

Biyahero.Ph: A Web Based Travel Organizer

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ABSTRACT: Peer-to-peer markets, collectively known as the pooling economy, have emerged as alternative suppliers of goods and services traditionally provided by long-established industries. The rapid growth of peer-to-peer platforms has arguably been enabled by two key factors: technology innovations and supply-side flexibility. Technology innovations have streamlined the process of market entry for suppliers, have facilitated searchable listings for consumers, and have kept transaction overheads low. Supply-side flexibility is another hallmark of these platforms: Uber drivers can add or remove themselves from the available supply of drivers with a swipe on an app, and similarly other suppliers can readily list and de-list the selection of goods or services they have on offer. Biyahero.ph adapted this kind of market by allowing its biyahero organizer to input their travel packages and enlist them so that biyahero joiner can choose and avail the said tours.

Keywords: Peer, Flexibility, organizer, uber,

I. INTRODUCTION

The emergence of peer-to-peer platforms, collectively known as the pooling economy, has enabled individuals to collaboratively make use of under-utilized inventory via fee-based sharing. Consumers have so far enthusiastically adopted the services offered by firms such as Airbnb, Uber, Lyft, and TaskRabbit. Biyahero is a travel pooling app wherein user can select and book their trips via using the uber way of things. This platform will help Trip Organizers to reach more client to offer their services wherein on other hand trip joiners will able to have more selection on trips they plan to book. The platform will be used by 2 kinds of users, Organizer and Joiner. Biyahero will be the platform to connect both parties.

The primary objective of biyahero.ph is to design and develop a mobile and web platform system that will list tours available in the Philippine to connect other travellers in just a one tap. It also incorporates rating feature to ensure high standard services.

II. LITERATURE REVIEW

Mobile application is trendy and receives high demand in marketplace. Thus, mobile technology has been identified as a potential delivery alternative since it is able to provide services anywhere anytime. The proposed system is created to be used in both mobile and web or also known as Progressive Web App, this applications uses modern web capabilities to deliver an app-like user experience.”

In 1995, Pierre Omidyar started the consumer auction website that became eBay. An often-cited story is that he recognized its potential when he put a broken laser pointer up for sale, and sold it for \$14.83 to a buyer who turned out to be a collector of broken laser pointers. As the story suggests, the Internet is a powerful tool to help buyers and sellers find each other. It has enabled the creation of marketplaces for local goods and services (e.g., Craigslist), computer programming (Upwork, formerly oDesk, and Freelancer), consumer loans (Prosper, Lending Club), crafts (Etsy), start-up financing (Kickstarter), accommodations (Airbnb), babysitting (Care.com), and currency exchange (TransferWise, CurrencyFair). These days, hundreds of companies are trying to create markets for “on demand” services such as rides (Uber, Lyft, BlaBlaCar), deliveries (Instacart, Postmates), and household tasks (TaskRabbit, Handy).¹ Although these businesses each have specific features, they share common elements. They lower entry costs for sellers, allowing individuals and small businesses to compete with traditional firms. They rely on spot transactions, often eschewing long-term contracts or employment relationships. They take advantage of technology to improve the matching of buyers and sellers or to implement flexible or auction-based pricing. They frequently do little up-front screening or certification and instead try to maintain quality by using reputation and feedback mechanisms. And, at least in some cases, they have made inroads by skirting regulatory barriers. For economists, the rise of peer-to-peer markets has provided a fascinating set of examples of innovative market design. Companies such as eBay, Etsy, and Airbnb allow

