of its content providers, and the ability to generate income necessary to maintain the provider's existence. After the website was launched (OpenAnchorage.net), the team immediately faced an unavoidable challenge: what business model or models should be selected to guide this site towards a successful and sustainable implementation.

A classic definition of a business model was developed by KMLab, Inc. (as cited in Chesbrough & Rosenbloom, 2002): "A business model is a description of how your company intends to create value in the marketplace. It includes that unique combination of products, services, image, and distribution that your company carries forward. It also includes the underlying organization of people, and the operational infrastructure that they use to accomplish their work." Some business models can be used to address or explain three phenomena: 1) e-business and the use of information technology; 2) strategic issues, such as value creation, competitive advantage, and firm performance; and 3) innovation and technology management (Zott, Amit, & Massa, 2010).

Chesbrough and Rosenbloom (2002) mentioned in their research that businesses with established business models are less likely to be motivated to explore alternative business models than are technology start-ups businesses. They also suggested that the set of all feasible combinations of potential variables, such as value proposition, market segment, value chain, cost structure and profit potential, value network, and competitive strategy, and hence business models, are not foreseeable in advance. As a result, the search for a successful model is less the development of a fully elaborated and defined plan of action, and more of a process of generating a candidate model, and adjusting and adapting that candidate based on new information and possibilities. As part of the process, alternative models might be generated and filtered through a heuristic logic that was established from previous success.

Motivated by Chesbrough and Rosenbloom's research, our research design will start our process of business model research by analyzing and comparing alternative business models and use a mapping approach. Then we will build upon our business model research to run an experiment to collect data using the experiences of test subjects on the OpenAnchorage website. These data

will be analyzed to find and generate a new alternative model for further testing and experimentation. The research design will be an iterative analysis-adjustment and adaption-data collection process. We will use high school and business major college students combined with a recruited target group of users as subjects in our experiment. They will act as the information providers and website users to test different business model implementations and find good potential fits with website usage and user satisfaction. The final goal of this project is to determine the potential business model or models that will serve our site best by using this innovative, iterative, experiment approach. The desire is that, eventually, the site will be able to reach a critical mass of participation, generate socio-economic values to serve our community, and support its own long-term sustainability.

BACKGROUND

This project builds upon EveryBlock by using code extended from their OpenBlock Project (OpenPlans, n.d.) and by experimenting with new ways for users to find local news and public information through user interaction. The project was planned to be implemented in three phases: the first phase started with the installation of a pilot version—including mapping and updated news feeds— customized for the local community. In the second phase, a module was developed to construct metadata to help users assess the trustworthiness of the news on the OpenAlaska website. This was to be accomplished by consolidating and collaborating content obtained from diverse content sources, where each news item and more general public data was assigned a measure of content quality. The third phase was to focus on the economic sustainability of our hyper-local news site.

However, after we implemented the pilot site using the open source code from the OpenBlock Project, we encountered three major problems: high deployment cost due to the amount of location-based customization the provided code requires, high cost of obtaining developers skilled in the technology used to develop the code (Django and GIS), and lack of accurate geographic data for rural communities. Similar difficulties were encountered with the OpenBlock project mentioned (Thornburg, 2013) After evaluating the alternative solutions and analyzing the potential costs and benefits for our long-term development and maintenance purposes, we decided to abandon the approach of using open sources to develop our system from scratch with proprietary software. The general guidelines we have set up for this project's information feeds are the following.

Automated. Constraints on the time available for the administration of our application require that data collection and display be accomplished through automated scripts. Content submitted by users in both text and picture formats must be handled without human intervention.

Trustworthy. It might be possible to assume that content provided by government sources or obtained from public data sites is reliable. However, content provided by blogs and through mobile devices might be less reliable. Some measures of the quality of the data are a necessity if the information presented is to be trusted by the users.

Timely. Since delayed information might severely limit the usefulness of the local news and information, our system automatically feeds and posts this information in virtually real time.

Scalable. In order to remain viable in the future, the system should be designed so that it can add new data feeds and new—perhaps unanticipated—types of content providers.

