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Collaborative group planner for the
asynchronous and remote search and
discovery of holidays

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Declaration

By submitting this work, I declare that this work is entirely my own except those parts duly identified and referenced in my submission. It complies with any specified word limits and the requirements and regulations detailed in the assessment instructions and any other relevant programme and module documentation. In submitting this work I acknowledge that I have read and understood the regulations and code regarding academic misconduct, including that relating to plagiarism, as specified in the Programme Handbook. I also acknowledge that this work will be subject to a variety of checks for academic misconduct.

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Abstract

This project approaches the group travel planning process as a case of collaborative information seeking (Foster 2006; Hertzum 2008) and it examines the way in which remote asynchronous and synchronous groups of people undertake the activity of travel planning. A series of interviews, followed by a set of observations and evaluations were conducted. The study suggests a new design for supporting remote asynchronous collaborative travel planning, following a scenario-based user-centred design approach (Carroll 2000).

keywords: group travel, collaborative search, exploratory search, social discovery

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1. Introduction and Objectives

1.1 Introduction

Travel planning frequently involves taking the preferences of individual users and aggregating them into a single search query. This task can prove to be highly complicated, and it can fail to take into consideration the tastes of all of the group members (Ardissono et al. 2003). For instance, when planning a trip, each group member might have a different destination preference, a unique budget and a different time availability. Taking into consideration the tastes and the preferences of everyone can waste a lot of time and energy and might not result in favourable outcomes - sometimes the travel plans might not be finalised.

This project approaches the group travel planning process as a case of collaborative information seeking (Foster 2006; Hertzum 2008). It examines the way in which groups of people undertake the activity of planning travel among themselves. The focus of the project is on the information exchange that occurs while planning group travel. Even though web search is in general considered to be a companionless activity, collaborative information seeking has been the subject of multiple research studies in different environments. Studies were conducted in healthcare (Reddy and Spence, 2008), academia (Hemminger et al. 2007), architecture (Makri & Warwick 2010) and in design environments (Bruce et al. 2003).

Drawing from the experiences of the participants, the project aims to suggest a new design for supporting remote asynchronous collaborative travel planning. The focus of this project is also on the way people communicate during travel planning. Understanding of this aspect was achieved by observing the technologies that the participants used for facilitating this activity. Attention was also paid to the other artifacts that the participants engaged with during travel planning.

The study followed a scenario-based user-centred design approach (Carroll 2000). Scenarios help capture stories about application use, they aid in understanding people's needs and they on the activities "that need to be supported" (Carroll, 2000). In order for a design to be user centred, it has to adhere to the following principles: the design should be based upon the understanding of users' needs, tasks and environments; the design should be driven and refined by user-centred evaluation; the design process should be iterative; and the design should address the entire user experience.

Participants were interviewed about their travel search and planning habits, and they were observed using their preferred travel planning tools, both individually and as a group. Taking into account the findings of the two in-depth interviews conducted, a focus group was organised for the purpose of eliciting requirements further, this time focusing on groups and

on collaboration within groups in the process of travel planning. Thematic analysis was used to analyse the data from interviews and observations.

1.2 Contributions

This project makes the following contributions:

1. It describes the iterative design process of a multi-session collaborative travel planning dashboard;
2. It discusses the system features of popular meta-search flight engines;
3. Tests a new method for aggregating group flight search results;
4. It defines requirements for asynchronous and remote collaborative travel planning;
5. It proposes a novel interface for searching and exploring and organising group travel.

2. Context

2.1 Literature review

2.1.1 Information Search and Retrieval

Nowadays, people seem to resort more and more to online search as their main method of seeking and acquiring information needs throughout the day. Some of the information seeking tasks conducted can be as simple as short-duration searches for information hosted online, using keywords as search terms. In the past decade, this activity has been more and more better supported by web search engines (Morris 2012). Browsing one website or only one document can be sufficient in providing a person with the information they were after.

However, people's search behaviours are greatly influenced by task. The way in which people search for information has been studied for a large number of years. Several models in which this activity is conducted were identified: (a) the procedural model, which looks at what the user's task is at each point (Marchionini 1995); (b) the behavioural model, which looks at what people do (Wilson 1999); and (c) the cognitive model, which looks at what people think, how they decide what their goals are and what they should do next.

On the other hand, more complex search tasks can be seen when the information needs become more ambitious (e.g., more than one person is involved in the search process or the queries become more complex, taking a long time to complete). These situations are also known as exploratory search Golovchinsky, Diriye and Dunnigan, 2012).. In these instances, multiple search episodes might be required (Morris, 2008; Ma Kay and Watters, 2008; Sellen, Murphy and Shaw, 2002). For example, by bookmarking a number of different search results, a person can quickly resume their previous exploration episode from where they left it. Another common practice observed among information seekers is emailing, saving links or printing documents and ultimately accessing them (Aula, Jhaveri and Kaki, 2005).

2.1.2 Collaborative Search and Retrieval

Only in the recent years, the task of information seeking started to no longer be seen as only a solitary activity, but also as a collaborative one.

Applying individual information seeking models in collaborative search is seen as an unsuitable method for understanding collaborative information seeking (Hyldegard 2006). For instance, after exploring Kuhlau's model of information search processes (1991) in a group educational setting, Hyldegard (2006) stated that without including the effects and influences of social and contextual factors related to collaborative search processes, collaborative search cannot be modelled in the same way as individual search. This also seems to be due to the fact that collaborative search does not only involve the transmission of

information between an individual and a system, but also the communication between several individuals that might be engaging with the system (Yue, Han and He, 2014). Therefore, Yue, Han and He (2014) suggest that there is a need for a new way in which the complexity of the interactions and the communications mentioned above should be managed.

What is meant by "collaboration" during search was presented by Shah (2009) as a composition of different layers of interaction, including communication and corroboration. As demonstrated by Morris (2007) and Evans, Kairam and Pirolli (2009), collaboration can be important to the success of information seeking episodes, especially when combining the three social tactics of information gathering: direct asking, public speaking and searching.

A group of people can have the same goal and can work towards achieving it by collaborating in the information seeking, searching and retrieval stages (Foster, 2006). Also, Evans and Chi (2008) add that there are three types of social search activities: collective, collaborative, and friend-filtered. With the use of collective search, a result can be evaluated by a multitude of people, collaborative search provides answers to the queries from one's networks experts, and friend-filtered offers personalised results which are built on the knowledge of one's network.

Morris (2008) made one of the first attempts at determining the necessary features that a collaborative search software should have. A survey study (N=204) conducted in 2006 by Morris (2008) reported that 53.4% (N=109) of the people that completed the survey stated that they collaborated with other people in the search process. Moreover, 87.7% of the people stated that they have "watched over someone's shoulder as he/she searched the Web and suggested alternate query terms". Furthermore, 30.4% conducted real-time search activities by online messaging others. The most common tasks for collaborative search were travel planning, online shopping and literature searching. The results of this survey were reassessed in 2012 when Morris conducted a subsequent survey in which 167 American adults participated. The results show that there has been a notable increase in the activity of collaborative searching, with 65.3% of the respondents reported having cooperated in order to find information online (Morris 2013). Moreover, small-group collaboration was more prevalent than large-group collaboration (i.e., groups larger than four members).

The findings of this survey confirm previous studies that attest that it is possible for searching to be a collaborative activity (Talja 2002; Twidale, Nichols & Paice 1997). However, the survey also found that at some stages of the collaborative search process, people work individually (e.g., when seeking information using their own search techniques). Evans and Chi (2008) also discovered by surveying 150 Amazon Mechanical Turk users that both individual and collaborative search activities can be conducted concurrently.

No explanation for the way in which collaborative information seeking takes place was provided in the two surveys conducted by Morris (2008) and by Evans and Chi (2008). However, Morris (2008) declared that search interfaces do not fully manage to support both individual and collaborative search activities. In the model used for describing the layers of

collaboration presented above, namely communication and corroboration, Shah suggested that collaboration is more than just people working as a group. They were described as "searchers" that share the same interest and have the same information seeking goals. Shah and colleagues (2009) used this concept in the development of a collaborative information seeking tool called Coagmento.

However, one of the first works on collaborative information seeking was done by Twidale et al. (1998) who designed Ariadne, the first collaborative system for information seeking. Twidale and colleagues looked at the way people cooperate and work in small groups (Twidale & Nichols 1998). They reasoned that browsing could be improved if it were seen as a collaborative process, rather than a solitary one, such as it is usually supported by the existing web search engines. While finding information can be a solitary activity, performed solely by one of the members of a group, the act of using the information newly discovered can be performed by all of the group members.

A number of other collaborative systems were designed by the research community in an attempt to provide browser-based support (Kelly & Payne 2014) for collaborative search: CoSearch (Amershi & Morris 2008) which is designed to support co-located synchronous collaborative search, Querium (Golovchinsky, Diriye & Dunnigan 2012), SearchTogether (Morris & Horvitz 2007) which allows synchronous or asynchronous distributed collaborative search, WeSearch (Morris, Lombardo & Wigdor 2010), Storable, Shareable Search (Morris & Horvitz 2007a), which support co-located or remote asynchronous search, and CoSense (Paul & Morris 2009). Each tool offers a different range of functionalities, varying from one context of use to another (Kelly & Payne 2014). However, they all support the following aspects of collaboration: awareness, division of labour, persistence and sensemaking (Kelly & Payne 2014).

Awareness involves the users being aware of each other's past and current activities (Shah & Marchionini 2010). It eliminates the need of constantly having to ask for updates on the progression of the work and it improves coordination of activities. Division of labour is "the process of distributing a task across members of a group" (Foley & Smeaton 2010). Persistence allows the resumption of prior search sessions by storing information from prior search episodes (Morris & Horvitz 2007). Lastly, sensemaking refers to the way in which users understand complex information (Slaney & Russell 2005).

Sensemaking in a collaborative environment is not solely a solitary cognitive activity that takes places "inside the sensemaker's head" (Paul & Reddy 2010). Instead, Paul and Reddy (2010) argue that it is "a social and interactional activity that takes place between multiple people". They add that this activity results in a mutual understanding of the information used by the people for the purpose of achieving a shared goal.

2.1.3 Collaborative Search and Retrieval in the Context of Travel Planning

Travel planning can be more than just business and payment transactions. Being able to be involved in the trip planning activity (e.g., choosing destinations and finding travel deals) can aid in enhancing social relationships and facilitates sharing experiences (Gretzel & Fesenmaier 2003). However, Meng (2010) states that the activity of selecting suitable destinations is a complex process, which comprises of variables such as transport, attractions, the destination itself and the timing of all the parties involved. Fesenmaier et al. (2006) state that travellers need to make a "series of sub-decisions" with regards to this problem. They also affirm that users decide on their travels according to their perception of the importance of these variables. As observed by Memon et al. (2014), the more constraints must be considered, the more laborious this activity becomes.

"The internet has become the most significant travel planning tool across all generations", more utilised than "other types of information including travellers' previous experience and word of mouth from friends or relatives" (Kim, Xiang & Fesenmaier 2015). A number of systems that have been developed offer recommendations regarding destinations to be visited (Fesenmaier et al. 2003; Saarinen 2005; Gretzel et al. 2004; Lee, Chang & Wang 2009; Ricci & Werthner 2001) and itineraries to be considered (Rodríguez et al. 2012). Other systems suggest different types of activities for the users to undertake once they have arrived at their destinations (Vansteenkiste et al. 2011; Garcia, Sebastia & Onaindia 2011), whilst others use the geolocation of the users for the purpose of suggesting activities in their proximity (García-Palomares, Gutiérrez & Minguez 2015).

One of the most common task for collaborative search is travel planning (Morris 2013). Seeing the travel planning activity from the perspective of information seeking and retrieval could be explained as: identifying an information need (e.g., going on holiday next summer), selecting a method in which the individual can find the necessary information (e.g., searching for websites with travel or flight deals), formulating a simple query or a search statement (e.g., searching on Google for 'cheap summer vacations'), executing "the action" (e.g., selecting the most promising link from the results list), examining the "response from the system that might result in the extraction of information" (e.g. scanning the web page for suitable travel deals"), and eventually either continuing the process (e.g. booking the holiday deal), or abandoning the task (e.g., if none of the information presented on the website was useful for the person). However, group recommender systems have not been that widely researched and developed as recommender systems for individual users. A few of these systems, such as Travel Decision Forum (Jameson, Baldes & Kleinbauer 2003) and McCarthy et al.'s (2006) CATS, were designed for recommending vacation destinations. In these two systems, each user has an individual profile, and each travel group has their own profile.

3. Methods

This project looks at the requirements of asynchronous and remote collaborative groups of travellers and proposes a novel interface for organising group travel.

The study starts with focusing on what are the strategies of people that conduct online travel search; they way in which online group travel planning is organised; what technologies people use when they individually or collectively plan travel; what are these technologies lacking and how could they be improved. A series of interviews, followed by a set of observations were conducted. The focus of this project is also on the way people communicate during travel planning. Understanding of this was achieved by observing the technologies that the participants used for facilitating this activity. Attention was also paid to the other artefacts that the participants engaged with during travel planning.

Drawing from the experiences of the participants, the project aims to suggest a new design for supporting remote asynchronous collaborative travel planning, following a scenario-based user-centred design approach (Carroll 2000). A series of interviews, followed by a set of observations were conducted. The participants were recruited through social networking websites by posting in an online group of travellers and through friends. For participants to be suitable for the interviews, observations or evaluation session conducted, it had to have used in the last four months at least once a flight meta-search engine (website which combines results from multiple airline providers, usually ordering the results in ascending order by price, such as Skyscanner, Kayak or Google Flights) for the purpose of organising a trip with someone. Participants that have managed to both book their holidays and that did not continue with the booking process for any reason were encouraged to participate in the study. This is due to the fact that the study also aimed to achieve an understanding of both positive and negative experiences. The recruiting lasted five days, in which the participants were pre-screened and interviews were scheduled for the subsequent weeks, at the convenience of the participants.

This chapter describes the rest of the data gathering and analysis techniques used.

3.1 Data collection

In order to discover realistic scenarios for travel-search technologies, a scenario-based evaluation was conducted. Semi-structured interviews were performed, followed by a focus group. As per the scenario-based evaluation followed, the focus group had the role of validating the findings of the interviews. Group observations and evaluations of existing travel search technologies were conducted afterwards. They had the role of discovering "positive and negative claims about existing and envisioned features", providing information to aid in the design of a new travel dashboard (Herskovic et al. 2007).

3.1.1 Individual Interviews

The design process began with a series of in-depth semi-unstructured interviews with two avid travellers (i.e. someone who loves to travel and has engaged in numerous trip planning activities), two male aged 24 to 27. The semi-structured format of the interview had the benefit of allowing the participants to expand on any issues that they found to be of high importance. Also, by not having a strict format for the interviews, the participants were able to feel more at ease during the interviews, since the conversation followed a natural flow. Furthermore, any less structured the interviews, the harder that they would be to analyse.

The aim of the interviews was to gain a better insight into people's habits when travel planning. The participants were asked to reflect on the latest instance in which they planned a holiday in collaboration with their friends. This helped in identifying gaps in the online travel planning process.

The interviews were held in the participants' workplace. At the beginning of the interview sessions, the participants were provided with a short description of the purpose of the study and they were presented with consent forms. It was important at this point to reassure them that all of the details of this study will remain confidential and that they can withdraw from the study at any point.

A number of pre-defined questions were prepared (see Appendix B). These were based on the objectives of the study and on several questions that were used for eliciting requirements in previous studies on collaborative search (Capra et al., 2010; Kelly and Payne, 2014).

At the end of the interview, short debriefing sessions in which the participants were presented with a summary of the points raised while the interviews occurred. Also, the participants were reminded that the information they provided will remain strictly anonymous.

3.1.2 Focus Group

Taking into account the findings of the two in-depth interviews conducted, a focus group was organised for the purpose of eliciting requirements further, this time focusing on groups and on collaboration within groups in the process of travel planning. Since the focus of this project is on collaborative travel planning, holding a focus group seemed to be a suitable way of gathering more data on the subject (Bruseberg & McDonagh-Philp 2002).

The recruitment of the participants followed the same requirements that were presented above. Additionally, the groups of participants had to be actively planning a trip together at the moment when the focus group was conducted.

The group chosen for the focus group was homogenous, i.e. they shared very similar characteristics. In this case, they were all in the same undergraduate course for three years and were friends for the past four years. This minimised the risk of the participants acting

unnaturally or wanting to exacerbate their answers in order to impress other members (Corfman, 1995).

The participants were presented with consent forms and were told that they could withdraw from the research anytime.

In addition to the questions prepared for the individual interviews, additional questions focusing on collaboration were pre-defined:

Did you do your searches on different websites?

Did you search at the same times as your partner/s?

How did you organise/delegate the searches?

Were you and your partner/s co-located or remote?

How many search sessions were there?

How did you share the information that you found among yourselves?

Any challenges identified by both you and your partner/s?

How did you reach consensus the information found was sufficient?

What was the outcome?

At the end of the focus group, the group's view on the topic was communicated back to the group.

Having a broad idea about the way in which information flows in a group that is in the process of travel planning, the study took a step further and observed the way in which groups of friends organise travel plans.

3.1.3 Group Observations

For observing the current practices of co-located travel planning groups, one group of participants was recruited, following the same criteria for recruiting participants as the one presented above. Additionally, the group of participants had to be actively planning a trip together at the moment when the observation was conducted and be located in different countries: four young professionals (2 male, 2 female) aged 24 to 27. The group was enrolled in the same postgraduate course one year ago, and now they were all located in different parts of the world. They had a similar history of prior technology use, and they were not new to online travel search.

The group was asked to allow the author to participate in their trip planning session for the purpose of observing their current practices when arranging a trip remotely. This enabled the observation of the behaviours of a remote group of friends while planning a trip together. It was not possible to know from the beginning how many sessions had to be attended since travel planning can involve multiple information-seeking episodes although a number of two sessions were estimated. The observation sessions took place over Skype, with the members sharing their screen or videos, while at home. This allowed the participants to not only use their desktop computers or laptops but also to be in the comfort of their homes, enabling more naturalistic observations.

The focus of the interviews was on the following aspects: the way in which the groups choose a destination (or more) which suited the preferences of every member of the group; the concerns that every member of the group had and how different tasks were delegated to the members of the group.

At the end of the session, additional questions on the issues that were brought up by the participants were asked, for the purpose of clarifying any misunderstandings. A short debriefing session in which the participants were presented with a summary of the points raised while the interviews occurred. Also, the participants were reminded that the information they provided will remain strictly anonymous.