thousands of sellers to experiment with prices, selling mechanisms, and advertising strategies. Finance platforms such as Prosper and Kickstarter use a variety of public good mechanisms to enable individuals to collectively fund loan or project investments. Labor markets such as Upwork and TaskRabbit allow buyers to run small-scale procurement auctions for specialized tasks. Businesses such as Instacart and Uber use centralized mechanisms to assign workers to jobs, but these mechanisms also rely on market forces. When a rider submits a desired route, Uber advertises the job to nearby drivers. The allocation of the job is invisible to riders, but Uber tries to balance demand and supply and limit wait times by adjusting prices to current market conditions. In this review, we take stock of the academic research on peer-to-peer markets and discuss some of the broader economic issues around these new platforms. We divide the article into three parts, looking first at the design of Internet markets, then at the economics of peer production, and finally at some emerging regulatory issues. Businesses that hope to create successful marketplaces for matching buyers and sellers have to solve several problems. They need to help buyers and sellers find each other, either by developing a centralized assignment mechanism or by enabling effective search. They need to set prices that balance demand and supply, or, alternatively, ensure that prices are set competitively in a decentralized fashion. And importantly, they have to maintain an adequate level of trust by developing mechanisms to guard against low quality, misbehavior, and outright fraud. In solving these problems, peer-to-peer businesses usually have to trade off between two important objectives: designing market mechanisms that efficiently elicit and incorporate dispersed IAs of June 2015, there were 583 peer-to-peer start-ups listed on AngelList, a website that tracks early-stage investment opportunities. Trying to figure out which of these are viable was an enjoyable part of our “research.” Consider Drizly, an Uber-esque service that delivers beer and other alcoholic beverages at the press of a button (it faces a dozen or more competitors), or Dufl, which will move your travel bag from city to city and wash your clothes between trips (a potentially attractive service for frequent travelers, although the price tag of \$99 plus a monthly subscription fee led one caustic online commentator to remark that “it seems like an expensive solution to a problem that doesn’t really exist”). 616 Einav · Farronato · Levin EC08CH22-Levin ARI 20 September 2016 13:52 information, and minimizing various forms of transaction costs to keep the user experience convenient. To see an example, consider the cases of Airbnb and Uber. In accommodations, heterogeneity is a central problem. Given a choice of Paris apartments, not everyone will agree on a common ranking, and sellers may have widely varying costs. The dispersed nature of information calls for a market design that prioritizes choice by initially presenting fairly broad sets of options and relying on buyers to narrow them down. In ride sharing, matches need to be made in real time. Most people heading home from a bar on a Friday night want an immediate and safe ride, and care less about choosing between a nicer car and a more experienced driver. It therefore makes sense for Airbnb to run a decentralized marketplace, whereas Uber uses a centralized assignment mechanism. The way that peer-to-peer markets deal with quality assurance and trust is perhaps more surprising. It does not take a PhD in economics to see the potential incentive problems in semianonymous online transactions. Yet we know plenty of professional game theorists who are willing to spend the night in a rental apartment they found on Airbnb. What is especially striking about this degree of trust is that peer-to-peer businesses often dramatically lower the barriers to becoming a seller. London drivers historically spent years studying to obtain a black cab license, and becoming licensed to run a bed and breakfast could take months. The application process to become an Uber driver or Airbnb host takes days or hours. Of course, these businesses do some up-front screening, but they also rely heavily on user feedback to provide ongoing monitoring, including subtleties such as one-sided versus two-sided reviews, what information to collect, whether to limit the set of reviewers, and how to provide incentives to leave meaningful and truthful feedback. To do this, we set out a simple model in which goods and services can be produced by dedicated professionals or flexible peers. Certain features of markets make them more amenable to peer production. These include variability or diversity in demand, the absence of scale economies in production, and of course the existence of well-functioning spot markets to match buyers and sellers effectively. We think of the entry of peer-to-peer markets as potentially performing two tasks: improving the efficiency of spot transactions and lowering the cost required for sellers to advertise themselves to buyers. These innovations especially benefit flexible sellers, who might not otherwise do enough business to justify large investments in advertising, reputation, or customer relationships. We also discuss the extent to which peer-to-peer markets can generate revenue from users, and the longer-term prospects for peer production. One highly publicized issue is how peer-to-peer businesses entering into local taxi and hotel markets should be incorporated into the existing regulatory structure. Another issue that will grow in importance if flexible work becomes more prevalent is at what point contract workers on peer-to-peer markets should be viewed as employees of the market maker. A further set of questions surrounds the collection of data on workers and customers, and the ways in which people’s histories can be used or shared. Each of these areas is relatively novel, so after laying them out, we focus on posing questions for future research.

