

Mobile Services Part 1

Pilot survey on location based services, mobile websites and applications



Prof. Dr. Uwe Weithöner, Marc Buschler (Bachelor of Arts)

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1. Executive summary

Mobile services have expanded significantly in the past few years. Modern smartphones with applications offer a whole new variety of opportunities. Flatrates, mobile internet and said new smartphones have changed the market. Today, most travellers use applications. There are many different applications on the market right now offering travellers support during the different stages of their trip. Travellers can access information everywhere or make bookings right from their mobile phones. Many applications are well-known and used frequently. But this is only the beginning. The mobile market, especially in tourism, will continue to grow and pose a big challenge for the tourism industry.

2. Problem statement

The change in the mobile market brings both possibilities and chances for the tourism sector. There are many new opportunities, especially for destinations. But how can they be available on the mobile phone - choose a mobile application (app) or choose a mobile website? What are the pros and cons? What does the customer want?

Location based services are a special and important aspect. What have destinations to do? Do the customers really want and use location based services and which services are they looking for?

3. Development of the mobile market

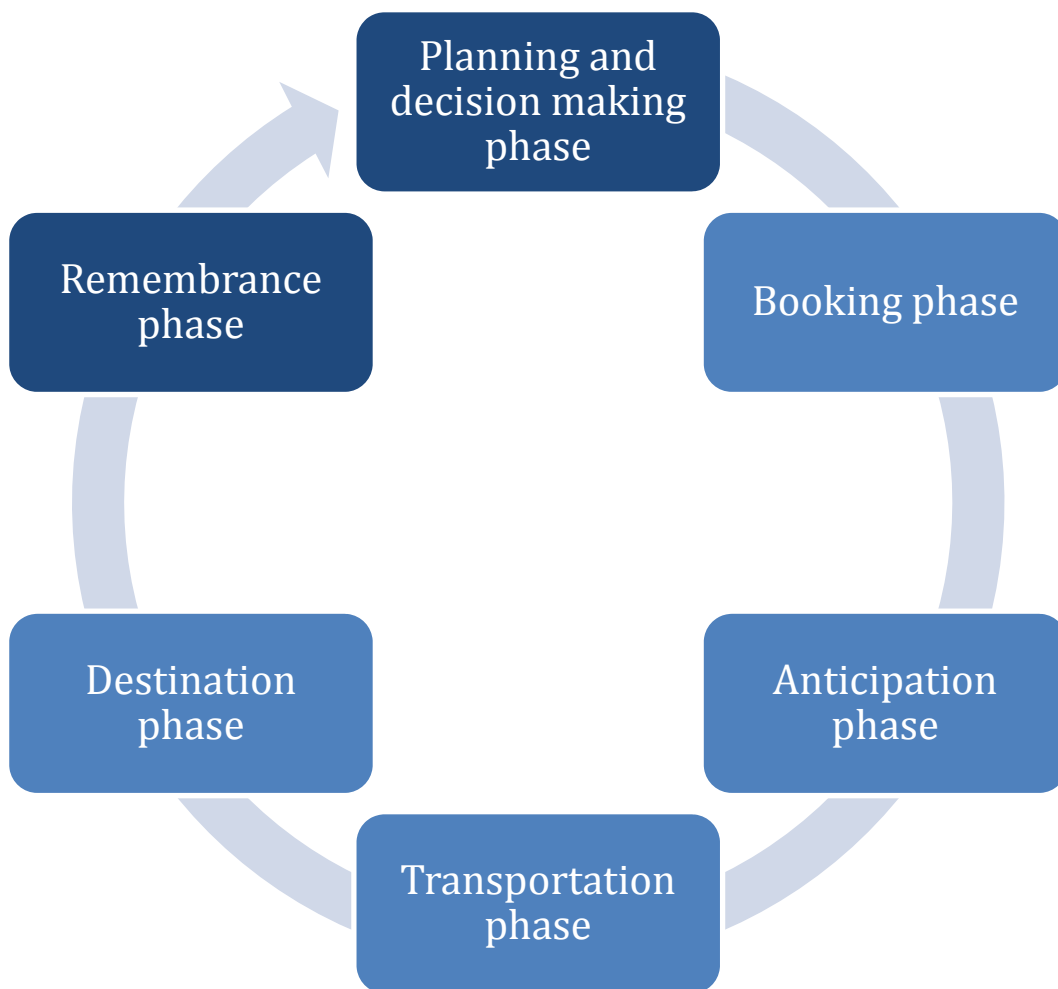
The worldwide mobile market encompasses a huge amount of end-users. In 2010, there were more than 5 billion mobile contracts in the world and predictions for 2011 say that the market will grow again by 10 per cent. After the boom years 1999 and 2000, during which the market grew by 110 per cent, annually growing rates are stable at 10 to 15 per cent. Since 2005, there are more mobile than landline contracts, and in 2009 there were 108 million mobile contracts in Germany. This equals a market penetration of 132 per cent on average, everybody from baby to grandmother owns 1.3 mobile phones.