3.1.4 Summative Evaluation of Existing Technology

Even though the behaviours noticed in this session cannot be generalised, after observing the way in which the group collaborated and interacted during the travel search, a more in-depth analysis was conducted of a new concept of aggregating meta-search flight results for groups of people, seeusoon.

The three participants recruited (3 male) were aged 24 to 28, and they all lived in Europe. They had extensive experience with conducting flight search using meta-search engines. At the beginning of the evaluation session, they were presented with consent forms and were told that they could withdraw from the research anytime. We made sure to re-enforce verbally the aim of the study and remind the participant that they are not the ones being tested, but the system.

The evaluations took place in the participants' homes. Evaluating the new tool helped in obtaining a better understanding of how such a tool could be beneficial for group travel planners. The focus here was on finding out what features this tool is missing; what is its best use and when; what is its best feature and what are the concerns of the users regarding it.

3.2 Data Analysis

The answers of the participants were used to develop themes around the subject of online travel planning and search and will help us uncover any additional subjects of interest.

The interviews and the observation sessions were analysed taking a thematic approach. Overt patterns and frequent subjects that arose during the interviews and the observations were identified. An emphasis was put on the subjects that were of high personal interest for the participants. These items were compared and contrasted in order to find out if there are any patterns in the answers of the participants and to identify any repeating issues.

The in-depth interviews were transcribed during the interviews, and each session was later reviewed in order to refine the conversations and to find similar statements made by the participants. An initial list of codes was created.

3.3 Design Investigation and Development

3.3.1 Design Framework

The design of the new system followed a user-centred design approach. The design process started with understanding the needs and the concerns of people who engage in online travel information seeking. A set of requirements were built, focusing on the needs of the users, on understanding what the system to be build should do, how it should be used in conjunction with other tools, and how it might fit with the expectations and behaviours of people.

After the data was analysed and a set of requirements were established, two conceptual scenarios (Carroll, 2000) were generated. These helped building the personas around which the system was envisioned.

A low-fidelity wireframe of a possible visualisation for the new travel planning and exploration system was created based on the scenarios and on the personas. The low-fidelity wireframe helped in acquiring a better understanding of the interaction sequences which are required in such a system. At this stage, the focus was on deciding what are the things that the users should know before using the dashboard, and also on making sure that this system corresponds with their current mental models.

Next, high-fidelity clickable prototypes were developed. Although creating high-fidelity clickable is considered to be time-consuming, with the new tools available for rapid prototyping, any modifications required were easily made. The prototype was styled in Sketch 3 and made interactive using InVision.

3.3.2 Design Evaluation

In the user-centred design process, evaluation is central to designing interactive systems.

3.3.2.1 Design I

The first design of the travel dashboard comprises of two main areas: an individual one for users that want to explore different travel options, and a collaborative one for groups of travellers in which they can coordinate their flights.

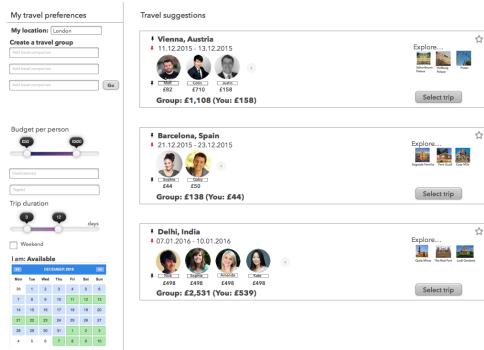


Fig. 1 Individual screen

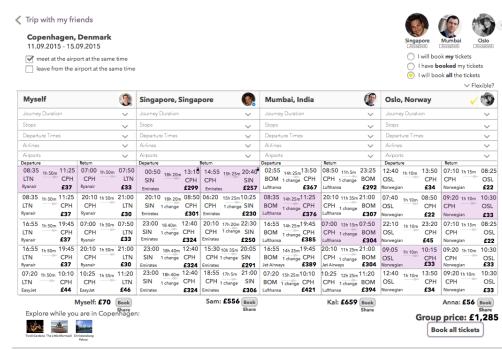


Fig. 2 Collaborative screen

Individual User Testing

Before evaluating the travel dashboard with users, a pilot study was undertaken to determine the reliability of the test procedures and to detect any potential practical problems (Preece, Rogers & Sharp 2002).

The participants were first presented with a brief overview of the design of the travel dashboard and were allowed to explore the system for five minutes. The designs were personalised for every participant. Prior consent was required to use their public Facebook information, such as personal and friends' profile pictures and locations. Also, the participants were presented with consent forms before starting the testing sessions and were told that they could withdraw from the research at any point. Furthermore, the aim of the study was re-enforced verbally and the participants were presented with a summary of the research.

The participants were asked for their first impressions and afterwards they were asked to complete a few pre-defined talk-aloud tasks. They were also provided with a printed list of the tasks.

As done in Shah, Marchionini and Kelly (2009), the participants were asked not only to evaluate the collaborative system, but also to give feedback on the way in which the system could be improved. They were encouraged to explore as many functionalities of the system as they could, and run multiple search queries. This is considered to be an effective way in exploratory search applications since it allows the users to understand the "breadth of a topic" (Golovchinsky, Diriye & Dunnigan 2012).

One of the participants was first presented with a design based on a persona, i.e. royalty-free stock pictures of peoples and randomly allocated names were used. He was later presented with his personalised dashboard. The thoughts and comments of the participant expressed during testing the persona-based design were compared to the ones he expressed when he was presented with the custom-made system, i.e. the one which used the locations and photos of him and of his friends.

The participants used their laptops for completing the tasks. The sessions were recorded with screencast software.

Heuristic Evaluation

A set of heuristic focusing to shared visual workspaces, introduced by Baker, Greenberg and Gutwin (2001), were applied to the first design. These were adapted from Nielsen's heuristic evaluation methodology (Nielsen & Mack 1994). Nielsen's heuristics was designed for the purpose of identifying usability problems in single user applications by one or multiple evaluators according to a set of criteria. However, none of these heuristics supports identifying issues related to teamwork and groupware usability.

The set of heuristics for groupware introduced by Baker, Greenberg and Gutwin (2011) was reviewed by Herskovic and collaborators (2007) and were found to be optimal for applying in the first stages of the design, when low-cost modifications can be easily made. Also, since it does not require the participation of users, it takes a relatively short time in comparison with ethnographical studies that can take weeks.

The heuristics were applied to the collaborative screen (Fig. 2) of the travel dashboard. The results of the heuristic evaluation are presented in the next chapter. They have helped in providing with a clear direction for the design changes of the second design of the dashboard.

3.3.2.2 Design II

The group that was observed in the requirements gathering phase (2 male, 2 female) was asked to participate in a personalised remote evaluation of the new travel dashboard concept.

One more group was invited to take part in the evaluation of the second design. The

participants (3 male) were also planning on undertaking a trip together and they were acquaintances of the researcher.

Both of the group members were asked to participate in individual sessions and in group sessions. The individual sessions and the collaborative sessions took place over a span of two days, each.

Individual User Testing

In the individual sessions, the focus was on the exploratory and discovery aspect of the dashboard, in which the users can search for potential travel destinations and potential travel companions. The group user testing involved all of the members of the groups and focused on the collaborative screen and experience provided by the dashboard. Therefore, these evaluation sessions had the aim of capturing user experiences while conducting individual travel search and while collaborating with other users for the purpose of exploring the collaborative aspect of the new system.

The individual sessions required the participants to explore some of the features of the dashboard, similar to the evaluation of the first design. However, the focus of this session was on the experience of creating a travel group and selecting suitable flights, so less time was spent on every single feature of the system.

An experiment was conducted at this point. The system that one of the participants of the second group experienced at first was not personalised. Instead, personas, i.e. royalty-free stock pictures of peoples and randomly allocated names, were used. The thoughts and comments of the participant were compared to the ones he expressed when he was eventually presented with the custom-made system, i.e. the one who used the locations and photos of him and his friends.

Consents were obtained prior to the designs of the personalised systems.

Group User Testing

Having each created a new travel group, the group session involved all of the group members discussing together about their choices and coming to a consensus regarding the flights that they would eventually separately (or not) book. The focus of the researcher, which was observing the participants, was also on the way in which communication takes place between the members of the group and on the topics and concerns that arose during the two sessions.

With the use of the high-fidelity prototype, the participants were able to simulate using the system in a natural and realistic manner.

3.4 Limitations

The study was designed to be as naturalistic as possible. The interviews and the observations conducted were not too long since the participants were not prompted to share more than they were willing to. However, in these circumstances, a larger number of participants should have been recruited, since the data collected might not be generalisable to the entire population. Also, domain experts, such as travel agents could have been interviewed. This is because it seems that many of the people interviewed or observed mentioned at one point having used travel agents in the past.

More observers might have been necessary in the group observation and in the group evaluations conducted in order to observe how the participants were using the tools.

Sometimes user observations can be rigid technique for evaluation tools designed for groups, since "it does not account for social, organizational, political and motivational factors that influence how the group accepts and uses the system" (Bass & Unger 1996).

Also, not having multiple evaluators for the heuristic evaluation might not have been beneficial for this study. However, researchers argue that even only one evaluator can discover more or less the same amount of problems as three of four would discover. Also, it might have been better to have conducted the heuristic evaluation for the second design.

Only transcribing the interviews and the observations might not capture every single detail as well as recording the interviews or the observations audio or video might had done. However, the writing speed of the researcher was fast enough to allow capturing all of the essential responses and to also allow maintaining eye contact during the interviews, for the purpose of keeping the conversations' as fluid as possible. Of course, errors could have occurred since a certain term or phrase might mean one thing for the participant and a different one for the researcher (Gall, Gall & Borg 2003).

Instead of having the participants evaluate the two designs by doing some pre-defined tasks, maybe it would had been better to solely have them explore the system for the entire duration of the study, not only for a few moments. Also, it can be difficult to choose appropriate tasks when studying information seeking, and it might have been more appropriate to have the participants choose their own search tasks.

Not having participated in the next meeting of the group that was observed whilst travel planning might have resulted in a loss of valuable information. However, it was still possible to design the system based on the other data that was gathered in this study.

Moreover, since the researcher of this study has many groups of friends all over the world, gathered from a series of internships, she has always wondered what could be a more efficient way of meeting with them; which destination would be convenient price-wise and distance-wise for all of them.

4. Results

4.1 Data Collection and Analysis

4.1.1 Individual Interviews

The interviewees mentioned doing most of their searches either on meta-search flight engines, such as Skyscanner or Kayak, or directly on the websites of airlines

The participants mentioned that they usually engage in a minimum of two search episodes, one in the pre-planning period in the moment when they simply want to check approximately how much the tickets cost, and one more when they are decided to make the booking and proceed with the payment.

The only challenges mentioned by the participants were sharing the results of the search and planning with friends. One of the participants mentioned using several different ways of sharing information, such as manually copying word-by-word the time, date and duration of the flight and sending it in an e-mail or at the phone. By the time the friend checked his e-mail, the prices had gone up significantly. At this point, he felt like opening a new tab and running again a query with the same dates to see if the prices indeed went up.

When asked to reflect back on their latest group search episodes one participant remembered being the only one to run all of the searches on his laptop when he was in the same room with his friends. However, when they were discussing over the internet, all of the people searched separately for prices, more or less on the same websites.

However, when they saw that some of them were not getting the same results, one flight appearing for one person, but not for the other, one person took the responsibility of conducting all of the searches for all of the group members. He communicated back to his friends how much it would cost them each, and which flight they would have to take. He also remembered that for some of his friends it was enough to simply mention the flight number, but others needed the dates and times explicitly mentioned.

4.1.2 Focus Group

Travel Companions

From the first minutes of the focus group, having a travel companion seemed to be an influential factor in whether one will travel somewhere or not. G.P1 expressed his disappointment in not managing to find someone with whom to visit Iceland. He said that even though he had the money, he "did not have the time and the people". Here, it seems that not having the necessary time to travel was also a factor for not visiting Iceland. While on the subject of having travel companions, G.P3 mentioned the following:

"I am the person that would travel everywhere. As long as I have a companion."

Again, having someone with whom to share the experience of travelling together seemed to be an important aspect for the participants when making travel plans. However, when choosing someone to travel with, the participants were clear about not wanting to travel with strangers, preferring to travel with someone that they know instead:

"I always try to consider the personalities, so they won't clash. And the habits, I think that they are very important. Because you can be a really good friends with someone, but if your habits are different, then that can lead to a really huge fight [while travelling]."

Selecting Destination

"I was also planning on visiting Cracow, but one of the friends is in Warsaw at the moment, so I might just visit him there. So although I was thinking of visiting Cracow, I changed my plan and I will travel to another city, because of my friend."

When choosing a travel destination, the participants mentioned that they are usually looking for "cheap" tickets, but when they are not the ones arranging the holidays, they sometimes have the impression that there might be a cheaper ticket that their friend might have missed. However, the participant expressed his happiness with simply being able to travel somewhere with his friends:

"I let them chose the tickets, so I hope that they chose the right one. So I was just lazy in that respect. I was really happy that we are going on the trip."

One of the participants shared an experience in which only one of his friends conducted all of the travel searches and made all of the bookings necessary:

"One person arranged all of the flight tickets, so we had to send the person all of the documents for booking the flight tickets. We had one person that was pushing all the idea for the vacation, and she ended up booking the tickets. She saw a cheap one and said to book right now. She contacted everyone (we had a WhatsApp group for this trip) and asked if those tickets were OK, if so, send me your details. Luckily, we responded quite quickly. And then they booked the accommodation right away after booking the flight tickets."

One of the other respondents seemed to have experienced a situation in which all of the parties were involved:

"I did a quick search based on a few locations that I wanted to visit and I created a list of them based on the price and then I sent this list to my friends, so they can search and see which locations are cheap from their cities."

He mentioned that he had to arrange several Skype meetings on this occasion. Another similar experience for him was when he and one of his friends tried find a "decent" deal

("*cheap deal, including hotels and flights*"), but without success, because they did not correspond with their travel period and with their budget. While trying to find a suitable deal, the participant recalled going through the results of the searches with his friend, while in the same room, looking at the prices, at the hotels and the locations of the hotels, writing this information on a piece of paper and referring to it when finding new offers. They eventually decided not to proceed with booking the holiday, since "*the other person was not willing to spend that much money*".

The rest of the respondents had different opinions with regards to where they usually do their travel-related searches. One of the participants expresses his preference towards Skyscanner because of the ability to display results from multiple airlines. Another participant agreed with his choice, and added that in addition to using Skyscanner, he also enjoys using Google Flights, since it has a more efficient way of displaying the dates and the prices of the flights. Furthermore, one of the participants expressed his preference in conducting the searches directly on the website of the airlines.

"Me and a friend of mine wanted to visit a third friend of ours in New York. We knew the approximate dates, but not the exact dates. We knew the period. So, we used BA's [British Airways] website and Skyscanner to check for alternative flights and we also consulted some local travel agencies, because we thought that they would give us cheaper deals."

The respondents were in unanimity with having shared travel-search results (e.g., flights scheduled at different dates and times) by e-mail, or having communicated them over the phone. Also, during the searches, the respondents were either co-located and they were searching from different devices or remote, communicating via e-mail or through the phone.

It was not clear how they managed to arrive at an consensus regarding which flight option to select.

4.1.3 Group Observation

The participants agreed on a time and a date to hold a Skype call, after G.P5 initiated a group conversation with all the group members on WhatsApp. At the beginning of their call, G.P5, the same person that initiated the group chat, proposed going on a road trip "*somewhere in Europe [...] wherever it's the cheapest*". Since G.P5 is located in Singapore, G.P7, located in Budapest, wanted to make sure that he is OK with flying to Europe.

Selecting Destination

G.P6 quickly proposed going to San Francisco. It can be seen that the certain members of the group proposed a few destinations. It was not clear which were the criterion based on which these suggestions were made on, since the group members did not provide an explanation for his proposed destination. However, G.P5, took into consideration his friend's idea and

summed up that now they have to choose between Europe or San Francisco, since these two were the first destinations recommended, and repeated: "*whichever is cheaper*".

Early in the conversation, the participant that proposed going to San Francisco wanted to share his screen with the others. It was not clear for G.P4 whose screen are they all going to be looking at, since she thought that G.P5, the person whom initiated the trip planning was going to share his screen with all of them. Could it be that since he was the one to take the initiatives of proposing the trip idea and setting up the WhatsApp chat and the Skype call, the other members to see him as the person that will continue to take on the role of being the most actively involved in planning this trip? Is this the way people see him?

G.P5 wanted to start looking for cheap destinations by searching for flights from Singapore to Europe, by going on Singapore Airline's website. However, since the website does not support searching from country to continent, he asked his friends to suggest an arbitrary place in Europe. He quickly changed his mind and asked his friends if they would all search, independently, for flights to San Francisco. G.98 expressed her concern about the price of tickets, stating that she already knows that the tickets will cost a lot. She mentioned that she needs to take into consideration the cost of the visa as well, and that she is thinking about her low salary.

Shortly after, G.P5 mentioned that they need a date, or a range of dates. G.P4 quickly suggested "May". Since G.P5 was not too sure when in May would be the best, he asked G.P4 if "anything in May" would be OK. G.94 suggest to travel at the end of May. G.P5 was still unsure about when that would be, since he needs a clear date, so he asked her if that could be the second half of May. G.P4 replied: "*after the 17th*". G.P8 quickly suggested the 21st of May, since "*it's a Saturday*". G.P7 and G.P6 both agreed with that date.

Afterwards, G.P4, G.P8 and G.P7 asked (in different ways) for how long are they going to be travelling for. G.P4 suggested to go there for two weeks. G.P8 wanted to check if that would mean buying return tickets for around the 4th of June. G.P5 agreed to the dates suggested.

Budgets

In the meanwhile, G.P8 was searching for flight tickets from Mumbai to San Francisco. She expressed her disappointment in seeing that "*that's two months of my salary for a one-way ticket*". Seeing that there were big price differences between them (£400, £600 and £800), they decide to travel to Europe instead. G.P5 mentioned that he will check if travelling is cheaper by keeping the current tab open.