In software engineering, a **connection pool** is a cache of database connections maintained so that the connections can be reused when future requests to the database are required. Connection pools are used to enhance the performance of executing commands on a database. Opening and maintaining a database

connection for each user, especially requests made to a dynamic database-driven web and mobile application, is costly and wastes resources. In connection pooling, after a connection is created, it is placed in the pool and it is used again so that a new connection does not have to be established. If all the connections are being used, a new connection is made and is added to the pool. Connection pooling also cuts down on the amount of time a user must wait to establish a connection to the database.

Web and mobile based applications use an application server to handle connection pooling. Dynamic web pages without connection pooling open connections to database services as required and close them when the page is done servicing a particular request. Pages that use connection pooling, on the other hand, maintain open connections in a pool. When the page requires access to the database, it simply uses an existing connection from the pool, and establishes a new connection only if no pooled connections are available. This reduces the overhead associated with connecting to the database to service individual requests.

Web and mobile pooling system has been designed in previous works for various applications such as carpooling, house rental pooling, business-to-consumer pooling, and so on. So, different methodologies and systems have been designed by researchers to cope for the different purposes of research.

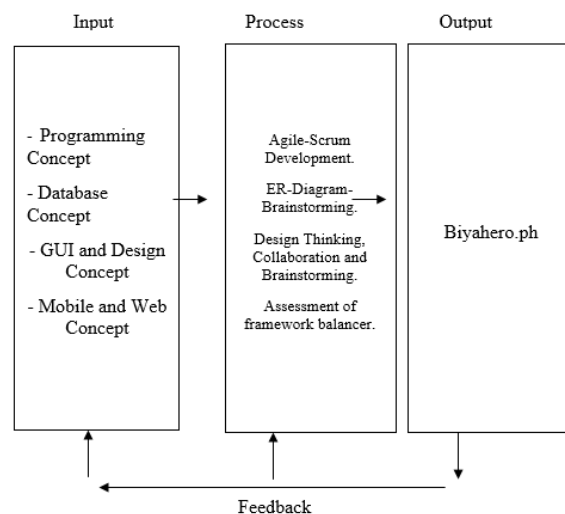


Figure 1- Conceptual Framework

Figure 1 illustrates the general flow and structure for the path of this study. The idea of having the Input-Process-Output system approach was used to describe the conceptual framework of the study conducted.

Input

These are the concepts that the proponents studied to come up with an efficient and accessible system. It is made of information needed that will help the application to work. The language that is used in developing the system is PHP laravel framework. The proponents used MYSQL for the database where all the data are stored, while the design concepts used were Android web viewer, HTML and CSS to create a mobile and web platform. Bootstrap will be used to make the webpage that will serve as the back end, to make it more flexible and maintainable.

Process

The proponent used agile method to develop their prototype in fast paced development. Creating an entity-relationship (ER) model is to visually represent the structure of a business database, where data equates to entities (or objects) that are linked by defined relationships expressing dependencies and requirements. By nature, it is an abstract visualization, the first step in the design process towards creating a logical and functional database. **Design thinking** refers to creative strategies designers utilize during the process of **designing**. **Design thinking** is also an approach that can be used to consider issues and resolve problems more broadly than within professional **design** practice, and has been applied in business and to social issues. In the software context, frameworks give you something on which to build. They provide a quick start to developing an application. The closer the framework is to the finished application the better, reducing the effort needed to build the application. From the house illustration, a framework that provides the foundations, walls and roof is a quick start to finishing the house. Software frameworks are available for use in each application layer: user interface, business process and logic, and data access.