One might assume that the market is saturated. But it is still expanding. In 2009, the European market grew by 7 per cent. And because of the new smartphones, saturation is not expected any time soon. Since the launch of the iPhone in 2007 there has been a smartphone boom on the mobile market. From 2009 to 2010, the worldwide number of smartphones increased by about 50 per cent. They now have a market share of about 19 per cent. In Germany, their number increased by about 47 per cent and

smartphones have a market share of 8 per cent. Every third new mobile phone is a smartphone. Smartphones and the mobile internet are *the* boosters of the mobile market.

4. Phases of travel

A trip can be divided into different stages, creating a cycle with six distinct phases of travel.



4.1 Planning and decision making phase

In this phase, the travellers have to choose what kind of vacation or trip they want to experience, where they want to go, how much they want to spend and so on. After choosing the type and the location they have to compare the offers of different providers to figure out which one is best for them.

In this phase, mobile advertising campaigns can attract the traveller. Also possible are specific applications which provide travel catalogues, time tables, itineraries or additional information about the destinations and their touristic offers.

4.2 Booking phase

After choosing their trip, the travellers have to book it. In the past they went to a travel agency to book, but today there are many more possibilities. They can book online via PC or mobile phone. They can book through a hotline. And of course the option of employing a travel agency still remains. Travellers also have to decide which additional features they want to book, like for example insurances or special offers.

Booking a complete trip via mobile phone is still rare nowadays. But booking individual elements like the flight ticket or train ticket is already done frequently. Mobile booking and ticketing are two of the most promising aspects of the mobile market.

4.3 Anticipation phase

This phase starts a few days before the trip begins. The travellers pack their bags, check the weather at their destination, plan the first activities there, reserve seats and finally call a cab to the airport or train station.

Mobile travel guides can be very helpful here to decide which activities to choose for the first few days. Weather applications are an easy way to check the weather at the destination. Applications or websites providing travel planning are very helpful and used often in this phase.

4.4 Transportation phase

The travellers are now on their way to their designated destination. They can take the airplane, public transport or their own car to get there, depending on their planning.

In this phase, mobile ticketing is also an appealing possibility. Instead of printed paper tickets, customers receive a QR-code on their mobile phones which then serves as their ticket. Travel

information applications on mobile phones are also frequently used to stay informed about delayed airplanes or trains.

4.5 Destination phase

The destination phase is the most important phase of the entire trip. For the travellers this constitutes their vacation. In the destination phase, the travellers are at their destination in the selected hotel. They intend to visit points of interest, see attractions and generally have a nice stay. Consequently, the primary factors for satisfied customers are the hotel and the destination.

In this phase there are many possible uses of mobile phones. Hotels for example can be chosen and booked by the travellers while they are still on their way there. Travellers can also check mobile websites or applications of their hotel chain and look for hotels at their current location. Additional services like hotel information or wake-up calls can be provided via mobile phone. In the future it might also be possible to use smartphones as personal keys and controllers for hotel rooms and save the habits and wishes of customers in specific profiles on their phones.

These days, many destinations provide individual applications or mobile websites with additional information and event calendars. The most important services for destinations are the location based services. These offer customers the greatest additional benefits of their mobile phones. It is crucial that all service providers, hotels, restaurants and museums are present in the location based services. In addition, it is also essential that they work together to provide customers with the best possible experience. Travel guides using augmented reality can also prove interesting in this phase.

For museums, mobile ticketing and individual guides on mobile phones can be a promising way into the future.