At the same times, G.P8 suggested going to Berlin, and G.P4 suggested going to Italy. In the debriefing interview G.P8 mentioned that she picked Berlin by "*thinking of the places around my friends (Oslo, Hungary) and Paris, Berlin and Italy came to my mind. And then I thought that Paris might be a little bit too romantic. I have this list of six places where I wanna go in Europe, and I thought that I really have to go to these places, so if we meet there then I could get the chance to cross it off my list.*

G.P8 asked if they should go to Milan or to Rome in Italy. Both G.P4 and G.P5 chose Rome. At the same times, both G.P4, G.P8 and G.P5 were able to tell quickly what the price of their tickets will be.

At this point, G.P6 mentioned that he will need to leave in 15 and asked his friends to "speed up" the process. G.P5 pointed out to G.P6 that he might need to decide now on his ticket. G.P4 took over the conversation and put the focus on what is everyone's budget for this trip. After they stated what their budget is, G.P5 tried to find a way in which he could find cheap flight options for G.P8. He thought about taking the average of the budgets of all of them and splitting it. G.P5, after figuring out that this is not a feasible option, suggested to G.P8 to choose a destination that would not be expensive for her. She suggested going to Bali.

G.P6 suggested recording everyone's budget, while G.P5 suggested having a group budget and splitting it into separate budgets, around £400 each. However, this did not seem to be a feasible idea since a ticket for G.P4 from Norway to Bali would cost more than £400.

Asynchronous Communication

At this point, G.P6 had to leave and he told his friends to let him know what they have decided, but do not buy any tickets before they confirm all with him. He suggested e-mailing him or creating a Facebook group chat to let him know what the group has decided eventually.

Task Delegation

After G.P6 left the conversation, the friends tried to see how they could split their budgets. In the end, they did not reach any consensus, since they decided to continue with trying to find a destination and booking their tickets sometime in the next days. Before they ended the conversation, G.P4 added the following: *"We should all decide on how much we each want to spend and then have one person in charge, because then they could kind of do everything and then they could kind of find out where it is possible to go from all of our different countries, instead of all of us trying to talk on Skype and decide. It would be so much better if we were all together in one place. But that's obviously not possible at the moment (laughs). Or if we could just say: "OK, we are going there, on that day", and then we would have to buy our own tickets."*. They all agreed to the conversation tomorrow.

Conclusions

With regards to the *budget* of the group and to the budget of every individual, there was a tendency of searching for the cheapest destinations. Also, the friends could not figure out how to efficiently split the budget of this trip.

When trying to find cheap *destinations*, they were not sure where to find them. They tried recalling some places that they would like to visit and searched for the prices to those

destinations.

In some instances, they were unsure of whom should conduct the searches. Lastly, communication seemed to be scattered across multiple channels: Skype call, e-mail, WhatsApp messaging or even Facebook group as per the suggestion of the person that had to leave early.

The findings of this group observation session support the idea demonstrated by Morris and Factors (2007), Large, Beheshti and Rahman (2002) or by Toze, McCay Peet and Toms (2011) that information search and retrieval is a collaborative activity. However, as it can be seen here, not all of the activities were performed by the members of the group as a unit. For example, some members conducted their own travel searches that they did not share with others, in which they saw and compared the available flight options. Therefore, one can experience finding a suitable ticket as a solitary activity.

4.1.4 Summative Evaluation of Existing Technology

Opinions taken from the individual interviews

The participants expressed their preference in using the following technologies when travel planning: Skyscanner, Kayak, Expedia and airlines' websites.

When asked about what do they think that these tools are missing, one of the participants expressed his dissatisfaction with Syscanner not displaying the prices of the tickets outside of the travel period selected. He found this type of feature useful when he used once Kayak, when he wanted to see if there are any other cheaper days that might had been omitted. The second interviewee mentioned disliking the fact that some airlines will not be displayed in the search results that he once made from the Spanish version of the website, but they did come up when the search was made on the UK website.

Not being able to use a country's name as a search query and having to input a specific city or airport code was another issue, from his point of view.

When asked about which features they have enjoyed using, both of the participants mentioned the ability to search for flights to "Everywhere", supported by Skyscanner.

The evaluation sessions

Seeusoon, a new concept of meta-flight search engine was used in the evaluation sessions with users conducted. Seeusoon takes a step further from generic meta-flight engines, by allowing the inquiry of multiple origin points, suggesting one common destination for all of the origin points. For example, inquiring for flights from London, New York and Dubai on

the 10th of October 2015, results in the following destination suggestions: Rome (average price per person of £209), Warsaw (£238), Copenhagen (£247), etc.

Since the focus of this project was on online group travel planning, seeusoon was evaluated for the purpose of gaining insights into its usability and user experience.

None of the participants had any prior experience with the system and the concept was also new to them.

In the first session conducted, the participant found interesting the fact that he could not select a budget. He said that he thought that if the users know where they would like to go on holiday, they could specify the place and the time and give it a budget range. Once he reached the results page, the participant felt that there were too many prices displayed on the same page. He mentioned that: “I thought the price that they gave me earlier was the price, but it seems that we need to reevaluate, they gave us the cheapest price... but there still are a ton of prices to choose from”.

The screenshot shows a flight search interface. At the top, three departure points are listed: London to Lisbon (Wed 2 Dec - Fri 4 Dec), Paris to Lisbon (Wed 2 Dec - Fri 4 Dec), and Madrid to Lisbon (Wed 2 Dec - Fri 4 Dec). Below these are three buttons: 'Start from London', 'Start from Paris', and 'Start from Madrid'. The main section is titled 'Your flight options' and displays a list of 12 flight results. Each result includes the price, departure and arrival airports, and the date. The results are as follows:

Flight Price	Flight Details	Airline	Action
91,58 €	LGW - 16:35h → LIS - 19:15h ⏲ 2h40m / Direct LIS - 10:55h → LTN - 13:40h ⏲ 2h45m / Direct	easyJet Share	Book
101,01 €	LGW - 16:35h → LIS - 19:15h ⏲ 2h40m / Direct LIS - 06:30h → LGW - 09:10h ⏲ 2h40m / Direct	easyJet Share	Book
107,31 €	LGW - 16:35h → LIS - 19:15h ⏲ 2h40m / Direct LIS - 19:45h → LGW - 22:25h ⏲ 2h40m / Direct	easyJet Share	Book
147,17 €	LGW - 16:30h → LIS - 19:10h ⏲ 2h40m / Direct LIS - 07:15h → LGW - 09:50h ⏲ 2h35m / Direct	TAP Portugal Share	Book
147,17 €	LGW - 16:30h → LIS - 19:10h ⏲ 2h40m / Direct LIS - 09:50h → LHR - 12:40h ⏲ 2h50m / Direct	TAP Portugal Share	Book
147,17 €	LGW - 16:30h → LIS - 19:10h ⏲ 2h40m / Direct LIS - 19:45h → LHR - 22:35h ⏲ 2h50m / Direct	TAP Portugal Share	Book
156,17 €	LGW - 10:40h → LIS - 13:20h ⏲ 2h40m / Direct LIS - 07:15h → LGW - 09:50h ⏲ 2h35m / Direct	TAP Portugal Share	Book
156,17 €	LGW - 10:40h → LIS - 13:20h ⏲ 2h40m / Direct LIS - 09:50h → LHR - 12:40h ⏲ 2h50m / Direct	TAP Portugal Share	Book
156,17 €	LGW - 10:40h → LIS - 13:20h ⏲ 2h40m / Direct LIS - 19:45h → LHR - 22:35h ⏲ 2h50m / Direct	TAP Portugal Share	Book
156,17 €	LGW - 16:30h → LIS - 19:10h ⏲ 2h40m / Direct LIS - 08:35h → LHR - 11:25h ⏲ 2h50m / Direct	TAP Portugal Share	Book

Fig. 3 Flight results, seeusoon

The participant did not notice that the list of flights can be ordered in other ways. Only after analysing closely the webpage he found the “Order by:” label: “*it's in a weird place*”. He

also found the label “Outbound departure time” to be confusing: “*Is this my outbound or your outbound?*”. He also did not realise that he can switch between multiple starting locations because the tabs seemed to look like buttons.

Overall, the user did not find this website useful as a tool:

“I still have not identified the date and if we really want to find the cheapest [tickets] we would give ourselves a window to have the possibly of seeing flights a few days after and a few days before a date, just in case that there is something really cheap there; we would have to do that for every day, individually. What if it could identify a range of dates and mention that we would like to go to any of these five places and that we want to depart across this window? Find the cheapest holiday for us!”

The second participant said that he does not trust the website because it only had one travel suggestion for his inquiry. Looking at the results page, he mentioned that the way that the information is presented is confusing, and that he prefers how www.hipmunk.com presents their flight results: “*I assume that it is arranged by price, but that is not made explicit anywhere*”

“It’s quite a lot of work to figure out which of these times are convenient for us, because now we need to stay here and compare all of the dates.”

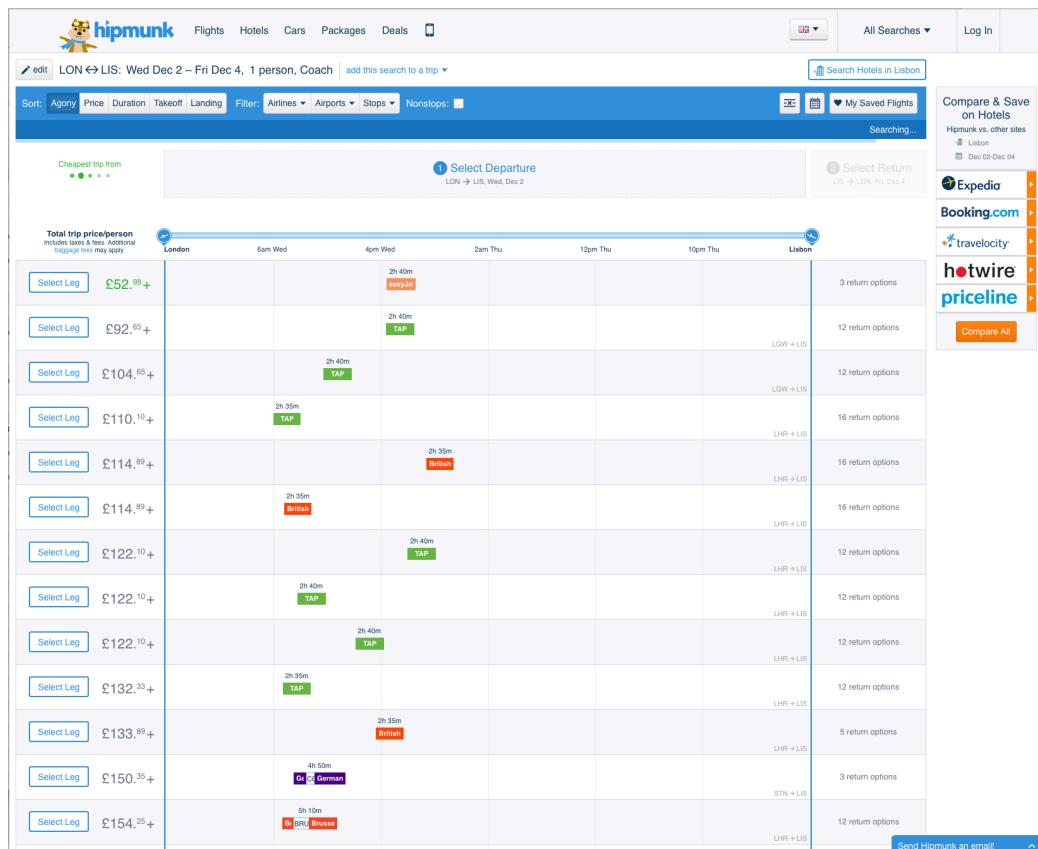


Fig. 4 Flight results www.hipmunk.com

The second participant expressed his dissatisfaction with the website:

"I think that it misses out the main thing: it does not calculate convenience. I think that the point here was to work out these things for us so we can converge, but there is no feeling of convergence. It seems like it's just two separate things, that two flights have been picked, so it's not that useful."

Both of the participants started by wishing to arrange a trip for five people and they selected “5 travellers”, instead of pressing five times on the “+add city of departure” button”. They seemed to be confused by the terminology used. Since the headline says “Group trip planner”, they seemed to think that they need to select first the number of travellers, not add the departure cities.

Also, the participants did not like the fact that they cannot choose a pre-defined destination.

"This stuff is useful, but it's more of an add on, whereas the core of the product for us as travellers would be being able to filter suggestion by budget, period and duration."

Recommendations

- Allow the users to choose their preferred outbound and inbound times. For example, three passengers might prefer to arrive at the same time to their destinations, instead of being presented with multiple, different outbound hours.
- The website could also allow travellers to select the hour at which they would like to leave from the airport.
- Expanding on above recommendation, the website could also allow the travellers to select the hour at which they would like to arrive "back home". For example, on a weekend trip, both of the friends might prefer returning home by 10 p.m.
- Allow the users to filter travel suggestions by adding "budgets"
- Specifying that prices from multiple airlines were compared could improve first-time users' understanding of the website.

4.2 Design Investigation and Development

4.2.1 Scenarios

The scenarios were based on the requirements elicited during the data gathering phase. They were also concentrated around the discussions held during the focus group, concentrating on the following episode described by one of the participants:

"I did a quick search based on a few locations that I wanted to visit and I created a list of them based on the price and then I sent this list to my friends, so they can search and see which locations are cheap from their cities."

Scenario 1:

Johanna (22, Sweden), Kate (24, United Kingdom), Daan (23, Belgium) and Viktor (25, Morocco) met last summer in New York, doing voluntary work. One year later, they are all working and living in different countries, but they have decided to arrange a meeting somewhere where it would be convenient for all four of them. Daan took the initiative of creating a group chat on Facebook in which he added Johanna, Kate and Viktor and asked them if they would like to meet again in the next months. They are all excited about this idea and decided to arrange a video conference in order to see when would everyone be available to travel. Since they all have different availabilities, budgets and travel preferences, they decide to use the system in order to generate potential holiday options. Kate creates a new travel group in which she invites her friends. Now, all of them can set up their budgets, availability and destination preferences individually using the system. While they are making their selections, the system suggests them several possible destinations, all matching their budget and interests. They discuss on Skype about the possible destinations, and decide that they could meet in Frankfurt in the second weekend of February 2016. After selecting the destination and the period that works for all of them, they are now able to use the collaborative dashboard to select their flights. Everyone has the option to see all flights available for each of them, from all airlines. They also have the option of coordinating their flights in such a way that they could arrive in Frankfurt at around the same times. After comparing the flight times and prices, every person can book their tickets now or at a later point. When they are ready to make the bookings, they are redirected to the airlines' website. They are then able to return to the dashboard to inform their friends that they have booked their tickets.

Scenario 2:

Eleni (29, Greece) enjoys nature activities and exploring new countries and would like to travel to a new place in December 2015. Since she is not sure yet where and when exactly she would like to travel, she decides to just use the system to explore possible destinations and friends suggestions. The system presents to her what are the cheapest destinations in December, according to the locations of her Facebook friends. She notices a trip to Istanbul, Turkey, that might be interesting although she does not fully agree with the group of 4 suggested friends. However, she is happy with the period and with the costs (750 GBP for the whole group), since she knows that the selected destination is one that is convenient for everyone, both price-wise and period-wise, since her friends have already selected their availability and budget when they started using the system. She sends out invitations to join the travel group to the suggested friends. Invitations arrive both on Eleni's friends inboxes and as a Facebook notification. Out of the 4 invited friends, only two, Marian (25, London) and Fabrice (28, France) accept. After being notified about the accepted and rejected invites, the system suggests to her another 2 friends that might want to join the trip, based on

common interests and friends' locations so that the overall travel cost does not change. She decides to invite just one and close the 5th slot of the travel group. The invitation is received by Ena (23, Romania) who although has never used the system and has not put in her availability, agrees with the travel dates. After accepting the invitation and registering with her Facebook account, she is able to join the travel group and book the cheapest available flight.

4.2.2 Personas

Personas were created for the purpose of envisioning to whom the travel dashboard should be aimed for. Several different personas were created, exemplifying the way in which a wide range of users could benefit from using this system. By defining persona characteristics, a layer of abstraction is eliminated. They layer separated the scope of the product from potential users, linking product features with the needs of specific segments of users.

A summary of the personas is presented below.

Persona 1:

Alex is a professional who recently graduated from a top university in London. He would like to go on a holiday with seven of his previous colleagues from University, who are now based throughout the world. He is not quite sure about the exact availability of his friends. He has a few destinations in mind but he does not know which ones would be more suitable for everyone's taste and availabilities. Alex, Natasha and Fiona are in London, Jason is in New York, Kim is in Hong Kong and Katerina is in Athens.

To choose the destination, he has to take into account the destination country's visa/passport requirements, all members' interests and activities and needs to find a destination that will not be too expensive to reach for any of the friends he will be travelling with.

Alex, Natasha and Fiona met in a pub in London and they figured out that they would all be available to travel in the first week of November this year. Natasha sets up an online group chat with their friends and tries to find out if they would also be free in that period. After 8 hours, they finally got a reply from every single person. Regarding their travel preferences, Katerina would like to go somewhere close in Europe, whereas Kim expressed her interest of travelling to Turkey since she will be already there on a business trip.

Persona 2:

Ben is a 27 years old former account manager who has decided to take a gap year from his career in order to discover the world. Although being on a reasonable budget, he wants to get the best value for cost from his gap year, expects a unique experience and looks forward to visiting as many interesting destinations as possible. He wishes to have a unique, memorable experience. He has contacts all around the world, is open to and even embraces any mean of transport, from 1st class experience with Emirates Airlines to local buses and private means of land transportation, any type of accommodation, ranging from five-stars hotels to couch sharing with friends or even strangers.

Having friends in New York, Mumbai, Moscow, Seoul, Philippines, Johannesburg, Honduras, Sydney and Lebanon, he wants to explore all 6 continents while being a guest to his friends. He might even travel together with his friends, in groups. He needs to find the cheapest and most efficient way of planning his trip while still choosing the most suitable destinations (among all possible).

4.2.3 User Journey

The following user journeys for the new system were created, based on the scenarios and on personas created:

User Journey 1 - the invitation:

People are notified that a new travel dashboard was generated by receiving an invitation (in the form of a Facebook notification or as a personalised e-mail). The invitation can either contain all the information with regards to the trip (ticket prices, dates, trip members) or can be empty: the users can build the trip together by using the collaborative travel planner. The user can accept the invitation if she agrees with all of the details of the itinerary, or she can suggest modifications (e.g., if the travel period is not suitable, or if the airfare is too high; might be outside the traveller's budget).