Sustainability. Once the website is fully functional, it must be able to generate sufficient revenue to ensure that it will be able to continue in operation.

LITERATURE REVIEW

Business Models

Business models have been the focus of substantial attention by both academics and practitioners. In relation to technology, business models can be viewed as roadmaps used for guiding the transformation of technological developments into some measure of economic value. The most common measure of value is often monetary, but it might also be measured on other bases such as social benefits. The design and implementation of business models is becoming as critical to technological success as is the development of the technology itself. The rise of e-commerce, social media, and apps has changed the conventional way of doing business, and because of those changes, new business models have needed to be developed for the purpose of generating value from these new technologies.

In their working paper, Zott, Amit and Massa (2010) did a comprehensive review of business model literature and explored the topic through multiple disciplinary and subject-matter perspectives. They included different e-business model typologies, components of these business models, and associated strategic marketing in each model. A discussion of business models on the website also listed the following basic categories of the business model taxonomy, which includes brokerage, advertising, infomediary, merchant, manufacturer (direct), affiliate, community, subscription, and utility. It was also emphasized that sometimes several different models may be combined as part of the company's overall e-business strategy (Rappa, 2011).

Within a specific context, a business model is the method of doing business by which a company can generate revenue by specifying how it positions itself in its value chain (Rappa, 2011). Based on our research, we decided to use the mapping approach by integrating and adapting the approaches of three models.

Chesbrough and Rosenbloom (2002) explained their definitions of business models that are modern variations the classic definition of strategy of a business unit by Andrews (1987). In their paper, they represent a business model as the intermediary between technical and social domains (see Figure 1). In the technical domain, features such as technical feasibility and performance would be key objectives; these form the inputs into the business model. In the social domain, measures such as value, price, and profit could be objectives; these are the economic outputs generated by the implementation of the business model. Within the business model itself, value proposition, market segment, value chain, cost structure and profit potential, value network, and

competitive strategy, are the variables that can be selected in the design of a particular model. The selection of the variables in the business model determines how successfully the technical inputs are converted into economic outputs. They listed six functions of a business model that need to be defined. They present the more detailed and operational definition of these functions as the following:

- Articulate the *value proposition*, that is, the value created for users by the offering based on the technology;
- Identify a *market segment*, that is, the users to whom the technology is useful and for what purpose;
- Define the structure of the *value chain* within the organization required to create and distribute the content offering;
- Estimate the *cost structure* and *profit potential* of producing the offering, given the value proposition and value chain structure chosen;
- Describe the position of the organization within the *value network* linking suppliers and customers, including identification of potential complementors and competitors;
- Formulate the competitive strategy by which the innovating organization will gain and hold advantage over rivals (Chesbrough & Rosenbloom, 2002).
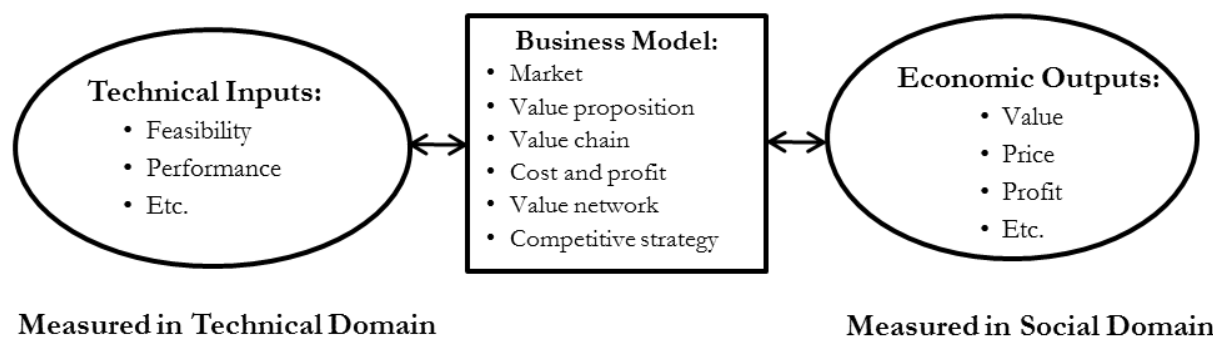

Figure 1: The Business Model Mediates Between the Technical and Economic Domains.