4.6 Remembrance phase

This phase takes part after the trip itself. The travellers remember the good times they had, possibly while watching photos and videos. Good memories trigger dreams and wishes of returning to the holiday destination. The remembrance phase is very important for customer loyalty. By mobile phone taken photos or videos can be posted and published in social networks like facebook.

There are not that many touristic applications for mobile phones in this phase yet, but mobile loyalty is one of the big trends to watch.

5. Survey results

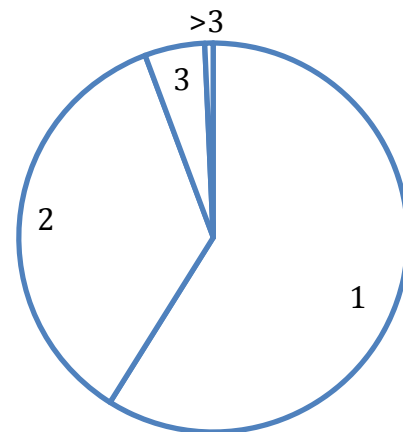
In our online survey from December 2010, 300 participants from Germany who use their mobile phones in different stages of their travels were asked about their habits and wishes. The presented results are from the pilot survey, the final survey is currently in progress and is going to have 3000 participants.

5.1 Number of mobile phones

Almost 60 per cent of the survey participants said that they own only one mobile phone, while 35 per cent have two and 5 per cent have even more than two devices.

In the age cohort 50+, the number of participants with more than one phone is significantly higher than in the other groups. Possible reasons might be that this group often uses a second mobile phone for business purposes or that they have a (often older) backup phone in case the first one breaks.

Number of mobile phones

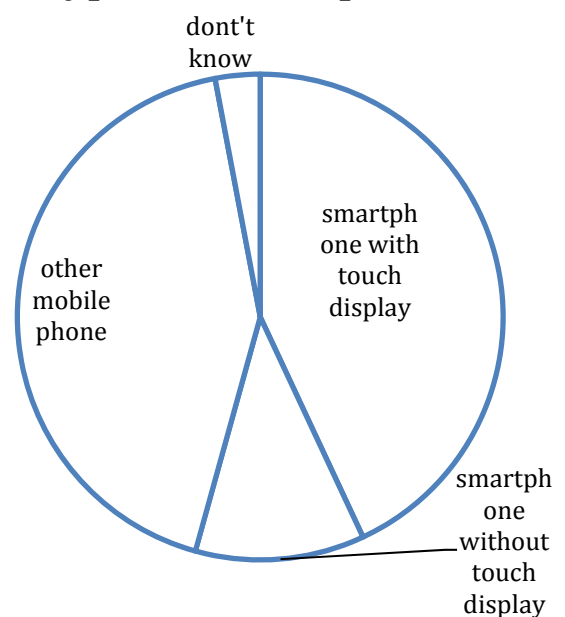


5.2 Types of mobile phones

Surveys conducted by different market researchers indicate that smartphones have a significant market share. Consequently, participants in this survey were also asked what types of mobile phones they use. 55 per cent said that they use a smartphone. Of these, 43 per cent use smartphones with touch displays. Only 43 per cent of participants still use conventional mobile phones without smartphone functionalities.

These numbers show that smartphones today have the same market share as conventional mobile phones. Asked what their next mobile phone would be, nearly three quarter of the survey participants considered buying a smartphone as their next mobile phone. It can thus be projected that the market share of smartphones will continue to expand in the future.

Type of mobile phones



5.3 Mobile phone market

The mobile phone market is huge and comprises a multitude of competitors. Customers can choose between 200-400 different models of mobile phones currently on the market. So which mobile phone producer has the biggest market share?

In Germany, Nokia still dominates the market with nearly 30 per cent of market shares. The second place is a tie, with Samsung and Sony Ericsson accounting for about 20 per cent each. These three are all manufacturers which produce both smartphones and mobile phones. Smartphone-only manufacturers have less market share. The main producer in this segment is Apple with 10 per cent, followed by HTC with 4 per cent.