The dashboard can be updated regularly with the live price; a notification can be displayed if the price has raised above the traveller's budget. Once the itinerary is suitable for every traveller in every aspect, they can proceed to booking their tickets. Here, the task of booking tickets can be delegated in several ways: one person pays for every flight, or everyone books individually. In some cases, these two solutions could be combined: a person pays for a part of the trip (e.g., for three people) and the rest of the people pay separately for the remaining of the trip. Each of the travellers can select from a list of predefined notes how they would like to proceed with the bookings: "I have booked the tickets myself", "I would like to ask _____ to book them for me", "I will book the tickets myself, irrespective of their price".

However, users will be alerted that there might exist price fluctuations. Ideally, travellers would be displayed a fixed price, but this concept is based on a meta-search engine, and not on a concept similar to a travel agency.

User Journey 2 - the explorer:

When users connect with their Facebook accounts, travel suggestions could automatically be created according to the users' relationships on Facebook: common groups of friends, mutual friends, etc. Users can also create their own travel lobbies, according to their and their friends's location, several travel lobbies could be generated.

When being displayed a list of holiday suggestions, each item, besides destination, price and duration includes suggestions of groups of people that could join the holiday, as a group (e.g.: travel with Marian Neagoe to Barcelona in October for only \$39). Users are allowed to modify the following parameters: "Marian Neagoe", "Barcelona" and "October", in order to list multiple suggestions.

The *user journey* ends in the moment when the user is redirected to the booking websites.

4.2.1 Design I

The design of the system is based on the concept of aggregating travel results for multiple origin queries, as seen in seeusoon.

Groups are auto-created based on the user's social data, social interactions and geographical distance between groups of friends. This requires discovering the social group one is part of in real life (e.g.: group of four people living in the same household, friends having travelled together or often social interactions, etc.).

Grouping social contacts is achieved by calculating a *matching score*. The algorithm behind this score tries to identify the level of similarity between a group of friends taking into consideration the aspects below. Each one is assigned a different weight, as sometimes lower costs may be a priority, in the same way the strength of the social relationship may be more important in other cases.

Layer	Criterion	Weight
Layer 1	Friends' locations (people living or working close to each other can result in cheap travel recommendations)	15-25
Layer 2	Mutual Facebook friendship (number of pictures in which they were tagged together; number of interactions of Facebook such as timeline posts, likes, etc.)	10-15
Layer 3	Shared interests (people that like the same artists; this could result in concert recommendations)	10-20
Layer 4	Shared goals (events in common, tourist destinations liked on Facebook)	10-15
Layer 5	Occupational group (people with the same employer, situated in different locations, could organise informal company meetings somewhere)	25-30

The data is used in order increase the probability of finding a suitable holiday destination as a group.

4.2.1.2 Functionalities

The application dashboard initially contains the following two frames:

1. The travel recommendations frame which contains boxes with travel suggestions displaying:

- destination (generated based on an optional input)
- travel dates (the period for which the travel suggestion was recommended)
- group of people (the names, along with profile photos of social contacts that are being suggested)
- price per group
- average price per person
- suggest to meet with (social contacts located in the suggested destination)

If the user is not happy with the suggested location, he can edit it or remove it from future suggestions. The location will be added to a blacklist and will not be suggested for the current search session.

The screenshot shows a Facebook-style travel dashboard. On the left, under 'My travel preferences', there's a 'My location' field set to 'London', a 'Create a travel group' section with three input fields, and a budget range slider from £50 to £820. Below that are sections for 'Budget per person', 'Destination(s)', 'Tags(s)', 'Trip duration' (3-12 days), and 'I am: Available' (a calendar for December 2015). On the right, under 'Travel suggestions', there are three cards for 'Vienna, Austria', 'Zurich, Switzerland', and 'Delhi, India'. Each card shows a group of people, their travel dates, individual prices, and a total group price. It also includes an 'Explore...' section with images of local landmarks and a 'Select trip' button.

Fig. 5 Design I, Individual area

2. The search form frame which contains the following two frames:

- user's location (can be implicitly selected or explicitly selected by the user if information is incorrect or user wants to generate more travel suggestions)
- "Add friends" feature (the user can input the names or emails of the whom he wishes to travel with)

- budget per person adjustment feature (users are able to either set their own budgets, or to agree with their friends on a "group budget")
- destination search feature

If users have a preferred destination, they can enter it here. Can be a city, country or even continent. Having **multiple locations**, instead of just one possible location: if the user selects "Europe" as a destination, this still represents multiple locations. In this way, the algorithm is able to find the optimal one in the entire continent. At the same time, users are able to add more than just one destination, separated by comma e.g.: "Europe, South East Asia". If the user adds "Europe, Germany, South East Asia", Germany would have a higher weight since it was mentioned twice, as it is included in Europe. In this way, a "specific location" can even be one *city*. Like in focus group conducted, the two travellers were considering going either to Thailand, Costa Rica or to Nicaragua.

- duration of trip (with slider for adjustment)

- user's availability displayed as calendar, allowing multiple availability intervals.

When a user adds the period in which he is available to travel, travel suggestions based on those dates are generated, and the calendar displayed on the left frame is marked with that specific interval. When a second user adds his interval, the two combined dates are marked on the calendar and travel suggestions are generated based on the two.)

The main interface of the collaborative screen contains one main frame which includes:

- destination and dates selected (these can be modified from here, generating new flight results for each group member)
- "meet at the airport at the same time"/"leave from the airport at the same time" option (the flight results would be sorted in such a way that all users would have more or less the same arrival or departure times)

For example, as shown in the wireframes, the user flying from London would arrive at 11:25, the user leaving from Athens would arrive at 12:15, the person from New York at 12:40, etc.)

- friends' status: invite/pending/accepted
- "flexible?" option (allows users to adjust the dates based on cheaper days alternatives)
- filters based on journey duration, stops, departure times, airlines, airports
- flight suggestions (departure/return + time, airport code, flight length, number of changes, airline and prices)
- buttons for booking for each person
- buttons for sharing for each person
- exploration feature (if friends' suggestions are not possible because the user might not have any friends located in the destination generated, landmarks and other points of interest for the user to discover while at the destination are suggested)

Travel Dashboard

Thomas Home

Copenhagen, Denmark
11.09.2015 - 15.09.2015

meet at the airport at the same time
 leave from the airport at the same time

Flexible?

Myself	Singapore, Singapore	Mumbai, India	Oslo, Norway
Journey Duration	Journey Duration	Journey Duration	Journey Duration
Stops	Stops	Stops	Stops
Departure Times	Departure Times	Departure Times	Departure Times
Airlines	Airlines	Airlines	Airlines
Airports	Airports	Airports	Airports
Departure	Return	Departure	Return
08:35 1h 50m 11:25 LTN CPH Ryanair £37	07:00 1h 50m 07:50 CPH LTN Ryanair £33	00:50 18h 20m 13:10 SIN CPH Emirates £299	14:55 15h 25m 20:40 SIN CPH Emirates £257
08:35 1h 50m 11:25 LTN CPH Ryanair £37	20:10 1h 50m 21:00 CPH LTN Ryanair £30	06:20 15h 25m 10:25 SIN CPH Emirates £301	08:35 14h 25m 11:25 BOM CPH Lufthansa £367
16:55 1h 50m 19:45 LTN CPH Ryanair £37	07:00 1h 50m 07:50 CPH LTN Ryanair £33	23:00 18h 40m 12:40 SIN CPH Emirates £324	20:10 17h 20m 22:30 BOM CPH Lufthansa £230
16:55 1h 50m 19:45 LTN CPH Ryanair £37	20:10 1h 50m 21:00 CPH LTN Ryanair £30	23:00 18h 40m 12:40 SIN CPH Emirates £324	16:55 14h 25m 19:45 BOM CPH Lufthansa £250
07:20 1h 50m 10:10 LTN CPH EasyJet £44	10:25 1h 55m 11:20 CPH LTN EasyJet £46	23:00 18h 40m 12:40 SIN CPH Emirates £324	07:00 13h 15m 07:50 BOM CPH Lufthansa £306
Myself: £70	Sam: £556	Kal: £659	Anna: £56
Book	Book	Book	Book
Share	Share	Share	Share
Explore while you are in Copenhagen:			
Tivoli Gardens	The Little Mermaid	Christiansborg Palace	

Group price: £1,285

[Book all tickets](#)

Fig. 6 Design I, Collaborative area

The following actions are available:

- adjust budget per person (the users are able to either set their own budgets, or to agree with their friends on a "group budget")
- add destinations (if users have a preferred destination, they can enter it here)
- adjust duration of trip
- change/check availabilities (if the user is not aware of the entire group's availability, he can use the calendars below each group member's picture - the dates when everyone are highlighted in the calendar on the left side; if everyone already knows the exact date when they want to travel, they can insert it in the calendar on the left)
- favourite travel suggestions
- adjust budget, period and availability (yes/no and dates range)
 - create travel group(the user can input the names of the friends with whom he would like to search for travel suggestions)
- pin destination/dates/people
- check travel availability of other travel group members
- invite users to join travel group
- communicate with friends through chat
- send travel itineraries through e-mail
- book one ticket or book all tickets

4.2.1.2 Problems improved

The system helps users by:

- Finding suitable travel options according to varying constraints of multiple users, often complex and strict;
- Discovering suitable travel destinations according to one's interests without having to do prior research;
- Saving the time taken to search for flights on multiple dates, from different locations, etc. and cross-match users availabilities and travel preferences with the best travel options available;
- Lowering travel costs and offering more value for price, by guiding users and their search towards the best airfares and deals available;
- Making it easier for people to meet across the world and organize group travels with members spread internationally.

4.2.1.3 Design Rationale

Morris (2008) identified three different strategies for performing collaborative web browsing: divide-and-conquer, brute force and backseat driver. The divide-and-conquer strategy involves the group members planning in advance the way in which work should be divided, each group members being responsible for a specific piece of work. The brute force strategy involves having the users conduct individual search related to their own piece of work, eventually sharing the findings with the rest of the group. The backseat driver requires the group to delegate one of the group members to be the "driver". He is responsible for "providing input to the device, while the other group members give suggestions about how to proceed" (Morris, Lombardo & Wigdor 2010). The system was designed with these strategies in mind:

- Following the divide-and-conquer strategy, the members of a group of people that would like to travel somewhere can each generate a number of travel suggestions (either for all of the members, or only for themselves). After saving a few possible itineraries, they can compare them among themselves.
- In the case of applying the brute force strategy, a user can use the system for the purpose of exploring possible travel suggestions. Once he found the perfect travel combination, with a group of people with which he would enjoy to travel, he can send an invitation to this group.
- In the backseat driver scenario, a co-located or a remote group of friends can all decide outside of the system where they would like to go and where. One of the friends can access the dashboard and create a new travel group that includes his friends, filtering the results by the destination and the dates they have decided on. He can invite them to join the travel group created, any of the group members being able to modify the parameters of this trip at a later time at their convenience.

Therefore, this system was designed for catering for many types of search techniques, either individual or collaborative.

The design of the dashboard was envisioned with the users not being required to populate any fields with data. Instead, by having the dashboard inside of Facebook, any necessary information, such as users' locations or lists of friends, was quickly extracted from Facebook. Almost everyone has or had a Facebook account at one point (Singh 2009). Although some people might not have a large amount of information displayed on Facebook, the majority of them have at least their locations and their friends' publically available (Wisniewski et al. 2015). This design leveraged on people's familiarity with Facebook and with the functionalities which Facebook offers. Since it is important in collaborative information seeking to allow communication, Facebook supporting the creation of individual and group chats, or phone and/or audio call making, having the dashboard built on Facebook allowed for easy access to these features that aid communication. This design approach might prove useful in exempting the users from using a multitude of different software that aid communication (Morris, 2013). In other words, everything is in one place.

However, having an effective method of communication is not the only thing that a well-designed collaborative information seeking system should have. According to Shah, Marchionini and Kelly (2009) the system should also have the following: "an ability to see everyone's actions, a way to distribute tasks and aggregate information, and a mechanism to record user interactions, processes, and results."

Furthermore, the design of this process followed the guidelines presented by Shah and colleagues (2009) for designing a "user-centered CIS system":

1. The system should provide an effective way for users to communicate with each other.
2. The system should allow (and encourage) each user to make individual contributions to the collaborative.
3. The system should coordinate user actions, information requests, and responses to support an active and interactive collaboration. This collaboration could be synchronous or asynchronous, and co-located or remote.
4. Users need to agree to and follow a set of rules to carry out a productive collaboration. For instance, if they have a disagreement on the relevancy of an information object, they should discuss and negotiate; they should arrive at a mutually agreeable solution rather than continuing to dispute it. The system needs to support discussion and negotiation processes among the users.
5. The system should provide a mechanism to let the users not only explore their individual differences, but also negotiate roles and responsibilities. There may be a situation in which one user leads the group and others follow (cooperate), but the real strength of collaboration lies in having the authority vested in the collective.

Functionalities

“Meet there with...”

This feature is based on the story of one of the interviewees of this study. The interviewee mentioned making a list of the people that he would like to see while he was visiting London. He spent some time trying to remember whom he knew that lives or works in London, writing their names down in a notebook. He tried to get hold of all of them to check if they will be in London in the period when he was travelling there.

To provide a solution for such a situation, the "Meet there with..." feature was incorporated into the travel suggestions. However, in the case that friend suggestions are not possible because the user might not have any friends located in the destination generated, the *exploration feature* will be displayed.

Budget

Including an option for setting or adjusting budgets was highly important. The evaluations and the group travel planning conducted both revealed a need for allowing travel planners to input their budgets.

Adding Travel Suggestions to Favourites

As noted during the observation session of the group of friends that was trying to plan a journey together, travel search can be a multiple-episode activity. Also, as per the findings of Kelly and Payne (2014) collaboration among participants is "not isolated to a single configuration of time and space". Therefore, the dashboard had to support the activity of saving travel results, allowing the users to resume their search activity at any point.

“Flexible?”

The data gathered resulted in an explicit need of the traveller to be able to see alternative cheaper dates, by having a "travel window".

"Share" buttons

Being able to share flight itineraries with others is an important aspect of travel planning (Cao et al. 2011). Also, collaboration does not involve only exchanging information, but also storing it. Therefore, storing can be achieved by sharing the travel information with others.

4.2.1.4 Evaluation

Individual testings

A few of the most important remarks from the evaluations are presented below:

- The participants did not understand how the prices and the destinations were determined. However, one of the participants mentioned that he did not find the choice of friends weird, since every person in each of the groups knew each other.
- The participants did not notice that there was a price change.
- The first participant mentioned that he has doubts about using "meet there with...". He mentioned that he would rather meet with his friends straight at the hotel.
- One of the users was overwhelmed at first by the amount of information displayed on the collaborative screen.
- The users realised quickly that this is a shared page, but one of them mentioned that there should be a clear indication of this.
- When looking at the prices displayed, one the users commented that it is quite hard to read all the information, because he is required to focus on the details of his flight (the first two columns), but all of the others columns were adding weight graphically.
- Both users liked being able to pay for multiple people.

Heuristic Evaluation

The results of the heuristic evaluation applied to the collaborative screen are presented below:

Heuristic 1: "support intentional communication such as text, audio or video"

- facilitating communication through digital audio link or text chat between participants
- video can also be present

Directly, the collaborative screen supports only text, which is in turn supported by Facebook. The current chat status of every group members is displayed inside the dashboard, by using the standard online/offline chat representations of Facebook.

Audio and video communication can be achieved through Facebook's chat, but it is not something that was offered directly by this system. It seemed impractical at this point to provide a separate audio or video channel.

H2: "provide the means for intentional and appropriate gestural communication"

- support gestural communication such as telepointers (cursor), for the purpose of allowing a person to point to different objects in the workspace
- avatars and videos are also used for representing bodies with the workspace

Not achieved.

H3: "provide consequential communication of an individual's embodiment"

- capturing and transmitting both explicit and subtle dynamic that occur between participants (e.g., unintentional body language, intonation, etc.)

Not achieved here; would have to position monitors and cameras in such a way that all of the people would be seen and heard in the "same relative position on their video and audio surrogates". This would be too intrusive for the purpose of this system.

H4: "Provide consequential communication of shared artifacts (i.e. artifact feedthrough)"

- "display the local user's feedback to all remote users", that is, if there exists a direct manipulation of an object in the workspace, the system should not only display the final position of the object that was moved, but all of the intermediate steps that led to it being positioned in a certain space
- present all of the operations or commands that a person undertook for the purpose of enabling others to anticipate what is about to happen

Not achieved.

H5: "Provide Protection"

- error recovery, access control; allowing user to have their own private objects "that only they can manipulate and/or view"

Not achieved, but something to be included in the second design, through locked flights

H6: "Management of tightly and loosely-coupled collaboration"

- enabling users to smoothly shift between loosely- and tightly-coupled collaboration (shift between individual work and group work) without other users losing track of what they are doing; this can lead to improved assistance support (an integral part of collaboration "whereby individuals move from loose to tight coupling")

It is not possible here to see what users are doing outside of the collaborative screen.

H7: "Allow people to coordinate their actions"

- not imposing a structure that tries to direct their interactions
- allowing collaborators to see all the actions within the entire workspace, "even if people are working in different parts of it"
- allowing users to communicate via an audio channel

As with the previous heuristic, it is not possible to see what users are doing outside of the collaborative screen.

H8: "Facilitate finding collaborators and establishing contact"

- support informal encounters and spontaneous conversations
- allow users to know "who is around and available"

Achieved through the chat feature, which displays the statuses of the users next to their profile pictures.

4.2.2 Design II

The system benefited from a design change, addressing the concerns of the users and the problems identified in the heuristic evaluation.

4.2.2.1 Problems Improved

The following changes were made:

- pins were added
- an undo button was added
- *tags* were removed
- a plus button was added to the collaborative screen
- added a "flexible?" feature that allows seeing available travel windows

Travel Dashboard

My travel preferences

My location: Oslo

Create a travel group

Budget/person

£50 to £820

Destination(s)

Tags(s)

Trip duration

3 to 12 days

Weekend

I am: Available

DECEMBER 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Istanbul, Turkey
11.12.2015 - 13.12.2015

Nikoline £276, Line £798, Chi-Chi £276, Miriam £276

Group: £1,902 (You: £276)

Zurich, Switzerland
09.11.2015 - 14.11.2015

Karolien £56, Gertjan £56

Group: £256 (You: £144)

Delhi, India
07.01.2016 - 10.01.2016

Edith £676, Joost £343, Justin £676, Kami £342, Mirthe £343

Group: £2,878 (You: £497)

Explore...
Hagia Sofia, Topkapi Palace, Galata Tower

Explore...
Fraumünster, Uetliberg

Explore...
Qutb Minar, The Red Fort, Lodi Gardens

Select trip

Fig. 7 Design II, Individual area

4.2.2.1 Design Rationale

Pinning (destinations, dates, people)

A few things inside the travel group can be *pinned*, not allowing so it will not allow further modifications. For example, all of the travellers might be 100% sure that they would like to travel to Amsterdam. This is one parameters that will be pinned to the dashboard.