Osterwalder and Pigneur (2010) defined a business model as how an organization creates, delivers, and captures value. Based on his dissertation, Osterwalder has used the nine-point process decomposition with a focus on mapping approach to construct the maps of business model as illustrated in Figure 2 (Osterwalder, 2004). He developed a tool called the Business Model Canvas and later worked with Pigneur to design in this Canvas how any company's business model could be defined in 9 boxes.

- Value Proposition: the product/service, its feature and benefits or uniqueness vs. competition; size of the market opportunity; and the MVP or minimum viable product that best illustrates the product as quickly as possible to elicit customer feedback early;
- Customer Segments: who your customer is and what problems the product solves;
- Channels: how you will distribute and sell your product;
- Customer Relationships: how you will create demand;
- Cost Structure: the fixed and variable costs required to operate your business;
- Key Activities: the tasks the company must perform to succeed;
- Key Resources: suppliers, commodities, or other essential elements of the business;

- Key Partners: other enterprises essential to success of the business;
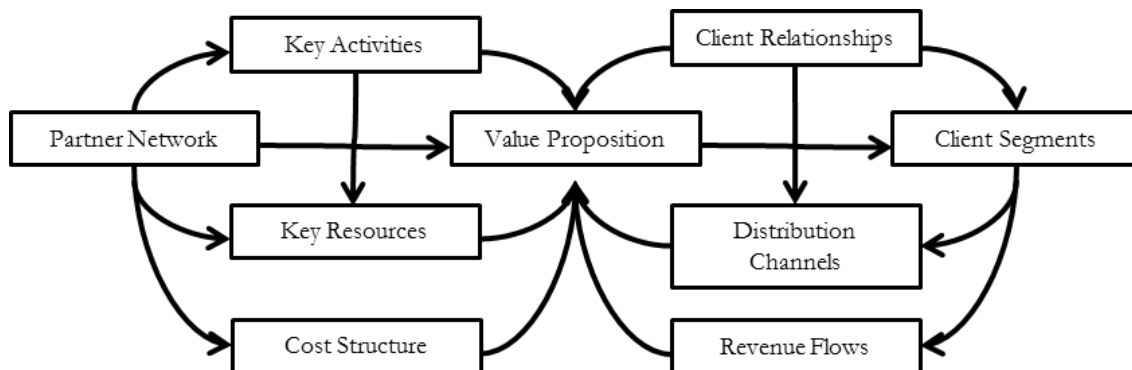- Revenue Streams: revenue and profit sources and size.

Figure 2: Osterwalder's Nine-Point Decomposition of a Business Model.

The Business Model/Customer Development Stack

Blank and Dorf (Blank & Dorf, 2012) argued that the Osterwalder Business Model Canvas (Osterwalder, 2004) could be used for something much more than a static planning tool. He found that the canvas was the launch pad for setting up a hypothesis to test and a scorecard for visually tracking iterations and pivots, during Customer Discovery and Validation. In other words, it combines the business model with customer development as a stack, business model design gets dynamic and customer development gets strategic. They explained that the simplest way to think about the intersection of the two processes is that you start by designing your business model, then each of the nine business model canvas boxes can be directly translated into a set of customer discovery hypotheses when will be described in customer development.

Osterwalder and Blank (2013) integrated business model design with the customer development process. They described how and when business model design meets customer development process. Each of the nine business model canvas boxes directly translates into a set of customer discovery hypotheses. They argue that many organizations assume that assumptions in their original business model will be correct. Confronting the reality that in cases where one of these hypotheses is wrong (such as wrong sales channel, revenue model, target market or customer) a crisis would be the result. They suggest that tying the Business Model Canvas with the Customer Development process turns these potential crises into learning opportunities called the pivot. Customer Development through customer discovery and customer validation phases forces people to get out of building and discover and to validate each one of the assumptions behind the business model. A pivot is when reality leads people to change one or more business model hypotheses. They claimed that the result is an updated business model not a fired VP of Sales.