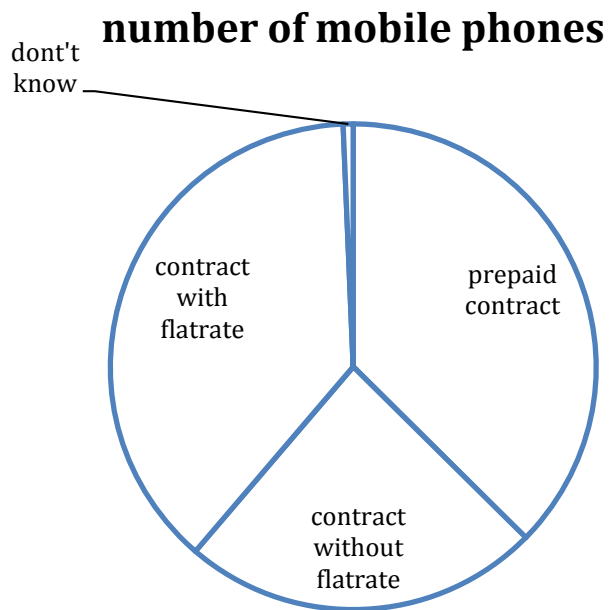
The question is: how will this market evolve? Currently Apple with the iPhone is the principal player on the market, but experts predict that the Android system will be the much more popular in the future. And there is also a deal between Nokia and Microsoft, the biggest software company in the world.

5.4 Mobile Phone Contracts

Ten years ago, there was only one way to get a mobile phone. Customers had to sign a contract with a network carrier and pay for the specific amount of minutes they talked on their devices.

Today, there are many other providers and a huge variety of different contracts. In fact there are so many types of contracts that most people are confused. For this survey, contracts were divided into three groups. Conventional contracts, contracts with a flatrate, and prepaid contracts. 38 per cent of participants have a

contract with a flatrate and another 38 per cent have a prepaid contract, the remainder use conventional contracts. This is a fairly significant change compared to a few years back, when prepaid and flatrate contracts were merely niche products on the mobile market. Customers who only use their mobile phones so they can be reached by others choose prepaid contracts, while frequent mobile users get contracts with different flatrates.



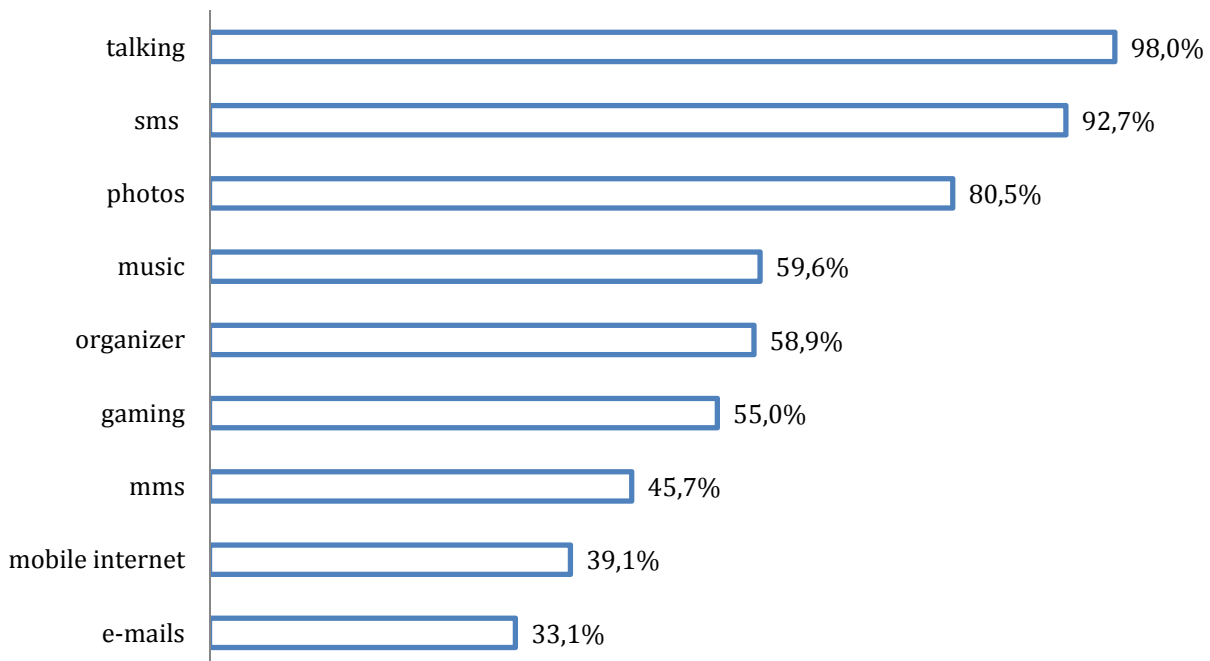
5.5 Functions of mobile phones

Modern mobile phones these days are used not only for phone calls. Additionally, they offer a variety of different applications. They are comparable to small computers. Users can surf the web, take pictures, listen to music, organise their calendar or use many more functions. In this survey, participants were asked which functions of their mobile phones they use.