"Plus" Button

A "plus" button was added to the collaborative screen, so the users would not have to go one screen back in order to add an additional person to the trip.

Pinning (destinations, dates, people)

The data gathered resulted in an explicit need of the traveller to be able to see alternative cheaper dates, by having a "travel window".

4.2.2.4 Evaluation

The results of the individual and the group user testing sessions are presented below.

Individual testings

A few of the most important remarks from the individual testing sessions are presented below:

- The pins were not clear for the participants. They were not able to tell at first glance what the pins can be used for;
- One of the participants was concerned that when he clicks on "Book all" four different tabs will pop up;
- The majority of the users were very excited at the sight of an "exotic destination", outside of Europe, but they were discouraged about the higher than normal prices;
- It seemed that the majority of the people did not understand how the results were generated. They might not have a mental model of how this type of aggregation for group trip planning can be made;
- The participants did not find the *ticks* used on the collaborative display for indicating the actions of the users clearly displayed (i.e. "will buy ticket", "bought ticket", "will buy all of the tickets").

Individual testings using persona

The first and the second designs were tested individually with two users that experienced at first the designs filled with the profile of a persona, i.e. the designs were not personalised with their names and friends. Since there were no differences in the way that they perceived or used the functionalities of the system, the results of both of the evaluations are presented below.

- One of the participants always had to remind himself of where "his" friends were travelling from. On the other hand, the participants that had their prototype customised did not check for the location of their friends, since they probably already knew it subconsciously.
- One of the participants could not understand what the destinations displayed meant. He thought that all of the people were leaving from that location. Also, it was not clear for him why different prices are displayed. It seems that since he was not aware of the locations/origin points of the people, he could not understand as quickly as the other testing participants that were aware of their real-life friends' locations how the destinations suggested were generated and how the prices were calculated. For a better design of the interface, it might be useful to have the locations of the people displayed beneath their profile pictures.

- On the second screen of the system, in the pre-planning stage of the group trip, one of the respondents looked at the price displayed for one of the persons that was part of the travel group, but not at their origin point. He mentioned that the price displayed for that person was too high and that he is not sure if someone would accept to come on a trip if they would have to pay such a large amount of money. He said all these without knowing where that person would actually come from, assuming that that person might live in London, since there is where this study took place. Therefore, without the participants having a real relationship to the people suggested, it was harder for the participant to understand how the prices were displayed (in relation with their origin points).
- Overall, both of the participants seemed to be more detached when presented with the prototype that used a persona. They could not seem to relate and they were also not as interested as the other participants in exploring the system. There was a drastic change in attitude when they were presented with their personalised design of the system.

Group testings

- The prototypes were personalised in such a way that the last member of the group that tested the system individually, was presented with higher prices than the others were. This is because in the majority of the times the prices of tickets change frequently. In the first group tested, one of the group members wrote down on a piece of paper the prices for everyone. At the beginning of the group evaluation, she recapitulated the prices with everyone. One of the participants was not too sure that she had the correct prices, since he mentioned that he remembers that the price of his ticket was lower. She went to check the collaborative screen, and indeed the prices of tickets were no longer the same as she had written. She seemed to be disappointed at first by this, but she quickly remembered that this is a normal thing to happen when searching for flight tickets.
- None of these people had any suggestions for friends that they could meet in Copenhagen, therefore they were displayed with the "Explore..." feature. One of the participants was eager to try out that feature to see where they could go in Copenhagen before booking the tickets. She said that she wants to see if there is indeed something very interesting to see while there.
- The members of both groups that evaluated the system seemed to be happy with the possibility of selecting to meet at the airport at the same time. They both decided that if they were to continue with the booking of the tickets, they would select the ones that would allow them to meet at similar times at the airport. One common concern of the members of the two groups was how can they know that someone (one of them) did not modify their flight choices.
- In both of the cases, the participants decided that they would book their tickets separately.

4.2.3 Design III

The system benefited from a second design change, addressing the issues identified in the individual testings.

4.2.3.1 Problems Improved

- Since the participants did not notice the price changes, red and green arrows were added to represent the changes graphically.
- Locks* were added to the flights displayed on the collaborative page. In this way, users can have more control over their selections.
- The label "returns" was added to the second column of the individual flights suggestions displayed in the collaborative screen
- Some of the participants mentioned that they were overwhelmed by the amount of information that was displayed on the collaborative screen. Therefore, the individual travel itineraries suggested can be hidden and expanded back now.

Travel Dashboard

Home | |

Trip with my friends

Copenhagen, Denmark
11.09.2015 - 15.09.2015

meet at the airport at the same time
 leave from the airport at the same time

I will book **my** tickets
 I have **booked** my tickets
 I will book **all** the tickets

Flexible?

Myself		Singapore, Singapore		Mumbai, India		Oslo, Norway	
Departure	Return	Departure	Return	Departure	Return	Departure	Return
08:35 1h 50m 11:25 LTN Ryanair	07:00 1h 50m 07:50 CPH Ryanair	00:50 18h 20m 13:10 SIN Emirates	14:55 15h 25m 20:40 CPH Emirates	02:55 14h 25m 13:50 BOM Lufthansa	08:50 11h 5m 23:25 CPH SIN	12:40 1h 10m 13:50 OSL Norwegian	07:10 1h 15m 08:25 CPH OSL
£37	£33	£299	£257	£367	£292	£34	£22
Expand to see flight alternatives		Expand to see flight alternatives		Expand to see flight alternatives		Expand to see flight alternatives	
Dylan: £556 Share		Niyati: £659 Share		Mina: £56 Share			
Myself: £70 Share							
Explore while you are in Copenhagen: Tivoli Gardens The Little Mermaid Christiansborg Palace							
Your ticket: £70							

Fig. 8 Design III, Collaborative area

4.2.3.2 Design Rationale

Flight Locks

The fifth heuristic for evaluating groupware suggested providing "protection", for enabling error recovery and implementing access control, allow the users to have their own private objects "that only they can manipulate and/or view". This was achieved in this design by allowing the users to *lock* the flight selections that they made.

5. Discussion and Conclusions

In the case that no travel itineraries can be generated because the parameters chosen by the users cannot produce any travel suggestions, because they are too constraining, the travellers will have the possibility to explore other itineraries, slightly modified. For example, adjusting the travel dates could result in cheaper flight tickets. Also, increasing the budget can reveal new destinations or dates.

Furthermore, in the case that the users do not have their current location on Facebook, it would be possible to send them a notification in which they would be encouraged to provide the system with their location, either directly inside of the dashboard or from their Facebook profiles. However, some people might be reluctant to do this, either because they are concerned that too many people will be able to see it, or because they do not know that they actually can set it to private. Also, people might not have such a big problem with hiding their location, as they have with hiding their friends list (Jin et al. 2014). Therefore, the system is depended on the users' decision to share their locations. Moreover, in the case that the location displayed is incorrect, the users should have the possibility of editing the locations. In this way, even if a user does not have his current location set on Facebook or if his current location is different than his "real" one, the user or any of the persons that create a travel that includes him can edit this information.

5.1 Future Work

- See how people use the dashboard. Do they add and/or remove parameters from the filters located on the left side, or do they let them modify parameters inside of the travel suggestions?
- Several people might not return to use the dashboard after their travel itineraries were generated. Should they be motivated to return by suggesting accommodation deals or fun things to do during their trip? All these could be extracted from affiliate websites;
- Should there be a clear moderator for the travel group, such as an admin? In this way, workload might be better delegated among the members of a travel group;
- How could users access more often the dashboard, not solely once or twice per year when they are looking to plan a vacation;
- See if people would use a search feature which would allow them to search by interests (e.g., rock music festival, cliffs, jungle, etc.). This could add a new dimension to the travel search experience;
- Test the system on more remote groups, but also on collaborative group. It would be interesting to see how different tasks would be delegated: would they all sit behind a screen, would they each search for destinations on their laptops, would there be a person delegated to form a group, etc.;
- Does size matter in remote collaborative travel planning as it does in basic group behaviour? Would the group act differently if it was co-located?

This study has explored a new travel recommendation method for asynchronous remote groups. The main features of the system are:

- Generating travel suggestion based on Facebook friends' locations;
- Suggesting adequate friends for travel groups based on information extracted from Facebook;
- Setting budgets, travel periods and availabilities for all of the group members and generating travel suggestions based on them;
- "Meet there with..." friend suggestion tool;
- The collaborative page with its easy way of comparing multiple flight suggestions.
-

The main concept behind this system could also be applied in the following situations:

- Couples in long-distance relationships which wish to meet somewhere else than in their current locations;
- Corporations that need to arrange global team meetings;
- Families that might need to organise holidays or weddings.

Hopefully, the study has opened up new avenues of future work in the area of collaborative group planning.

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Appendix A: Project Proposal

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Project Title: Itinerary coordination in meta flight-search engines

Supervisor: Dr George Buchanan

Introduction

Travel planning can be more than just business and payment transactions. Being able to be involved in the trip planning activity can aid in enhancing social relationships and facilitates sharing experiences (U. Gretzel and D. Fesenmaier, 2003).

With an increasing number of travellers willing to visit unfamiliar destinations, either for the purpose of celebrating or sharing experiences (e.g., conferences, weddings, bachelorette parties), it seems that people are trying more and more to be in control of their travel plans (Skift Products, 2015). "Self-service travel", as it is called (e3 Media, 2015), appears to be very appealing to those that would rather plan, manage and book their travel by themselves, online, without having to resort to a travel agency. As a result of this, new approaches and models for travel and travel-related online search are being continuously developed (Jannach et al., 2007).

While the majority of flight search websites help people travel individually, by allowing them to search for flights from one originating point to another, no system seems to allow so far travellers to efficiently coordinate their travel itineraries (this claim still needs to be researched). Global families and businesses have an increasing need to plan coordinated trips (e3 Media, 2015), a situation that does not seem to be easily achieved using the existing flight search engines. Furthermore, objective requirements such as price, distance and duration of the trip cannot always be considered (Fesenmaier et al., 2006).

Moreover, travellers are expecting a more personalised trip planning experience, but a simpler one (Skift Products, 2015). With an early focus on understanding the goals of travellers, their tasks and expectations, this research aims to design a tool that would consider the different requirements of people that want to coordinate their travel plans.

Studies of search habits (Fesenmaier et al., 2006) reveal that people engage frequently in the activity of travel planning. Meng (2010) states that the activity of selecting suitable destinations is a complex process, which comprises of variables such as transport, attractions, the destination itself and the timing of all the parties involved. Fesenmaier et al. (2006) say that travellers need to make a "series of sub-decisions" with regards to this problem. They also affirm that users decide on their travels according to their perception of the importance of these variables. As observed by Memon et al. (2014), the more constraints must be considered, the more laborious this activity becomes.

Project Objectives and Beneficiaries

The objectives of this research are:

1. To understand the different scenarios in which coordinated travel is necessary.
2. To identify what constraints groups of travellers have, and what are the missing features of existing meta-search websites.
3. To iteratively design a website that would allow users to arrange coordinated travel.
4. To develop and evaluate a tool that meets the requirements of the users to coordinate their travels.

This research can contribute to the community's discussion about the tasks and requirements of meta-search engine users that wish to coordinate different itineraries. Academically, the project will contribute to the research of designing websites for travel meta-search engines.

Key Research Questions

- a) What are the tasks of people who need to do coordinated travel?
- b) Given what those tasks are, which design could be the most effective for providing these facilities?

Methods and Methodologies

For the purpose of creating and evaluating designs for the travel search engine, the project will follow a user-centred design approach (Preece, Rogers and Sharp, 2002). The users will be involved in all the phases of the project.

1. Investigation

To meet objectives 1, 2 and 3

User Research (conducted to inform the design and the building of the tool)

Data gathering methods:

- Questionnaires (limitation: inadequate for capturing traveller's behaviour and decision-making process)
- In-depth interviews with a purposive sample of twelve travellers (Zaphiris and Ang, 2009)
- Observations (think-aloud study of how they plan their travels using existing systems).

Data collected - qualitative data:

- Verbal comments (discover patterns in travellers' thoughts; establish frequencies)
- Observed behaviour (risks: can be time-consuming, threats for validity and reliability of the data)
- User goals (highly important)
- User tasks (highly important)
- User scenarios – with a focus on *context* (Lazar, Feng and Hochheiser, 2010).

There will be an agreement between the researcher and the participants. Consent forms will be obtained from the participants and will be kept safe. Any other personal information will be maintained privately. The participants will be aware that they will be recorded and they will have been thoroughly explained this necessity. If participants are concerned about the fact that they are being recorded, they will be presented with alternatives for the audio or video recordings. It will be ideal if reactions and any perplexity caused by existing system will be captured.

During the interviews, the conversation will focus in the last instance on the usage of mobile phones and tablets for the flight search and planning activities. If people say that they perform any of the identified tasks on their mobile phones or tablets, emphasis could be put on researching these mobile interfaces. However, if the findings suggest that they are more likely to use their laptop or desktop computers, priority will be given to those interfaces (Nielsen, 2000).

The think-aloud study will try to overcome any limitations resulting from using questionnaires Additional research: academic research, usability of existing websites, books and social media (Kietzmann et al., 2011).

Analysis

Any tasks scenarios identified will be recorded and analysed for the purpose of informing the design. Interviews will be verbatim transcribed (Cairns and Cox, 2008) and inductive content analysis will be employed (Elo and Kyngäs, 2008).

A Hierarchical Task Analysis (HTA) will be produced for gathering design requirements (Preece, Rogers and Sharp, 2002) and programming tasks.

Design

According to the findings of the in-depth interviews, a number of two designs will be produced. Which design will be more useful for providing the facilities necessary to the users will be determined by adopting an evolutionary prototyping approach (Robertson and Robertson, 1999).

2. Building

To meet objectives 3 and 4

The evolutionary prototyping approach presents a higher probability of meeting the requirements of the users than other development approaches (Seffah, Gulliksen and Desmarais, 2005). This is due to the fact that users have the opportunity to engage with the system from an early stage.

Each of the following stages (iterations) of this study will contribute to the “evolution” towards the final product:

- Designing a first prototype according to the findings
- Building the prototype (using flight search APIs, e.g.: Sabre, Skyscanner)
- Testing it with *users* - receive feedback from the first six participants interviewed in the user research stage
- Designing the second prototype using the feedback received
- Refining prototype
- Testing again with users - receive feedback from the last six participants interviewed in the user research stage
- Refining prototype according to the feedback

(Robertson and Robertson, 1999).

Evaluation (iterative process)

- **Is the tool usable and effective for the tasks identified?**
- The *users* that participated in the user research will also be asked to participate in the evaluation of the tool (Marcus, 2011). Sampling the participants in this way might limit the generalisability of the results due to the fact that they might return with high expectations, and any previous experiences might influence their attitudes.
- However, the focus of the evaluation will not be on the ease of learning of the new systems or on how users' perceive the systems when exposed for the first time to them (not going to conduct a five-second test). Therefore, reusing the participants should not present a high risk.

Work plan

The first stages of the project are more defined and detailed than the later ones. This is due to the fact that the project will be implemented using an Agile methodology called Scrum (Schwaber, 2004; Pruitt, 2011), which involves numerous sprints/iterations. The second part of the project is more approximate, and it will change according to the results of the user research, of the designs and the validated learning resulted from each sprint. The success of the implementation of the first part of the project is essential for the second stage of the project. Everything from the user research and design stages will influence the latter stages greatly. The first stages of the project can be seen as one long iterative process, with a lot of unknowns in the equation.

From topic research to acceptance:

- | | |
|---|--------------------|
| 1. Investigation: 3 weeks | June - July |
| 2. Design: 2 weeks | July - August |
| 3. Building and Testing: 6 weeks | August - September |
| 4. Conclusion: writing, editing, proof-reading: 3 weeks | September |

Allow 25% for any unexpected issues that might arise.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Tasks	22.06.2015	29.06.2015	06.07.2015	13.07.2015	20.07.2015	27.07.2015	03.08.2015	10.08.2015	17.08.2015	24.08.2015	31.08.2015	07.09.2015	14.09.2015	21.09.2015
Planning and Objectives														
User Research														
Additional Research														
Organisation of Data Collected														
Analysis of Data Collected														
Iteration 1	Design													
	Building													
	Evaluation													
Iteration 2	Design													
	Building													
	Evaluation													
	Conclusion													

Resource requirements: desktop PCs and laptops, mobile devices, tablets, audio/video/screen recording software, software for design, access to APIs for retrieving flight queries, cloud hosting for the flight search engine.