The Coupon/Advertisement Model

In order to reach the long-term sustainability and, eventually, a profitable business, which can be self-sufficient, several potential sales/revenue models have been studied. Prior to 1999, banner advertisements sold on a cost per thousand impressions (CPM) basis; these were the dominant

method of Internet advertising. In early 2000, another way of selling ads, the pay-per-click (PPC) basis through an auction marketplace was used by GoTo.com and later Overture and Yahoo! Search Marketing became a revenue winner. The difference between the PPC models of advertising and the CPM model was that it mitigated the risk for advertisers by pushing the cost structure one step further down the conversion funnel. Whereas the CPM model forced advertisers to pay for simple exposure, the PPC model enabled them to pay only once when a user indicated some kind of interest by actually clicking on the advertisement from within a browser. In 2010, paid search accounted for more than half of online ad spending among small businesses; however, traditional search advertising was still not working for the smaller local businesses, primarily because of challenges for managing downstream attribution and because successful search marketing required more analytical sophistication than most small businesses could provide. A wave of companies such as Yodle and Yext entered the market to try to merge online advertising with offline lead generation and customer relationship management, but none successfully transformed the local advertising landscapes. Beginning in 2008, based on a Groupon case study by Lancellotti-Young (2011), Groupon entered into the market with a pay-per-conversion model (CPA). This model managed to bridge the gap between online and brick-and-mortar worlds by allowing small businesses to pay out for advertising only when consumers had actually generated revenue for the merchant. While Groupon leveraged large call centers to reach many of its merchant customers, its largest competitor, LivingSocial, pursued a model of employing a local sales force in every city in which it was operating. This latter model is clearly hyper-local, but is capital intensive and left some critics wondering if the cost structure really translated into customer dedication.

RESEARCH DESIGN

Our research design is based on the Business Model/Customer Development Stack approach of using the Customer Development process with the Business Model Canvas. We believe it is possible to assemble a far more detailed version of our vision that includes the nine most important elements of our business model. With this approach, we will validate our vision with the realistic validators: our potential customers. As customers applaud or pan elements of the business model, we will iterate the model and pivot over time based on the feedback of our customers. This constantly updated business model will become a scorecard for monitoring progress as we go through the Customer Discovery phase (Blank & Dorf, 2012). Our initial goal for the iteration phase will be able to get a sufficient level of participation to provide feedback on the website for its trustworthiness, relevance and usability. Once we achieve this critical goal and priority, then the other objectives of generating socio-economic values to serve our community, and eventually to support its own long-term sustainability will be undertaken.

After conducting a series of studies to analyze and compare alternative websites and their business models with either the similar functionalities or similar target customers, such as OpenBlock, Anchorage Daily News, Alaska Dispatch, SeeClickFix for their value propositions, and Groupon, Anchorage Daily Deals, regular mailing coupons and accumulated reward points of different e-commerce sites, for their revenue flows and distribution channels. We will first determined our hypotheses using the Business Model Canvas with Customer Development Process approach and abandon the broader news feed from news media and public data feed

from the public sectors, and will instead focus on a narrower customer base and channels, simpler customer relationships, and a limited, but focused, key activities and value proposition. They are summarized follows:

1. Value Proposition: provide a trustworthy website and service for people who live in the same community/block, an ability to post useful and interested text information, and an ability to post photo images onto a map for sharing location information. The categories of this shared information will include, among others, traffic, sports, social events, experiences, wildlife encounters. The users will be able to express their comments and votes on their preferences.
2. Customer Segment: the potential users will focus on individuals in their late teens and young adult, i.e., higher school and college students.
3. Channels: Internet and mobile devices, and customer interface quality.
4. Customer Relationships: through recruitments and focus group experiments.
5. Cost Structure: because of the academic focus of this project, there are no significant cost concerns at this stage.
6. Key Activities: the key tasks include providing a trustworthy and functional website which will be available for both content providers and information users on a 24/7 basis.
7. Key Resources: hardware, software, content providers, display designers and other facilities.
8. Key Partners: content providers, consumers and advertisers, display designers, and infrastructure providers.
9. Revenue Streams: concentrate on local small business advertisements and coupon sales without using a heavy capital intensive sales force.