The main functions for more than 90 per cent of participants are still calling and text messaging. But 80 per cent also use their mobile phones to take photos. This is a really high number for a function which is not a core function of a mobile phone. The camera was added to the mobile phone only a few years ago. Now it is one of the most frequently used functions. Other functions like listening to music, playing games and organising are used by 60 per cent. Functions that require an internet connection like surfing the web and e-mailing are used by 40 per cent or less.

So calling and texting are still the main functions today. But the example of the camera function shows that other functions can become quite popular within a relatively short period of time. Perhaps in a few years mobile internet will be as popular as the camera is today.

Functions of mobile phones



6. Mobile apps or mobile websites?

When a company wants to be available on mobile phones in the mobile web there are two different possibilities. They can either create a mobile website or publish a mobile application. No matter which option they choose, both have advantages and disadvantages.

6.1 Mobile websites

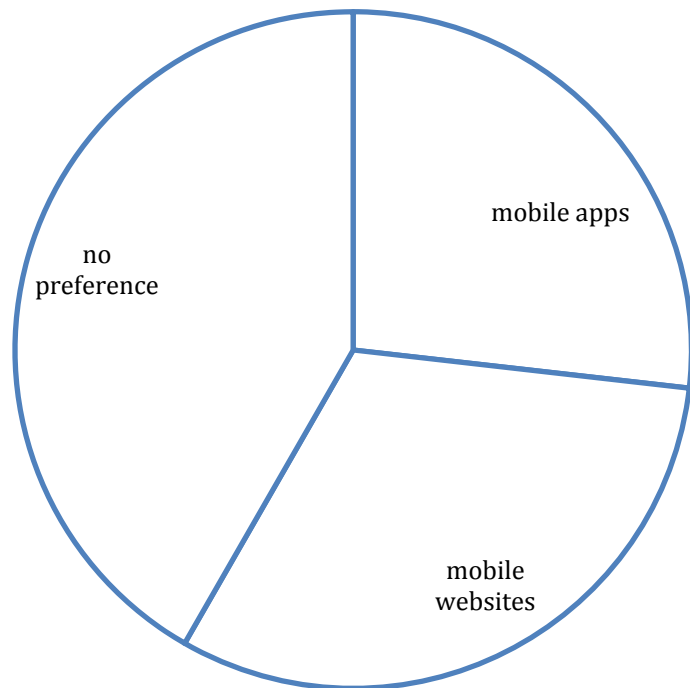
Mobile websites are smaller and lighter versions of the standard internet website of the company. A major advantage of mobile websites is that they can be accessed on mobile devices from different manufacturers, so mobile websites can provide for all of a company's customers. Although there are more than 400 different display sizes, mobile websites must be optimised for, the planning, development and the maintenance of a mobile website is less expensive than a mobile application. The major disadvantage of mobile websites is that a mobile internet connection is required to access them. This can be a huge problem, especially in the tourism sector. Often when travellers want to use their mobiles abroad there are high roaming fees so the phones become very expensive to use. The other disadvantage is that mobile websites cannot use all the functions of smartphones, like a camera or GPS. So the variety of usage is limited.