Risks

Risk	Likelihood	Impact	Mitigation Procedures
Not enough data	Medium (3)	Medium (3) Cannot validate the hypothesis about how the design should be, cannot get insights for the target public.	<ul style="list-style-type: none"> • Simplify scope, extend schedule • Simplify collection method • Have backup data sources
Data not linked properly with the objective	Low (1)	Medium (3) Get to false or inaccurate conclusions	<ul style="list-style-type: none"> • Have a well-defined set of actionable metrics • Rely only on empirical data • Make sure that there are no personal interferences • Make sure that the metrics used are consistent
Resulting analysis is inconclusive	Medium (3)	High (5) Cannot apply the research results to the design process	<ul style="list-style-type: none"> • Source as much data as possible • Justify every data collection point and link it to one or more of the initial hypothesis and at least one set of metrics • Use evolutionary prototyping
Unexpected logistical blocks	Low (1)	Low (1)	<ul style="list-style-type: none"> • Have backups
Final design not properly linked to the data	Low (1)	High (5)	<ul style="list-style-type: none"> • Regular reviews

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Computer Science Research Ethics Committee (CSREC)

Part A: Ethics Checklist

If your answer to any of the following questions (1 – 3) is YES, you must apply to an appropriate external ethics committee for approval:		<i>Delete as appropriate</i>
1.	Does your project require approval from the National Research Ethics Service (NRES)? (E.g. because you are recruiting current NHS patients or staff? If you are unsure, please check at http://www.hra.nhs.uk/research-community/before-you-apply/determine-which-review-body-approvals-are-required/)	No
2.	Will you recruit any participants who fall under the auspices of the Mental Capacity Act? (Such research needs to be approved by an external ethics committee such as NRES or the Social Care Research Ethics Committee http://www.scie.org.uk/research/ethics-committee/)	No
3.	Will you recruit any participants who are currently under the auspices of the Criminal Justice System, for example, but not limited to, people on remand, prisoners and those on probation? (Such research needs to be authorised by the ethics approval system of the National Offender Management Service.)	No

If your answer to any of the following questions (4 – 11) is YES, you must apply to the Senate Research Ethics Committee for approval (unless you are applying to an external ethics committee):		<i>Delete as appropriate</i>
4.	Does your project involve participants who are unable to give informed consent, for example, but not limited to, people who may have a degree of learning disability or mental health problem, that means they are unable to make an informed decision on their own behalf?	No
5.	Is there a risk that your project might lead to disclosures from participants concerning their involvement in illegal activities?	No
6.	Is there a risk that obscene and or illegal material may need to be accessed for your project (including online content and other material)?	No
7.	Does your project involve participants disclosing information about sensitive subjects?	No
8.	Does your project involve you travelling to another country outside of the UK, where the Foreign & Commonwealth Office has issued a travel warning? (http://www.fco.gov.uk/en/)	No
9.	Does your project involve invasive or intrusive procedures? For example, these may include, but are not limited to, electrical stimulation, heat, cold or bruising.	No
10.	Does your project involve animals?	No
11.	Does your project involve the administration of drugs, placebos or other substances to study participants?	No

If your answer to any of the following questions (12 – 18) is YES, you must submit a full application to the Computer Science Research Ethics Committee (CSREC) for approval (unless you are applying to an external ethics committee or the Senate Research Ethics Committee). Your application may be referred to the Senate Research Ethics Committee.

		<i>Delete as appropriate</i>
12.	Does your project involve participants who are under the age of 18?	No
13.	Does your project involve adults who are vulnerable because of their social, psychological or medical circumstances (vulnerable adults)? This includes adults with cognitive and / or learning disabilities, adults with physical disabilities and older people.	No
14.	Does your project involve participants who are recruited because they are staff or students of City University London? For example, students studying on a particular course or module. (If yes, approval is also required from the Head of Department or Programme Director.)	No
15.	Does your project involve intentional deception of participants?	No
16.	Does your project involve participants taking part without their informed consent?	No
17.	Does your project pose a risk to participants or other individuals greater than that in normal working life?	No
18.	Does your project pose a risk to you, the researcher, greater than that in normal working life?	No

If your answer to the following question (19) is YES and your answer to all questions 1 – 18 is NO, you must complete part B of this form.

19.	Does your project involve human participants? For example, as interviewees, respondents to a questionnaire or participants in evaluation or testing.	Yes
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Part B: Ethics Proportionate Review Form

The following questions (20 – 24) must be answered fully.		<i>Delete as appropriate</i>
20.	Will you ensure that participants taking part in your project are fully informed about the purpose of the research?	Yes
21.	Will you ensure that participants taking part in your project are fully informed about the procedures affecting them or affecting any information collected about them, including information about how the data will be used, to whom it will be disclosed, and how long it will be kept?	Yes
22.	When people agree to participate in your project, will it be made clear to them that they may withdraw (i.e. not participate) at any time without any penalty?	Yes
23.	Will consent be obtained from the participants in your project? Consent from participants will be necessary if you plan to gather personal data. "Personal data" means data relating to an identifiable living person, e.g. data you collect using questionnaires, observations, interviews, computer logs. The person might be identifiable if you record their name, username, student id, DNA, fingerprint, etc. <i>If YES, attach the participant information sheet(s) and consent request form(s) that you will use. You must retain these for subsequent inspection. Failure to provide the filled consent request forms will automatically result in withdrawal of any earlier ethical approval of your project.</i>	Yes
24.	Have you made arrangements to ensure that material and/or private information obtained from or about the participating individuals will remain confidential? Provide details: All name removed.	Yes

If the answer to the following question (25) is YES, you must provide details		<i>Delete as appropriate</i>
25.	Will the research be conducted in the participant's home or other non-University location? <i>If YES, provide details of how your safety will be ensured:</i> Meeting on commercial premises.	Yes

Appendix B: Individual Interviews Script

Questions for the individual interviews

If possible, ask to elaborate on every point:

Where did you conduct most of your travel-related searches conducted? How many were there?

Which tools?

What was their best use and when?

What was their best feature?

Were there any features that you wished they were available at the time of planning the trip?

Which features did they use the most?

Were there any features that you do not remember using?

Any challenges encountered in the search process?

How did you capture the search results? Any problems with managing the results?

How did you resume your research?

Any other concerns?

Appendix C: Focus Group Interview Script

Questions for the group interviews/focus group

If possible, ask to elaborate on every point:

Where did you conduct most of your travel-related searches conducted? How many were there?

Which tools?

What was their best use and when?

What was their best feature?

Were there any features that you wished they were available at the time of planning the trip?

Which features did they use the most?

Were there any features that you do not remember using?

Any challenges encountered in the search process?

How did you capture the search results? Any problems with managing the results?

How did you resume your research?

Any other concerns?

Did you do your searches on different websites?

Did you search at the same times as your partner/s?

How did you organise/delegate the searches?

Were you and your partner/s co-located or remote?

How many search sessions were there?

How did you share the information that you found among yourselves?

Any challenges identified by both you and your partner/s?

How did you reach consensus the information found was sufficient?

What was the outcome?

Appendix D: Consent Form



Participant No.: _____

I agree to take part in the City University London project conducted and recorded by Laura Lascau. I have had the project explained to me, and I have read the participant information sheet, which I may keep for my records.

I understand this will involve being interviewed by the researcher and possibly videotaped or audiotaped.

I understand and consent to the use and release of the recording by Laura Lascau and City University London. I understand that the information and recording is for research purposes only and that my name and image will not be used for any other purpose. I relinquish any rights to the recording and understand the recording may be copied and used by Laura Lascau and City University London without further permission.

I understand that participation in this study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Date: _____

Name: _____

Signature: _____

Thank you!

We appreciate your participation.

Appendix E: Script semi-structured interviews

Negative experience

Situation

Possible improvements

I: When and where did you travel lately?

P: I went to Madrid to visit a cousin, he is from Honduras, but he has been living in Spain for the last 10 years, so I was visiting him for four days. I left on Friday morning and I came back on Sunday night.

I: How did you travel?

P: I went by high speed train.

I: Where did you find tickets?

P: I tried to find them online but the platform was not available so I had to go to the train station and buy them there physically 10 days before.

I: Ok

P: I also went there two days in advance because it was a holiday And from what I have heard the trains sometimes ran not out of places, actually there were very little place left.

I: Did anyone go with you?

P: No, it was only me. I went with my friends to this place on Saturday but it was a one day trip and it was three hours away from Barcelona.

I: How did you travel?

P: By car.

I: Did you travel with other friends recently?

P: I went to my sisters wedding and I made a, I had a connecting flight in Atlanta, but the layover was 18 hours, so I coordinated by two friends, one of my friends lives in Atlanta, so I went to see him for a few hours, and another friend, he lives in New York, so he was also going to Honduras so we agreed to meet each other in Atlanta.

I: Where did you do your ticket searches?

P: www.kayak.com, but I made the purchase on Expedia.

I: How come?

P: Because Kayak showed me some trips, but the flight in itself, the connecting flight was not with, do you know what? That's a very good question, because I remember. I had different results depending on the Expedia. Because if I chose Expedia UK or Expedia Spain, then I got different results, so Expedia Spain showed an airline which I did not see in Expedia UK, so I ended up buying it in Expedia Spain.

I: Did you go on any other websites besides Kayak?

P: No, because that was the only one that... no, that was the only one I used.

I: Do you know of any other websites that do such searches?

P: Skyscanner.

I: Did you ever use it?

P: Yes, I am using Skyscanner more frequently now, as I am in Europe and I think that it provides better results than Kayak in Europe.

I: When was the last time you used it?

P: I used it yesterday to check flights for Germany. I searched specifically for Barcelona to Berlin and it provided a results and I was interested in seeing how prices compare to other locations throughout Europe, so I chose the "Everywhere", so I checked how far along Germany was along the list and it's a little bit further down the list. I definitely have cheaper options than Germany.

I: That's good, and how did you keep track of the results?

P: I was checking out of curiosity, to check what are the other locations that are cheaper, based on dates, but since it's a flight that will happen in December, I suppose I will check again eventually.

I: When are you planning on checking?

P: I don't know. Maybe before my friend confirms dates about where she's going to be in December.

I: I see. Did you encounter yesterday any problems when you were trying to search for flights? Or on any other occasion?

P: No. I mean, yesterday I thought that maybe it would be interesting to go to Scotland, but then **I realised that I don't know any cities or any airport in Scotland, so I had to look it up to find the airports**, so maybe interactive map, which asks where you want to go, maybe that allows you to have different alternatives, and maybe if you click on something maybe it could give you a map and results.

I: Got it.

P: Maybe show you the airports that are in that country. I think that would be an interesting visual solution.

I: Which features did you find to use more frequently though?

P: When I went to Honduras I selected non-stop flights, but that didn't happen since there are no non-stop flights to Honduras, I also check per airline. **I checked price variation per date. So for example if I move one day, how did the price variate on Kayak. I am not sure if Skyscanner has this feature.**

I: Where there any feature that you chose not to use?

P: No, I mean, well there is this other filter that is, like, you filter by the duration of the flight, or the cheapest flight, but I didn't use that.

I: Did you use any tools to capture your results, for the days that lead to different prices?

P: Since I had to book fast, I was checking flights, so my flight was the immediate, so I went to buy the flight, I just compared the flights in the moment and then I got it.

I: Good, good. You took a decision very quickly as it seems.

P: Yes.

I: Any other episodes in which you travelled somewhere with a group of friends or met somewhere with them?

P: No, only with that girl with which I met in Atlanta.

Appendix F: Focus group

G.P1: I haven't been outside Europe yet and I really want to do that.

I: Where would you like to go?

G.P1: I really want to visit Iceland one day.

G.P3: Mm, so do I!

G.P2: Which land?

G.P1: Just Iceland.

G.P2: Oh, ok.

G.P1: And then take a ten-day trip through the landscape, because the landscape is different every few hundred metres. You have a completely different view and you can really see the power of nature there and I wanted to go there last summer but then I got an internship in Ireland so I decided to do that instead, and then I wanted to do it this summer, but I didn't get the chance to properly find someone to go with. I did have the money but I didn't have the time and the people.

G.P3: Meeeeee. Just call me, I am the person that would travel everywhere. As long as I have a companion.

I: Where would you look for some people?

G.P1: I think that I would around my friends, at the people that I know already. You could look anywhere to find people, right? (laughs) I would also look further past my friends, in places like social networks, or something on the Internet. You can see that the concept of couch surfing is becoming very popular these days, so that could be one of the places where you could look, right?

I: Did you ever couchsurfed?

G.P1: Not yet.

I: Did you ever host anyone?

G.P1: I never hosted anyone, not yet, no.

I: Ok.

G.P1: I want to do that one day. Because my room is big enough, so I can do that.

I: Would you travel with strangers, besides hosting them?

G.P1: Yeah, if they are not complete strangers, so I would kind go get to know them before I undertook any big trips.

I: And what would be the things that you would like to know about them?

[safety]

G.P1: If they are not maniacs of mass murderers, that would be nice.

I: And how would you find that out?

G.P2: But even on Couchsurfing you can get to know a person, you can look at comments, reviews. I once met this girl, she was travelling for a year around the world, she bought a ticket where you can have a few flights all around the world and she didn't spend any money for the accommodation because she was always couchsurfing.

G.P1: But it's still a risk you take, because there will be bad stories. It won't always be good, I guess.

G.P2: This girl was always alone, and she was quite small, so not very strong, but she was always fine. So I think that you can find good people there.

G.P1: But you need to be careful though, just like hitchhiking.

G.P3: I stopped using Couchsurfing because of safety purposes.

I: Did you have a bad experience yourself?

G.P3: Yes.

I: Do you wanna talk about it?

G.P3: Yes, its alright. I mean, I did put a negative reference [review]. So I was couch surfing

in Armenia last summer, I was hitchhiking around, so I didn't need to spend too much money, and I was couch surfing in one guy's place and I was sleeping in a couch and my friend in the other couch. We were in the living room. And the guy started being rude to us, and he got aggressive at one point, I think that he didn't like us. And I just stayed awake until 4 in the morning and in the end it was such a weird situation that we just had to leave.

I: So you haven't couchsurfed ever since?

G.P3: Yes, exactly.

I: But you wanted to go hitchhiking at the end of this year, right?

G.P3: Mh-hm, I did find some other websites that are newbies, somehow, so it is more like kind of a **community** thing.

G.P1: So that might be more monitored as well.

G.P3: I found a website which is for travelling with people that you don't know, according to the place you are. I do like traveling by myself and doing everything solo, but when you are sometimes for a longer time and you feel like you just want to, just for a part of your trip, to see who else is travel at the same times, there is one way of doing that by registering. So I started doing that.

I: It seems to be a good website.

G.P3: Yes, because you need to properly register, and it is **showing your exact location**, so it's not like it is... I don't know, because it is working with GPS, so **you are kind of providing lots of information**.

G.P1: In a way, it's more random to select people, so you might have less bad luck of selecting someone that's not good.

G.P3: **There are not that many people there, because it's still small**, maybe there are 5 people registered all over London. And all of this people properly through the information on the internet and do a proper research. Otherwise, you don't find this places randomly. You can't just register there and there. So this somehow makes all this trustworthy.

I: But bad things could also happen when you stay in hostels.

G.P1: Yeah, but that's in the end just part of travelling, you cannot have control over everything.

I: So would you still travel with complete strangers, based on their on profiles?

G.P3: I will do that.

G.P1: A lot of people actually, as part of their journey, meet with people that they don't know and begin their travels together from one point. At the first impression, they think that the person is OK and then they look at **some characteristics which are similar to theirs**, and then they can see if they match up with those people.

G.P3: Even if you stay in hostels, like it happened with me last month, in Bali, where the only place with wifi was in the lounge in the hostel, you meet there with people that you do not know and you just start talking and maybe the next day you decide to go together and visit a place.

I: That's a very nice way of getting to know more people. Do you keep in touch with them?

G.P3: Yeah, we became friends on Facebook. Now I have friends from all over the world (laughs).

G.P1: I was also planning on visiting Cracow, but one of the friends is in Warsaw at the moment, so I might just visit him there. So although I was thinking of visiting Cracow, I changed my plan and I will travel to another city, because of my friend. So it really is about the people around you. I might not be the right sample, but I think that a lot of people would do that. Again, you base your preferences of travel on the places your friends might like. So if you go to places that are somewhere, you will believe their taste in cities.

I: So when you decided that you want to travel alone to Antalya, how did you decide on the location?

G.P1: I wanted to go somewhere **cheap** and I did not want to spend a lot of time arranging **everything** because I was very tired of working the entire summer, so I was like “OK, I have money, I have time, let’s just go somewhere”. So I got on websites with travel agencies from the Netherlands so I basically just clicked “Book” and everything was arranged for me. **But that is something that I wouldn’t do every time.** Because I do not mind arranging things, or not arranging things, but just going somewhere and seeing whatever happens, but for that time I just wanted no trouble.

G.P3: Yeah, when you are exhausted you do not want to organise anything at all.

G.P1: If you are with someone else you can organise the load of organising and arranging things. If you are alone you either have to do everything or nothing.

I: Did this agency arrange any tours for you?

G.P1: Not directly, they did not include that, but they could do that. You get a list of things that you can do and you can basically go to the lobby of the place where you stay and they tell you that you can go there, and there. But that was also way too arranged, because I do not like making your vacation completely planned and fixed. I just wanted to go out and do new things.

G.P2: Every time I made plans in my travels, all the time they changed. So I don’t do much planning now. You can do some research beforehand and see what you can do and what are the place where you can go, but everything you meet some people, and they show you places, things can change.

G.P1: Also, because I plan a lot of my daily plans, outside of vacations, **I do not like to do that during my vacations** because I know that I will always be planning so I will go crazy.

G.P3: Yes, you want a break from your day to day life.

G.P1: There is a new service that is pretty cool, I am not sure how it is called, but you basically pay a travel agency a sum of money and then they tell you to go to the airport, without telling you where you are going, they are arranging most of the trip and then you here about where you are going where you are at the airport.

G.P3: Whoa, but I’m guessing that it **depends on your budget** as well, no?

G.P1: Yes, so you basically tell them that you have a certain amount of of money to spare and then they will just arrange everything for you.

G.P3: What if you don’t like the destination?

G.P1: Yeah, then you could be in trouble. That is something that you signed up for. Maybe you could give them an indication like “I want sun”.

G.P3: I always try to consider the **personalities**, so they won’t clash. And the **habits**, I think that they are very important. Because you can be a really good friends with someone, but if your habits are different, then that can lead to a really huge fight.

G.P2: Even if you don’t fight, it can still be tiring.

G.P3: **Cleanliness** and **organisation** are important when it comes to the habits of a person. With my brother we are so different. So he would visit something and I would visit something else and then we meet in the evening for dinner, or maybe we have lunch together.

I: What was the longest period that you ever travelled with someone?

G.P3: Mmm... with my brother, it was one month in India. He is actually going in a few days to Senegal to visit a friend. My mum just told me. He has way too many holidays.

I: What was the biggest trouble that you encountered during travel?

G.P1: **I always have a feeling that there’s always a cheaper ticket somewhere, so you are never sure that where you are booking is the best place.**

G.P3: Can you define problem? Because that’s not a problem - that’s just luck, I mean not problem, but you can never know if you’re being cheated or in that case... yeah.

G.P1: You can never feel completely sure. Even if you go through a travel agency you tell them: give me for that much money and arrange a holiday for me, but you would still feel

that you could have found a cheaper deal somewhere else.

I: How did you friend choose Barcelona when she was arranging your trip?

G.P1: I don't know.

G.P3: Skyscanner? Because it gives many different airlines, and many other different options.