Output

The “**Biyahero.ph**” is developed to revolutionize the way how traveller join tours by listing all tours generated by the partnered organizer accessible thru the use of mobile or web browser.

III. METHODOLOGY

An online research methods or internet research method was used for this study. A standard search engine such as Google and other popular search engines are used to conduct an efficient, internet search quickly, and get the information you need. Internet research can be used for a lot of purposes such as company research, research for term paper or just getting all important information that the proponents want to know.

A field research was used in this study. By the method of mail questionnaire, some identification of social and economic background of respondents was obtained through used of e-mail or other messaging device such as Yahoo mail. Direct interview was done with open and closed questions to the respondents that will answer all that questions. The proponents chose an internet research method and field research method to determine the acknowledgement of selected company regarding to the system that will make their company improving in high condition.

A Likert scale (pronounced /'lɪkərt/, [1] also /'lɪkərt/) is a psychometric scale commonly used in questionnaires, and is the most widely used scale in survey research, such that the term is often used interchangeably with rating scale even though the two are not synonymous. A Likert item is simply a statement which the respondent is asked to evaluate according to any kind of subjective or objective criteria; generally the level of agreement or disagreement is measured. (Statistics cafe 2011)

Verbal Interpretation	Scale	Range
Strongly Agree (SA)	5	4.50 - 5.00
Agree (A)	4	3.50 - 4.49
Neutral (N)	3	2.50 - 3.49
Disagree (D)	2	1.50 - 2.49
Strongly Disagree (SD)	1	1.00 - 1.49

Figure 2- Likert Scale

Five point Likert scale was mostly recommended from previous studies K. Jansen, K. Corley, B. Jansen [10] Respondents were requested that react to the things by demonstrating their level of assertion utilizing a five-point Likert scale. five-point Likert scale utilized in light of the fact that this sort of scale can make a tradeoff between the clashing objectives of offering enough decision since just a few choices means measuring just bearing instead of additionally quality of conclusion and making things reasonable for respondents. This section gives a concise description of the methods used in developing a system. The proposed system is developed using Evolutionary Prototyping based methodology.

According to Walker [11] Prototyping addresses these issues with an iterative or winding procedure, in which a less difficult model is persistently refined toward the sought end. Essentially, prototyping comprises of a progression of stages in which a model is talked about and refined by the partners, and afterward actualized by the engineers. At that point the following stage takes after the same example, yet with a somewhat more definite model. A model begins essentially and develops in multifaceted nature. All partners, administrators, clients, designers, specialists, and so forth are incorporated from the start and at all levels of advancement. The point is to cooperate to understand the regular goal and minimize misconception and exclusions. The philosophy highlights adaptability to suit switch straight up until the item is finished.

Prototyping depends on building a model of a framework to be created. Besides, the underlying model ought to incorporate the real program modules, the database, screens, reports, and the inputs and yields that the framework will use for speaking with other (interfacing) frameworks. A model as a false up is significant. With the Prototyping Methodology, despite the fact that a model might be minimal more than a counterfeit up when it is first fabricated, it turns into the first of its kind when it is done. Along these lines, when the prototyping process closes, the model has turned into the framework. Particular sort of model will be utilized as a part of framework improvement which is transformative models since it advances into the last framework through iterative fuse of client input.