6.2 Mobile applications

Mobile applications, often called apps, are small programmes for mobile phones which users can install on their own. They are mostly provided through application-stores run by the manufacturer or other developers. Today there are more than half a million different applications offering a huge bandwidth of usages from small games to complete navigation software. Mobile applications are installed on the smartphone, so the information is stored on the phone and can be provided everywhere without an internet connection, if they do not need real-time information. Because mobile applications are only made for one platform they can use all the functions this specific platform or smartphone provides and so offer a larger variety of usage. But this is also the main problem of mobile applications. Companies have to choose specific platforms like iOS or Android and it is quite difficult to alternate between these platforms. So with a mobile application, only part of the market can be provided for. If companies want to reach the entire market they have to develop for different platforms simultaneously. The development costs of an application are also significantly higher than those of a mobile website. For a specific platform it can be up to 50,000 €

In summary, both systems have advantages and disadvantages for the companies. But what do the customers want? There are surveys from Gawker Media (2010) which say that mobile websites are preferred and other surveys from eMarketers (2010) in which mobile applications are the clear favourite. The result when posing this question to the participants of this survey was a tie. 30 per cent preferred mobile applications and 30 per cent mobile websites, the rest had no preference. It is supposed, that many of the participants did not know the differences well. So it is quite difficult to give advice on what to choose because both systems have pros and cons and the customers have no real preference for either one of them.

Mobile Websites or Mobile Applications



7. Location based services

Location based services (LBS) are one of the most promising mobile services. Travellers receive individual information matching the position of their mobile phone. There are two ways to get this information to the customer.

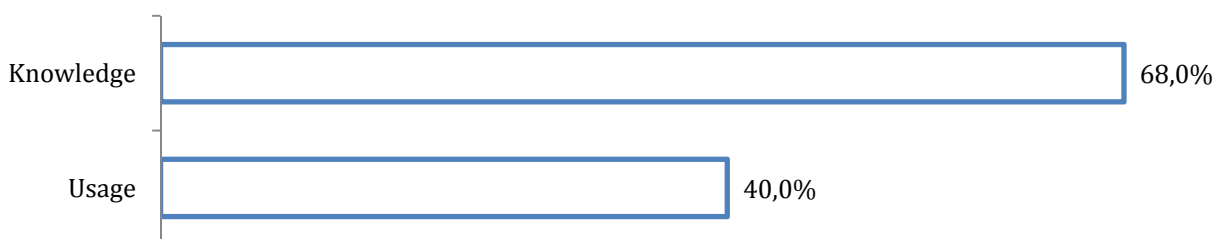
- The first is that the information is requested or ‘pulled’ by travellers themselves. For example, a traveller is at a location and wants to know where the best Italian restaurant or the nearest ATM is. So he checks the points of interest closest to him in LBS.
- The second option is the possibility to ‘push’ the information to the customer. If travellers enter a specific location they receive a notification on their mobile phone for special promotions or other useful information.

LBS are mostly used in applications and not on mobile websites. The reason for this is that it is easier for applications to work with the integrated GPS function required for LBS. Location based services are often used in other applications and they need real-time information. For example, mobile ticketing applications have integrated LBS to find a train or bus station. In mobile travel guides and in destination applications location based services are integrated to find attractions and points of interest.

Of course there are also applications that specialise in location based services, like “AroundMe“, “qype“ or “Google Places. With these specialised applications, users can read ratings and opinions of other users for a specific location and add their own opinion. It is also possible to connect this application to Facebook or foursquare so that users can share their actual location and their friends can see where they are. This is also helpful to find friends who are nearby.

In Germany, one of the biggest services of this kind is “qype“. The qype database contains more than 1,000,000 ratings and opinions for different locations separated into 850 categories. It is also possible to mark locations as favourites and have qype look for new places the user might like depending on his or her favourites.

With an awareness factor of 70 per cent, location based services are one of the best known applications in the tourism sector. 40 per cent of survey participants have used location based services, a fairly high number for a rather new application.



It is projected that both numbers will rise in the future and that location based services will become one of the most important services in the tourism sector. Because location based services are integrated into so many different applications they are used in all stages of travel. The main usage however is still at the travel destination.

8. Conclusion

So as a result of the pilot survey we see that an increasing numbers of travellers have smartphones and use them for travel purposes. Functions like camera become essential for many travellers, the same way the mobile internet function will evolve in the future. It is therefore essential for destinations to be available on mobile phones. For all provided services it is necessary to have real-time information to give the user the best experience.

Since customers have no real preference for either mobile websites or mobile applications and both have advantages and disadvantages, no ultimate conclusion on which option to choose can be reached. The decision for one or the other remains a matter of taste.

Location based services are one of the most important services for destinations. Ideally, all service providers, hotels, restaurants and points of interests should work together with the destination to offer travellers the best user experience possible through location based services. Many people already know these services and make use of them. With more offers and options the number of users is bound to increase.