G.P1: Probably, something like that. I sometimes just go to different airlines websites, and just check, normally I use normal airlines, not necessarily low-cost. But in this occasion **One person arranged all of the flight tickets, so we had to send the person all of the documents for booking the flight tickets**. We had one person that was pushing all the idea for the vacation, and she ended up booking the tickets. She saw a cheap one and said to book right now. She contacted everyone (we had a WhatsApp group for this trip) and asked if those tickets were OK, if so, send me your details. Luckily, we responded quite quickly. And then they booked the accommodation right away after booking the flight tickets.

G.P3: I also had something similar when we searched at the same time, we just met in one of our houses and started looking for possible for where it is cheap to go. We checked on BA's holiday offers because they offer holidays in packs, with hotel included, on Easyjet and on Ryanair. But we ended up not going anymore because we couldn't find a decent deal on the days when we wanted to travel.

I: What do you mean by "decent"?

G.P3: A cheap deal, including hotels and flights.

I: And was this episode only on one occasion?

G.P3: No, it was many, many times. On the phone as well.

I: And you still couldn't find anything?

G.P3: No. We could, but either the days wouldn't be good because they were working or the deal would be very expensive.

G.P2: I really like the Google Flights search as well. Because you can even see a matrix, a table where you have a margin of days and you can see the prices if you want to fly from different days.

G.P3: That's really good, but I am not sure if they show the cheapest ticket of the flights.

G.P2: No, and it's also sponsored. They have deals with some of the flight companies and every time someone click on those flight suggestions, Google gets paid for that. So they basically only index some of the flight companies because those pay Google, or Google gets paid for that. So it's still just like a service. It is very hard to make an independent search provider. Because they all want to be paid, all the people that do that.

I: Got it. Aaaand, now with Barcelona, did you have the same feeling that you could have found a better deal?

G.P1: I don't know, I didn't really, like, mingle with it. **I let them chose the tickets, so I hope that they chose the right one**. So I was just lazy in that respect. I was really happy that we are going on the trip. My friend actually lived there and she knew where to go. I've only heard good things about Barcelona.

G.P2: **I did a quick search based on a few locations that I wanted to visit and I created a list of them based on the price and then I sent this list to my friend, so he can search and see which locations are cheap from his city.**

I: Where did you search?

G.P2: On Skyscanner.

I: How did you send him this list you mentioned? E-mail/text/chat?

G.P2: Via **e-mail**. And then he replied and said that none of them would suit them because he cannot get out of the country for an extended period of time because he was too busy.

I: did you manage to go anywhere eventually?

G.P2: He suggested that I visit him in his country instead, which I did, and for this I went again on Skyscanner and found out the cheapest dates and visited him on the cheapest dates.

I: Ok.

G.P2: And, one more. Me and a friend of mine wanted to visit a third friend of ours in New York. We knew the approximate dates, but not the exact dates. We knew the period. So, we used BA's [British Airways] website and Skyscanner to check for alternative flights and we also consulted some local travel agencies, because we thought that they would give us cheaper deals. The idea is that on the return one of us would stop in London, and the other one would continue all of the way to Milan, however, we found that the cheapest way was to get two return tickets from Milan to New York and one of us just skipped the last leg of the flight.

I: Did you encounter any problems in the search process?

G.P2: No, not really.

End.

Appendix G: Group observation

task delegation

budget

when

G.P4: Oslo

G.P5: Singapore

G.P6: Hong Kong

G.P7: Budapest

G.P8: Mumbai

Group Skype call.

G.P5: We could go on a road trip, somewhere in Europe. I don't know where yet. **Wherever it's the cheapest.**

G.P7: So are you open with coming to Europe?

G.P5: Yeah.

G.P6: Or why don't we go to San Francisco?

G.P5: So we have between Europe or San Francisco. **Whichever is cheaper.**

G.P6: Can we share a screen on here?

G.P4: Yes, you can.

G.P5: Oh, that's nice.

G.P8: I can see myself on the screen.

G.P6 to G.P8: **Are we using your screen? Because I thought that G.P5 is going to search.**

G.P8: I will just close the screen sharing. OK, how do we find out what's cheaper?

Suggestions?

G.P5: Maybe it's easier to do it like, let's see if we search from Singapore to... let's see, **let's choose a place in Europe. Arbitrarily**, and maybe we can each, independently, search for that?

G.P4: Search for what?

G.P5: Should we just search for San Francisco?

G.P8: I already know that this is going to cost so much because of the **visa and because of my low salary [from India].**

G.P5: **I am just going to google flights from Singapore.**

G.P8: To where?

G.P5: To San Francisco. **We need a date, a range.**

G.P4: May!

G.P5: Anytime in May?

G.P4: Aha. End of May.

G.P5: So like the second half of May?

G.P4: Yeah, after the 17th.

G.P8: 21st of May? It's a **Saturday**.

G.P7: Yeah, we could do the 21st.

G.P6: Yeah, sounds good.

G.P4: How long is the trip? // G.P8: Are we looking at return flights?

G.P7: Yeah, for how long would you like to stay there?

G.P4: Two weeks.

G.P8: 4th of June? Should we also get return?

G.P5: Yeah, I don't have a problem with that.

G.P8: That's two months of my salary for a one-way ticket.

G.P5: How much is it?

G.P8: 18,000 rupees, £800. It's £800 for me.

G.P5: It's £600 for me.

G.P4: We need a place to stay too.

G.P8: Yeah, and I am not sure if I wanna spend £800 on a holiday, just for the tickets.

G.P4: Mine is £400.

G.P7: Ok, should we meet somewhere in Europe then?

G.P5: OK, let's do Europe. I wanna see if that's cheaper. **I am gonna keep that open in a tab.**

G.P8: Let's do Berlin. // **G.P4: Italy!** // excitement: they came very quickly with these cities. why Berlin or Italy? could it be a place where they always wanted to go?

from the debriefing interview: *G.P8: "I was thinking of the places around my friends (Oslo, Hungary, etc), and Paris, Berlin and Italy came to my mind. And then I thought that Paris might be a little bit too romantic. I have these list of 6 places where I wanna go in Europe, and I thought that I really have to go to these places, so if we meet there then I could get the chance to cross of my list."*

G.P8: OK. Milan or Rome?

G.P4: Hmm... Rome?

G.P5: I wanna go to Rome.

G.P4: Let's take Rome.

G.P6: OK, let's do it.

G.P8: There are two airport in Rome...

G.P4: **It doesn't matter, because we are not meeting at the airport.**

...

G.P4: Ok, it would be £50 for me.

G.P5: I haven't even checked.

G.P8: £450 for me. That's a months' salary but...

G.P5: £400 here. Isn't this cheaper for everybody?

G.P4: Yeah...

G.P8: It's cheaper than the U.S., definitely.

G.P6: Yeah, yeah.

G.P4: But it's going to be more expensive to stay there. And the hotel will be more expensive.

G.P6: I will need to leave in 15 minutes, guys. Can we speed up?

G.P5: You might have to decide now.

G.P4: What's your budget?

G.P8: £300 to £400 for the return ticket.

G.P5: So we could either do it something that averages it out, so £400 for all of us, and we split or we could get you something that costs you £300 (?). Or we could just start with you searching for any where you want to go to.

G.P8: How about going to Bali?

G.P5: How much does Bali costs you?

G.P8: Let me check, it's happening.

G.P5: G.P6, what's your price to pay for this **road trip**?

G.P6: My maximum price is £450. Why we don't record everyone's budget?

G.P8: I like Bali, I can do it in £280.

G.P5: I could go £600.

G.P4: There are no flights from Norway to Bali, so...

G.P8: Can you check if you can that like a lay over?

G.P6: Why don't we all meet in someone's house and then all go to Bali?

G.P8: OK.

G.P6: Let's all go to Singapore.

G.P5: OK, all come here.

G.P6: Great, should we discuss this when we get to Singapore? (laughs)

G.P5: Am I right to think that we all have a separate budget and that none of you are willing to do like a group budget and split it into separate budget?

G.P4: It depends. It might not be too fair if some one has to pay 60% and someone like 30%.

G.P5: So what's your budget again, G.P8?

G.P8: £300 to £400.

G.P5: So let's have a poll and [split every cost](#) between us. So then that's 5 of us, so we need a maximum of £2,000 basically.

G.P4: that wouldn't work either, because it's so much more expensive for me to get to Asia, so you would have to pay more for me to get there and G.P8 doesn't have that much money.

G.P8: No, but all of us are paying £400.

G.P4: Yes, but I won't be able to get to Asia for just £400.

G.P6: I have to go now guys, let me know what you decide. Confirm to be before you buy it, [e-mail me](#) or something. Or on Facebook, make a Facebook event. Facebook group.

G.P5: Oh, that's a good idea, there we go. So it this way we could share stuff.

G.P6: Yeah. Ok, bye bye.

G.P5: But I am cool with [splitting the money](#) however.

G.P5: G.P4, come on, just share your money (?).

G.P4: I think that it is unfair for G.P8 (Mumbai) to put down a two-month salary, when I would put down only a one weeks' salary, this is what £400 would be. I am fine with paying for my own ticket.

G.P5: Ok, so we could [choose our individual budgets](#) and then that could go into a poll, so if my budget is £600 and your budget is £400, as long as we are on the same level, we could make an assumption that we are all willing to choose a location that fits the total budget and we split. So if everyone could put in their own budget and I will calculate the total costs, we could just split it.

G.P7: But there is only going to go a handful of place if everyone does the lowest costs.

G.P4: Maybe we could delegate one person to do everything, to search for all of us where we could go.

G.P5: Let's try to find a destination tomorrow and try to book the tickets. I have to run now.

G.P4: Yeah, [book them individually](#).

G.P5: We could [start a group on Facebook](#).

G.P4: We should all decide on how much we each wanna spend and then have one person in charge, because then they could kinda do everything and then they could kinda find out where it is possible to go from all of our different countries, instead of all of us trying to talk on Skype and decide. It would be so much better if we were all together in one place. But that's obviously not possible at the moment (laughs). Or if we could just say: "OK, we are going *there*, on *that day*", and then we would have to buy our own tickets.

G.P5: Let's see about all these tomorrow.

G.P8: OK, tomorrow.

G.P7: OK guys, bye now.

G.P5: Bye.

Conclusion

- most of the times you cannot decide on just one session, especially with different time

zones and when people are busy, so essentially the website should be able to store information across different sessions

- they could not decide on how to split the money
- used tools that they were already familiar with, with some other social communication to try to find a solution, rather than using the more advanced facilities of Skyscanner

Appendix G: Summative evaluations

I: Just let me know what your thoughts are on this website (www.seeusoon.io).

P: I can add up to **9 travellers**?! They say that they have **700 airlines** in their system already, that's not too bad. they are actually using the API of Skyscanner... I cannot add more destinations right now. That is weird. **I added a lot of destinations and then I removed them and now I can't add new ones.**

I: Oh, no.

P: I will refresh the page. So, I would love to leave from Utrecht, and from Paris.

I: Is there an airport in Utrecht?

P: No, there isn't. Should there be? Because that is not very clear. No, **it is only airlines**, so that is directly a problem because I would search from my home city because I would expect to also have buses to take me there.

I: You could also add a third person now.

P: Ok, I will do that. Zurich... **If I selected something like Eindhoven, and I selected something from the list they should also put "The Netherlands" in the selection because if there is two place with the same name somewhere you will not know which one is selected.** This **date picker** is quite nice, I guess.

I: OK.

P: In my country, you start the days with a Monday, so this is like the American way of doing it. I am not sure if the British do it as well, but we prefer to start the weeks on a Monday, so this calendar is actually not very nice to use.

I: They are actually from Portugal.

P: They should be able to locate this based on your location. It's a very small thing, but it can make a difference.

I: I understand.

P: So let's say that I will stay for 4 days, but they do not know where I am going yet, right?

I: No, they don't, but they will suggest a few destinations.

P: Oh, this is nice. **They also give me an option to stay here, in my city.** This is pretty cool, it looks nice since it is very simple to use. **I wonder why some location are having a bigger square**, for example London and Malaga are bigger, but the rest are smaller. But I don't see why exactly. Maybe because it is a better place to go?

I: I am not sure, I was not able to identify this either.

P: This was just something that I noticed. The prices don't say much, you can just see the total. I would prefer to see the average price per person as well, maybe instead of the total.

I: The average price per person?

P: Yeah, like how... No, never mind This is because everyone has a different price, it is not very useful. Because when you see "Dublin", from Zurich it is very expensive, versus the half price for the other city.

One of the things that I notice now, by the way, is that I did not select euros in the first screen, so now I cannot select euros anymore. So if I want to change back to euros, I cannot anymore now. I did not think of changing it to euros, but now it is showing the prices in pounds, but now i need to use euros instead, but now i need to go back and search again, so i can use euros. do you see what I mean?

I: Yes, I do.

P: So this is something that they should try to keep on the top bar here. Even if you have to restart the search with the same parameter, that would be fine, because then you could easily change it to euros. **Or maybe they could actually show one currency per person.** So for the person in Switzerland, they could show the price in his currency. I still think that changing the currency here would be a very important part. I actually want to change it to euros now,

but I can't.

I: Would you like to select now one city?

P: I am going to Barcelona soon, so I am going to select this. I think I paid that much for return. By the way, **I do not know if these are returns**, because I never selected that.

I: Is the information clear?

P: Let me see. So know **I see these things, they are tabs, but this is not very clear because they look like buttons. I would be more clear that these are separate tabs**, instead of buttons, because now it looks like you need to select all of them, but I guess that you would need to select all of them, right?

I: Yeah, it seems like it.

P: I hope that this button keeps me on this list, because if I click here and I wanna book the trips, I do have to stay on this page.

I: Let's see what will happen.

P: This, [Order by/ Duration/Departure times/Price/Clear filters], **should be underneath the tabs**, by the way. Beneath the tabs, because they are for the list that you see here.

I: What is your opinion on the first tabs/lines on the page? Eindhoven to Barcelona, Paris to Barcelona?

P: Those are not OK there, they should be combined with "Start from Eindhoven", "Start from Zurich" and "Start from Paris". Because they are basically saying the same thing, but this is not clickable, so you cannot do anything with it. I guess this is just to show whenever the tickets have been booked, I guess that it is, but I do not know for sure.

I: Would you like to give it a try?

P: Yeah, sure. One other thing that I don't get is the icon for people, it is like a person with a leaf on top, or ear, it is not very clear. So I clicked on "Book", it is opening in new tab, which is a new thing. I am not actually to pay more, right?

I: No, of course no.

P: Let me crosscheck the prices. They are about the same, although in euros now, not in pounds. **It might be useful to see the flight number here** because you do not see the flight number back in the season page, so if the website would show me a different flight I wouldn't be able to tell. by the way, it is weird, because it is also showing text here, which you cannot read.

I: I see, I understand.

P: It's still working... The total will be 219. I still need to wait now. OK. That's it. **You could also add buses to this thing**, it would improve things.

I: One other website that I would like to show you is Rome2rio. Would you mind search for a trip from Utrecht to Barcelona?

P: Sure! It displays pretty much the same results as I had for my trip. It would be cool if you could display a map and on it have a few of the prices, as they do here. You could go over the map and select the places where you have friends: Paris, Zurich, etc.

I: Wouldn't be easier to just type these in?

P: Maybe you could add both features, so you would still see the map, and then you would have a textbox on top where you could add the locations. And then you basically select the place where you wanna go. Just like seeusoon, on Google Flights you can see the prices on a map, and it will show you all of the prices, from your departure point.

I: That's useful.

P: That work like a charm as well.

Debriefing thoughts:

- "The first thing that the users will notice is the locations and the price..."
- "Seeusoon uses the total price, because the total price is more logical, because the

prices vary per person.”

- “One other thing that you can consider is maybe if the price difference between people is bigger than a specific threshold, then you could just show the total price, and if it is smaller, then you can just show the individual prices.”
- “You could also add the prices of each person underneath their profile pictures.”
- “You could also have a share button in each of the cards. This would enable the users to share among themselves the details of this itinerary.”
- “Look at Groupon for offering discounted trips.”

1: User wanted to plan a trip for five people and selected “5 travellers”, instead of pressing five times on the “+add city of departure” button”. They seem to be confused by the terminology used. Since the headline says “Group trip planner”, they seem to think that they need to select first the number of travellers, not add multiple city of departure.

1: He also found interesting the fact that he did not get a the option to select a budget. Participant thought that: you know where you are going on holiday, you specify the place and the time. And give it a budget range: “it would be mutually beneficial if you would travel not on the 1st, but on the 3rd”.

1: The participant felt that too many prices were displayed on the same page, because he thought that “the price that they gave me earlier was the price, but it seems that we need to reevaluate, they gave us the cheapest price... but there still are a ton of prices to choose from”

1: The participants did not notice that the list of flights can be arranged in another way, only after analysing closely the webpage they found the “Order by:” label: “it’s in a weird place”. He still found the label “Outbound departure time” to be confusing: “Is this my outbound or your outbound?”. He also did not realise that he can switch between “Start from London” and “Start from Singapore” because the tabs seemed to look like buttons.

1 did not find this website useful as a tool because “we still have not identified the date and if we really want to find the cheapest [tickets] we would give ourselves a window to have the possibly of seeing flights a few days after and a few days before a date, just in case that there is something really cheap there; we would have to do that for every day, individually”.

1: It would be nice to have “as you build things up” to say “this is what your journey looks like so far”.

1: What if it could identify a range of dates and mention that we would like to go to any of these five places and that we want to depart across this window. Find the cheapest holiday for us.

1: The main thing for me when I think with whom to go on holiday with is seeing who is available in a window. And you usually have this right outside of technology, but you could still use WhatsApp or whatever.

1: I mean, getting your personal relationships up to the point where you can travel with someone is a very complex thing. You can FaceTime them, WhatsApp them, be face-to-face with them. You could embed a Doodle in this travel ecosystem.

1: The other website [seeusoon] did well in allowing you to achieve a task, but it didn't do it very well because it missed out two big things which are budget and period. Or maybe some way of offloading, because the reason why it is so difficult to figure out what works best for two people is that there is convenience [price, timezones] as well. So if you had somewhere to have boxes for departure, you also had a day for departure, but that was vague because we selected days for one person, rather than two people. There was a calendar here, but that seemed to be a general calendar. I think that if there were more filters, like those in the ecosystem, like a date range so you could highlight which are the dates that you think that would work for us [selecting the whole month like on Skyscanner]. Timezone is also an important thing, because if you select a day for London and for Singapore, that might be different. I would like it if you could have an arrival time, this would be the way in which you could get the other way around. And a leaving time because you might leave together.