The figure below shows the process of Evolutionary Prototyping Model; (1) Design, (2) Build Prototype, (3) User test prototype, (4) Feedback provided, (5) Refine prototype, (6) Final Product

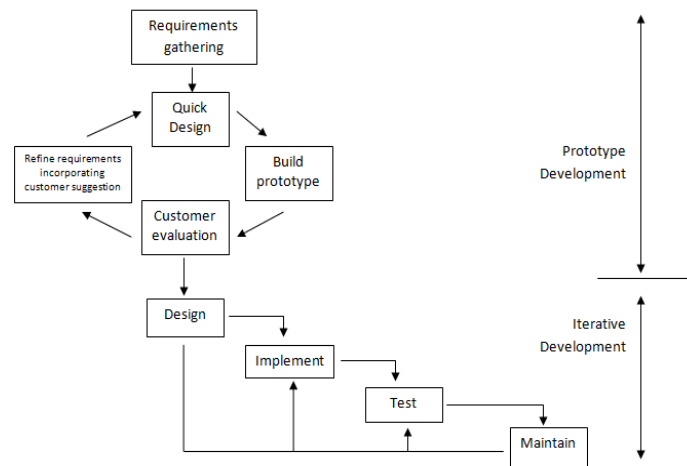


Figure 3- Prototyping Methodology

A prototyping model begins with requirements analysis, and the requirements of the system are defined in detail. The user is interviewed in order to know the requirements of the system. When requirements are known, a preliminary design or quick design for the system is created. It is not a detailed design, however, and includes the important aspects of the system, which gives an idea of the system to the user. (Thakur, D. 2015)

Information gathering from quick design is modified to form a prototype. It represents a “rough” design of the required system. Next, the proposed system is presented to the user for consideration as part of the development process. Once the user evaluates the prototype, it is refined according to the requirements. When the user is satisfied with the developed prototype, a final system is developed based on the final prototype. The final system is thoroughly evaluated and tested followed by routine maintenance on continuing basis to prevent large-scale failures and to minimize downtime.

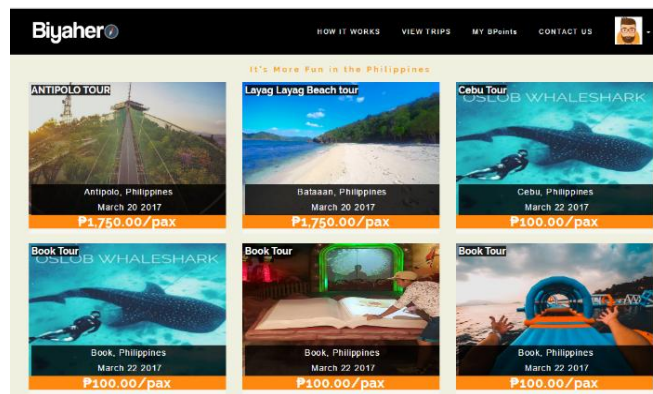


Figure 3- System Prototype

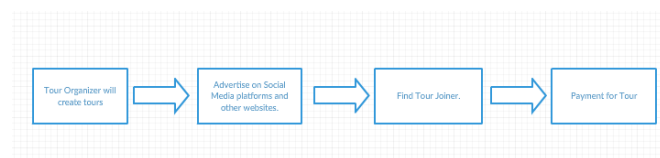


Figure 4 Context Diagram of the proposed system

The figure above shows a context diagram that is drawn for Biyahero.ph, It contains a process (shape) that represents the system to model, in this case, the "Biyahero.ph". It also shows the participants who will interact with the system, called the external entities. In this diagram Organizer and Traveller are the two entities who will interact with the system. Traveller and Organizer are the entities who will interact with the system. In between the process and the external entities, there are data flow (connectors) that indicate the existence of information exchange between the entities and the system.

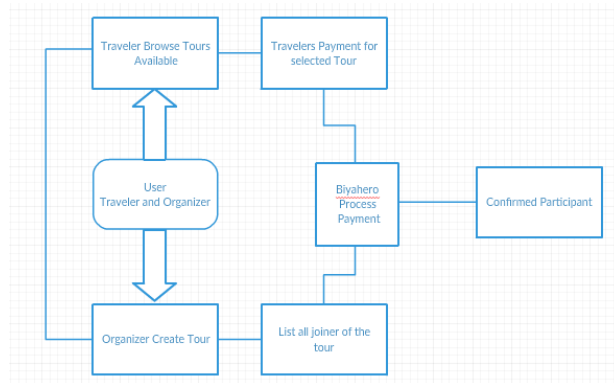


Figure 5 Diagram 0 of the proposed system

The figure above shows the level 0 DFD, which is the decomposition of the Biayahero.ph shown in the context DFD. Based on the diagram. In this process traveller has the convenience of choosing tours that is suitable for his plan and also providing a secured platform for his reservation fee.