The next stage of our research design will involve testing the above list of hypothetical components with actual users. We will start with the first seven components and use business major students from a local university combined with a recruited target users group as pseudo-customers.

DATA ANALYSIS AND FINDINGS

An alpha-level testing version of the OpenAnchorage website was launched in late August 2013. The website was demonstrated for our pseudo-customer groups, and data were collected in early September 2013 via an online survey. This online data collection method was consistent with the background skills of the subjects of the study, online web users. The duration of the survey was two weeks and the participants were volunteers who were interested in this particular research topic and had volunteered to use the site. In addition to the data related to demographic questions, our pseudo-users answered a survey questionnaire about their experiences with using the website. Survey questions included perceived usefulness, perceived trustworthiness, and level of satisfaction. The survey was designed to measure research constructs using multiple-items scales adapted from previous studies that reported high statistical reliability and validity and were evaluated on a five-point Likert scale.

Among 42 registered users since the site was launched, 27 responses were received. Of these, 2 out of 27 responses were invalid, incomplete or gave the same rating for all items; the remaining 25 responses were used for the analysis. The demographic profile and general Internet usage background from the questionnaires is summarized in Table 1.

Characteristics		Frequency	Percentage
Gender	Male	8	32
	Female	17	68
Age	18-20	1	4
	21-29	17	68
	30-39	6	24
	> = 40	1	4
Education background	High school	0	0
	College	15	40
	Master or higher	10	60
Job	Student	8	32
	Employed*	16	64
	Unemployed	1	4
Devices you use regularly to connect to the Internet (Check all that apply)	Laptop Computer	25	100
	Smart Phone	24	96
	Desktop Computer	12	48
	Computer Tablet	11	44
	Other	0	0
Location where you are most likely to use the Internet (Check all that apply)	Home	25	100
	School	19	76
	Work	16	64
	Bookstore/Café/Coffee Shop	12	48
	Library	10	40
	Friend's Home	9	36
	Outside	9	36
For which of the following activities do you use the Internet? (Check all that apply)	Check the weather forecast	19	76
	Find local events	17	68
	Find people you know	18	72
	Get directions	20	80
	Keep in touch with friends	24	96
	Keep up with current events	20	80
	Make or receive phone calls	20	80
	Pay bills	23	92
	Play games	13	52
	Play music	20	80
	Play videos (other than video games)	18	72
	Purchase products or services	24	96
	Read other people's comments (on blogs, news stories, etc.)	18	72
	Record videos	17	85
	Research academic articles or books		
	Send or receive instant messages	22	88
	Send or receive photos	25	100
	Send or receive videos	11	44
	Start new dating relationships	5	20
	Start new friendships	7	28
	Take online academic classes	19	76
	Take or post surveys	8	32
	Use social networking websites	22	88
	Other (please specify)	0	0

*Many students working on advanced degrees are enrolled in courses while working full time.

Table1: Demographic and Internet Usage Profile (N=25).

There is a large body of research that suggests that customers will trust e-vendor or website providers if they have a perception of usefulness (Babin & Babin, 2001; Davis, 1989; Pavlou & Fygenson, 2006, Taylor & Todd, 1995a, 1995b). Perceived usefulness is an essential measurement in shaping consumer attitudes and satisfaction with e-commerce. Based on social exchange theory (Blau, 1964), some scholars believed that trust creates strong impacts on customer satisfaction (Chiou, 2003; Singh & Sirdeshmukh, 2000). Chiu, Lin, Sun, and Hsu (2009) proved that trust is the strongest variable that had impacts on customer satisfaction in online shopping. Zhou and Zhang (2009) had discussed that website quality includes three dimensions: system quality, information quality, and service quality and concluded that these dimensions affect user satisfaction through perceived ease of use, perceived usefulness and trust.

Table 2 presents the descriptive survey statistics, and Table 3 shows their correlation coefficients by using Pearson's r values. In these survey results, one interesting finding is that higher perceived usefulness is correlated with higher frequency of use scores, r=.65, which can be considered a large effect based on the Pearson's correlation coefficient (r>.50). This result implies that the more useful the users find the site, the more likely they are to use it.