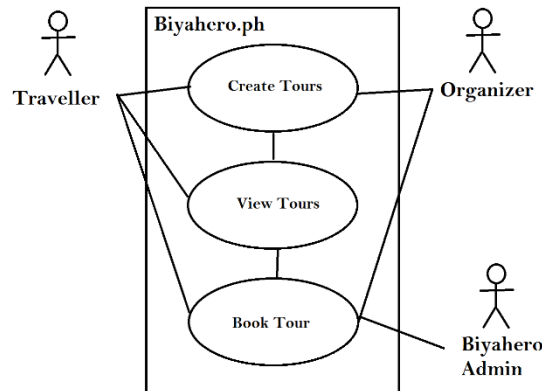


Figure 3. Use Case Diagram of the proposed system

This use case diagram is Simplest representation of the proposed system. Organizer will create a tour and traveller will be able to view and book the selected tour. Biyahero admin will be the one who will collect the payment and process the payment scheme of both parties.

IV. RESULTS

The aim of this research is to design and develop a uber style system that can list tours available in the Philippines created by partner organizers. Travellers can easily reserve the trip they want by using the booking feature of biyahero.ph. Booking feature of the proposed system is based on trivago way of process. Every organizer is strictly filtered by applying the Airbnb way of assessing their partner before allowing them to create their own thread.

The researchers aim is not just build a web and mobile application but a revolutionary way of travelling in the Philippines by providing adequate details of the tours, user-friendly interface, secured payment transaction, search-engine friendly and cheaper way to travel. The proposed system will not just build to advertise all over the web but to provide good services to the target visitors. These considerations will help the company in gaining a good image and eventually attracting more customers to buy their items.

V. DISCUSSION

The main objectives of this research is to design and develop a mobile and web application named biyahero.ph and create the country’s biggest tour network, connecting travelers with safe, reliable and fun organized tours at a variety of price-points in every tourist attraction around the Philippines.

For Organizers

1. To develop a module for payment scheme that allows user to pay online using paypal and bank transfer.
2. To develop a rating module that can assess the quality service that the organizer provides.
3. To develop a listing module that sorts and display every new tour available.

For Travelers.

1. To develop a module that can store every traveler's availability date so organizers can generate tour based on their preferred dates. 2
2. How to get tour suited in traveler's availability date.
3. How to lessen the tour expenses of every traveler.
4. What payment scheme does the traveler need to use for tour payments.
5. Where to report the service of every tour conducted.

VI. CONCLUSION, RECOMMENDATION AND FURTHER RESEARCH

This study may prove to be useful to the following groups of individuals.

Travelers. As the traveling in the Philippines is becoming more main stream biyahero.ph can take the traveling to the next level by connecting traveler and organizer to form a trip for their next adventure. Finding and paying the next trip will be one tap away. Generating feedback in tours you join will help every traveler to know and assess who the real deal is.

Organizers. Using biyahero.ph organizers can freely advertise their tours by this they can get more joiner and this means more income. Rating feature of biyahero.ph can also help build up the company profile of every tour organizer.

Local Communities. There will be huge impact in every local tourist spots, new source of income in every local communities will be created and this can be a big help to the livelihood of each family.

Future Researchers. This study about giving information about traveling pooling app may serve as a reference for future studies concerning in developing and designing related application. Researchers from travel industry fields are encouraged to make use of the findings as one of the sources for any related studies in the future.

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