Survey Items	N	Mean	SD
Visually appealing (Q9)	25	2.68	0.85
Easy to navigate/computer (Q10)	25	3.64	0.75
Easy to navigate/smart phone (Q11)	25	2.96	0.88
Trust (Q12)	25	3.24	0.59
Usefulness (Q14)	25	3.20	0.81
Frequency of use (Q15)	25	2.76	0.87

*5 points scale:
1=Not at all, 2=Slightly, 3=Moderately, 4=Quite, 5=Extremely agree

Table 2: Descriptive Survey Statistics.

	Visual Appealing	Easy to Nav/Comp	Easy to Nav/Phone	Trust	Usefulness
Visually Appealing	1				
Easy to Nav/Comp	0.0077464	1			
Easy to Nav/Phone	0.2023743	0.4110926	1		
Trust	0.2389862	0.1068838	-0.13815182	1	
Usefulness	0.2753751	0.0539164	0.06889728	0.23925507	1
Frequency of Use	0.0600291	0.2402885	0.14712990	0.43159165	0.64993368

Table 3: Correlation of Survey Measurements.

There was a medium effect which was close to the large criteria (r>.50) shown in this correlation analysis: higher trust scores were correlated with a higher frequency of use score (r=0.43). This seems to indicate that users are more likely to use the system if they find the posting trustworthy. This again emphasizes the need to improve the users' perceptions of trustworthiness.

With this limited sample size, we were not able to infer the same correlation to the rest of the population from which our sample was drawn.

Concerning encouraging users to either use the site to post events or to use it for any other purpose, two questions (Q18 and Q19) were relevant. These issues are important to consider when future work will be directed towards implementing a particular business model. Their ranking results are presented in Tables 4 and 5. The values in Table 4 show that the awarding of coupons was the most favorable approach for encouraging the reporting of events; 68% indicated that this was their first or second choice. None of the alternative awards stands out as a clear second choice, although earning points for gifts may still be a potential alternative to explore further. Table 5 also shows that the use of coupons was the dominant choice, followed by announcements of nearby sales, free samples, and an approach that award points.

Answer Options	Rating Average
Award of coupons	1.76
Earn points for gift	2.95
Save time	2.95
Get recognition by other users	3.62
Free advertising for posted event	3.71

Table 4: Factors of Creating Events on the Site.

Answer Options	Rating Average
Coupon	1.72
Announcements of nearby sales	2.72
Free samples	2.83
Points award system	3.00
Get votes and comments	4.72

Table 5: Factors of Using the Site in General.

The importance of sharing hyper-local information, as opposed to wider area information, can be seen in the responses to Question 13; these responses are listed in Table 6. For example, sharing urban animal sighting is truly an Anchorage phenomenon. With almost 300 black bears, 300 moose, and at least 36 grizzly bears living within the city limits, spreading the word on wild animal sightings throughout a neighborhood is recognized as being quite important to the survey responders. Reporting street repair needs, as well as reporting and checking for suspicious criminal activities were also consider important. Only the reporting of graffiti was not considered very important. This last result helps to valid the other responses on this question because graffiti is a minor problem throughout the Anchorage area.

Answer Options	Responses	Percentage
Reporting animal sightings	17	70.8
Sharing information with neighbors	16	66.7
Reporting street repair needs	14	58.3
Reporting criminal suspicious activities	13	54.2
Check for reports on criminal or suspicious activities	13	54.2
Checking for animal sighting reports	12	50.0
Report graffiti	4	16.7
Other (Please specify)	4	16.7

Table 6: Purposes of Using this Site.

Among those other suggested purposes, the responses show that people like to use the site to find food places, timely local news and updates, and current social events, such as the locations for concerts, garage sales, race start locations, and other local fun events on the map.

Some other findings were the comments and the thumbs-up/thumbs-down rating features. These were built into the system as a way for users to evaluate, and expand upon, the posting. Even though one-third of the users felt very much trust in the posting, none of them expressed an extremely high level of trust, and two-thirds indicated, at most, some to no trust. Efforts must be made to increase the level of trust of the users.

CONCLUSION AND FUTURE RESEARCH

The business model concept is useful in analyzing and communicating the essence of a business, and for predicting the implications of its needed business components. It is even more meaningful when integrated with a customer development process of customer discovery and customer validation for exploring the potential sustainability of our innovative hyper-local information site project. Since we have finished our pilot website (OpenAnchorage.net), this project will now address the next step by using the results of the experiment to guide its future improvement. Survey data were collected and analyzed in September 2013. Although the current iteration of the system did not include any news and public data feeds features, it did include most of the core functionalities and key activities intended to serve the needs of a hyper-local community.

The survey results will be used as part of our continuous development approach to guide revisions and improvements of the website and its usefulness. Three broad areas of improvement have been identified:

- Improving the visual appearance of the site,
- Improving the trustworthiness of the user provided content, and
- Modifying and adding new content categories.

In addition, two new areas of development will be undertaken: the use of the coupon/advertise model, and the development of a smartphone app.

Improving the visual appearance of the existing website, when viewed from a large screen device, simply involves changing the layout, colors, and graphics. However, improving the appearance on a small screen device like a smartphone can involve using some available technology such as jQuery mobile. Another possibility is to develop an app specific for one or more mobile operating systems. Improving the trustworthiness will involve the development of an algorithm that will factor in the number and recency of multiple postings, the accumulated ratings of each particular poster, and other items that will be selected based on their ability to evaluate trust. The addition and changing of content categories will be based directed on the survey results and suggestions of the survey participants. The new design and modifications can be tested by comparing the existing survey results with results collected through the same survey question, but after participants have used the new system.

Finally, because survey results indicated a strong preference for the use of coupons as the reward mechanism for encouraging participation, the use of coupons will be tested in the next iteration of the website. Expanding the coupon/advertise model as a basis for sustainable success will be tested by partnering with one or more businesses that would be willing to provide coupons to content contributors and users of the system; at the same time we will explore methods of providing value to those partners through advertisements.

In conclusion, we have addressed seven of the nine key activities and value propositions listed in our Research Design Section in this paper.

1. Value proposition: a basic method was developed for providing a trustworthy website, and through our survey, have determined a need to improve trust. A service has been provided for people living within a small geographical area to share information and post pictures on a map with geographic identification. In addition, users are able to express their comments on the posting and to rate them.
2. Customer segment: college students were recruited as our pseudo-users. High-school-aged customers were not included in our alpha testing, but will be included in the next run of tests.
3. Channels: the system was developed to be useable through the internet on both stationary, large-screened devises, and on mobile devices that have internet capabilities. However, the website was not tailored to mobile devices. The users' satisfaction with mobile devices should be improved in the next development iteration as a mobile app is developed rather than just a website opened on a mobile device.
4. Customer relationships: college students were recruited based on their particular interest in social media and emerging technology. They voluntarily tested the system.
5. Cost structure: not currently applicable in the academic environment. The next iteration will involve further testing by cooperating with business partners.
6. Key activities: a website was provided with some trustworthiness that could be used by content providers and information consumers on a 24/7 basis.
7. Key resources: dedicated hardware was acquired and used to develop the website using proprietary software development tools and a custom designed website. Through our testing, it was recognized that the design needs to be improved.
8. Key partners: since this was an alpha test, it was not open to outside testing. The next iteration cycle will open up the website to at-large users and business partners.
9. Revenue streams: not applicable in this current iteration. Will be tested in the next iteration.

Although the sample size was limited in the first experiment, the responses from those interested pseudo-users were valuable and useful for guiding the project to its next iteration. The next iteration of the Business Model Canvas elements will be updated to reflect the feedback we received from our pseudo-users.

With its exploratory features, it was our hope that this project will become an essential and creative tool for community engagement in Anchorage as it increases the number of users/consumers and functionality over time. Ultimately, we hope to create a critical mass of participants to serve our local community with valuable socio-economic content while achieving a long-term sustainable hyper-local information system.

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