1: You need to find people that would need to plan something like this as a holiday, because they won't be co-located for a start, so you would need to see how people basically go about doing all this.

1: We could have a list of places that we wanna visit, we can Skype each other and then you would know what all your information needs are. You could have all of the flights listed out like that and then it could just say "Person A arrives at this time, at this location", and Person B arrive then, and that could change as you do it. I don't even know if that is something that people need. This would be good for research, for the requirements gathering process, because it is creative. You need to find out what the parameters are when people make this type of decisions. With seeusoon it was weird [here you could reference some paper that said that], because you normally don't just wanna go anywhere, you usually have a few places in mind.

1: What would also be nice is if there would be a tool that would split the cost. You balance it out equally for each person. You could even buy the tickets like that. You can also say: "we are going here, because one person's ticket is super cheap and that would only work out cheaper if we take out averages".

2: The participant did not trust the website anymore from the minute it only had one travel suggestion: "I don't trust that at all, not even slightly". // **have more than just one travel suggestions**

With seeusoon you are not told why the suggestion is there, whether it is the cheapest or not, because it does not seem to be comparing multiple airlines. // **make sure to specify that multiple airline prices were compared**

Participant noticed that when he hovers over the card with the suggested destination, it breaks down the prices for both of them. He noticed that one of the flight tickets was way more expensive than the other one, and that having the group price displayed might be a suggestion of splitting the cost of the tickets.

2: Bad IA! The interface of Hipmunk was prefer by one of the participants, he likes how the information is displayed : "I assume that it is arranged by price, but that is not made explicit

anywhere”

2: Let the users choose their preferred outbound and inbound hours. For example, three passengers might prefer to arrive at the same time to their destinations, instead of being presented with multiple and with different outbound hours. Could also allow travellers to select the hour at which they would like to leave from the airport. Could also allow the travellers to select the hour at which they would like to arrive back to their city. For example, on a weekend trip, both of the parties might prefer returning home by 10pm.

2: It's quite a lot of work to figure out which of these times are convenient for us, because now we need to stay here and compare all of the dates. // use this to justify the way in which results were displayed, one next to another, not on different screens

2: I think that it misses out on the main thing. It does not calculate convenience.

2: I think that the point here was to work out these things for us so we can converge, but there is no feeling of convergence. It seems like it's just two separate things, that two flights have been picked, so it's not that useful. I don't know about its usability, its ease of use, because with the Technology Acceptance Model you have both “Perceived usefulness” and “Ease of use”. In terms of its perceived usefulness, I would give it a really low rating.

2: Even if they gave us a few more suggestions, it would be still better than just Bali. We have to do all of the planning.

2: This stuff is useful, but it's more of an add on, whereas the core of the product for us as travellers would be being able to filter suggestion by budget, period and duration.

2: Can you use it if you don't log in?

2: They could still sink their Google calendars and stuff. But with Google calendar people don't do it for social work, it's more for work stuff. You are not going to know which Saturdays and Sunday they will be free based on their work calendar.

2: But you wouldn't use it on purpose. You would go to this tool for a purpose. We would arrange that we want to go on a holiday, and then go here.

2: Seeusoon lack the most in not letting the people converge, it kind of says that “you are on this side, you are on this side, both choose”.

2: Make the app more simple, like we had earlier but with the necessary features. Or you could have two models:

- . you come to the site and you instantly decide on stuff;
- . doodle model which would be a longitudinal planning, you first have no time pressure because when you do Doodles, there's usually two or three weeks, you can select days and then you can select locations and then you select price, and then it's done.

2: You could say that my tool is not for the group of people who don't know where they are going, you can identify exactly that user group you are going for. Or you can have two

groups, one group which is unique and they know instantly that they do want to go there, but maybe you will have some older couples which like to plan loads, so this would be a longer one. You can compare both and then see “this one work better here, this one works better here, my final one is going to a bit of both or something”

Appendix H: Heuristic Evaluation Results

	Status	Comments
Heuristic 1: "Provide the means for intentional and appropriate verbal communication"	Green	
Heuristic 2: "Provide the means for intentional and appropriate gestural communication"	Red	cursor was included (simulated?) in Design II
Heuristic 3: "Provide consequential communication of an individual's embodiment"	Red	
Heuristic 4: "Provide consequential communication of shared artifacts (i.e. artifact feedthrough)"	Red	
Heuristic 5: "Provide Protection"	Red	achieved in Design II by allowing users to lock their flight sections
Heuristic 6: "Management of tightly and loosely-coupled collaboration"	Red	
Heuristic 7: "Allow people to coordinate their actions"	Red	not able to see the entire set of actions that other users are doing in the entire system
Heuristic 8: "Facilitate finding collaborators and establishing contact"	Green	through the Facebook chat facilities of displaying if a person is online (on messenger)

My travel preferences

Add people

U U U

BUDGET / PERSON

0 50 200 2000 £

TRAVEL PERIOD

1 2 6 18+ DAY

weekend (Fri eve-Sun ev)

II weekend (Sat mor-Sun evn)

occasion/continent

- weather preferences

Suggestions

sort by: [] 1

— 1 —

Barcelona, Spain
March 2016

March 2016



from £59 p

1

edit <

Cologne, Germany
December 2, 1916

December 2016



from £83 pp

461

San Francisco, United States
1-12-2015

October 2015



From § 229 rep.

Edit

- 1 The user can add from here a number of travel companions.
 - 2 The budget (per person) can be set from here.
 - 3 The user can set here the amount of time that he wishes to travel for with his friends.
 - 4 The user also can also select from one of the preset travel periods (weekends for now). This option will need to be refined depending on the traveller's weekend preferences.
 - 5 The users can set the city, country or continent that they would like to travel to.
 - 6 As seen on Kayak, different filters can be applied here. One that could be considered is "travelling according to the weather".
 - 7 If the users know the month when they would like to travel, or the exact dates, they can set them from here.
 - 8 The first line represents the airport/city of travel generated after the social media analysis and after applying a few (or zero) filters. The month of the departure is displayed on the second line.
 - 9 The profile pictures of a few people (generated after the analysis) are displayed here. Since in this window the user did not select any people yet (from the filter on the right), each of the results below (displayed in the form of a card) contains different travel itineraries with different friends from the social media account.
 - 10 Each result card can be edited separately, the user being able to change the destination/month/budget or add and remove people from the group, for each card. The travel suggestion will also change according to the filters (destination, period, budget) applied.
 - 11 The price is displayed per person. The price could also be displayed per group (the currency can also be modified).
 - 12 The results can be displayed either in alphabetical order (by destination city) or by price, as exemplified in the next wireframe.

My travel preferences

Iulia Raluca Ionita

Endre Komuves

Vlad Gabriel Amghel

Noroianu Andrei

BUDGET / PERSON

200£ pp.

1

TRAVEL PERIOD

WEEKENDS

weekend (Fri eve - Sun eve)

weekend (Sat mor - Sun eve)

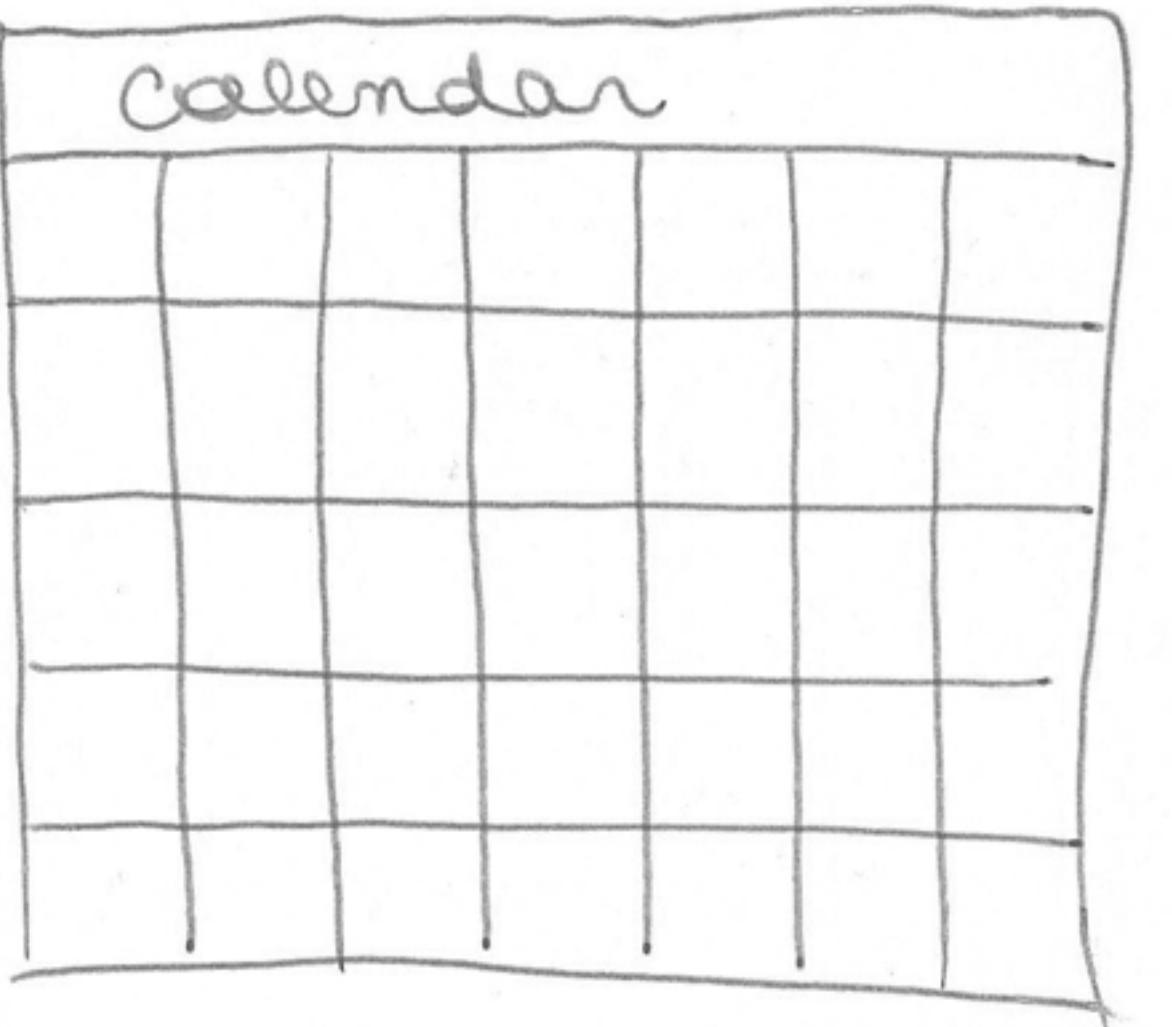
weekend (Fri Sat - Mon mor)

3

location
EUROPE

4

Calendar



Suggestions

sort by: price

Amsterdam, The Netherlands

November 2015 (13-14)

5

from £78 pp.

6

Budapest, Hungary

December 2015 (18-19)

from £84 pp.

Craiova, Romania

October 2015 (3-4)

from £92 pp.

meet there with: EC NC

7

SUGGESTED
(cheaper)

8

Berlin, Germany

November 2015 (13-14)

ili EK NGA HA NA

from £70 pp.

- 1 In this example, the user has added four users to his travel group: Iulia, Endre, Vlad and Andrei. The first results generated will only be for this group of 5 travellers (the user plus the four friends).
- 2 In this example, the user did not set any budget limits, therefore the results displayed are not restricted.
- 3 In this example, the prices displayed are for the flights that depart on Saturday morning and return on Sunday evening.
- 4 In this example, only the destinations in Europe will be displayed.
- 5 The exact dates of the travel are displayed here.
- 6 Even though all of the users in this example have the same departure airport (London Luton), the word "from" is kept. This is because there can be multiple flights in a specific morning/evening from the same airport to the same destination.
- 7 The user can also see which (Facebook) friends live in the suggested city. In this example, the group of friends could ask Ena Celoiu or Norica Celoiu for a tour of Craiova, Romania.
- 8 If not enough results can be generated, additional results can be displayed at the bottom of the page. In this example, if the user would also consider inviting Nora Andreea in their trip, the flight tickets would be cheaper (because of a certain 5+ group discount offered now by Ryanair).



My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget per person

£50 £820

Destination(s)

Tags(s)

Trip duration

3 12 days

 Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

↑ Vienna, Austria

↓ 11.12.2015 - 13.12.2015



+

Matt

£82

Colin

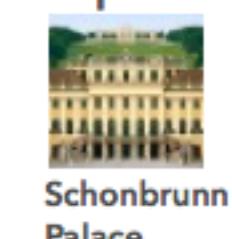
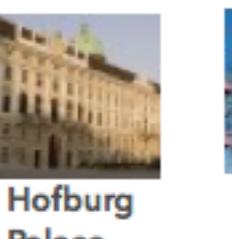
£710

Justin

£158

Group: £1,108 (You: £158)

Explore...

Schonbrunn
PalaceHofburg
Palace

Prater

Select trip



↑ Zurich, Switzerland ↵

↓ 21.12.2015 - 23.12.2015



+

Sophie

£144

£44

Gaby

£145

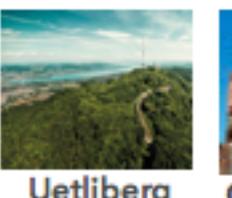
£50

Group: £356 (You: £44)

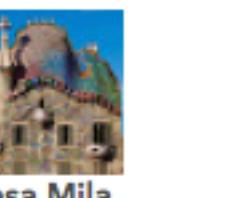
Explore...



Fraumunster



Uetliberg



Casa Mila

Select trip



↑ Delhi, India

↓ 07.01.2016 - 10.01.2016



+

Nick

£498

Sophie

£498

Amanda

£498

Kate

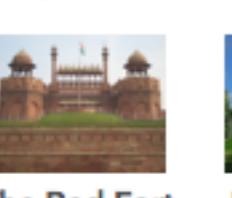
£498

Group: £2,531 (You: £539)

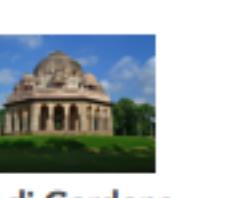
Explore...



Qutb Minar



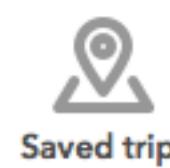
The Red Fort



Lodi Gardens

Select trip





Saved trips

My travel preferences

My location: London

Create a travel group

Sam David

Kal Carroll

Anna Jacob

Go

Budget per person

£50 £820

Destination(s)

Tags(s)

Trip duration

3 12 days

 Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

↑ Vienna, Austria

↓ 11.12.2015 - 13.12.2015



+

Matt
£82Colin
£710Justin
£158

Group: £1,108 (You: £158)

Explore...

Schonbrunn
PalaceHofburg
Palace

Prater

Select trip



↑ Zurich, Switzerland ↗

↓ 21.12.2015 - 23.12.2015



+

Sophie
£144
£44Gaby
£145
£50

Group: £356 (You: £44)

Explore...



Fraumunster



Uetliberg



Casa Mila

Select trip



↑ Delhi, India

↓ 07.01.2016 - 10.01.2016



+

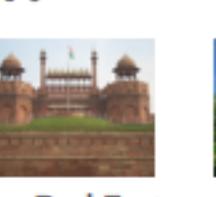
Nick
£498Sophie
£498Amanda
£498Kate
£498

Group: £2,531 (You: £539)

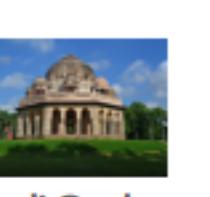
Explore...



Qutb Minar



The Red Fort



Lodi Gardens

Select trip





Trip with my friends

Copenhagen, Denmark

11.09.2015 - 15.09.2015

- meet at the airport at the same time
 leave from the airport at the same time

Singapore
AcceptedMumbai
AcceptedOslo
Accepted I will book **my** tickets I have **booked** my tickets I will book **all** the tickets

Flexible?

Myself		Singapore, Singapore		Mumbai, India		Oslo, Norway	
Departure	Return	Departure	Return	Departure	Return	Departure	Return
08:35 LTN Ryanair	11:25 CPH £37	07:00 CPH Ryanair	07:50 LTN £33	00:50 SIN Emirates	13:10 CPH £299	14:55 CPH Emirates	20:40 SIN £257
1h 50m →		1h 50m →		18h 20m →		15h 25m →	
16:55 LTN Ryanair	19:45 CPH £37	07:00 CPH Ryanair	07:50 LTN £33	23:00 SIN Emirates	12:40 CPH £324	06:20 CPH Emirates	10:25 SIN £230
1h 50m →		1h 50m →		18h 40m →		15h 25m →	
16:55 LTN Ryanair	19:45 CPH £37	20:10 CPH Ryanair	21:00 LTN £30	23:00 SIN Emirates	12:40 CPH £324	08:35 BOM Lufthansa	11:25 CPH £376
1h 50m →		1h 50m →		18h 40m →		14h 25m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	02:55 BOM Lufthansa	13:50 CPH £367
1h 50m →		1h 55m →		18h 40m →		14h 25m →	
16:55 LTN Ryanair	19:45 CPH £37	20:10 CPH Ryanair	21:00 LTN £30	23:00 SIN Emirates	12:40 CPH £324	08:50 CPH Jet Airways	10:05 BOM £389
1h 50m →		1h 50m →		18h 40m →		10h 35m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	16:55 BOM Jet Airways	19:45 CPH £389
1h 50m →		1h 55m →		18h 40m →		14h 25m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	18:55 CPH Emirates	21:00 SIN £306
1h 50m →		1h 55m →		18h 40m →		17h 5m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	07:20 BOM Lufthansa	10:10 CPH £421
1h 50m →		1h 55m →		18h 40m →		15h 25m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	10:25 CPH Lufthansa	11:20 BOM £421
1h 50m →		1h 55m →		18h 40m →		12h 25m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	12:40 OSL Norwegian	13:50 CPH £394
1h 50m →		1h 55m →		18h 40m →		1h 10m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	09:05 OSL Norwegian	10:15 CPH £33
1h 50m →		1h 55m →		18h 40m →		1h 10m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	09:05 OSL Norwegian	10:15 CPH £33
1h 50m →		1h 55m →		18h 40m →		1h 10m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	12:40 OSL Norwegian	13:50 CPH £34
1h 50m →		1h 55m →		18h 40m →		1h 10m →	
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46	23:00 SIN Emirates	12:40 CPH £324	12:40 OSL Norwegian	13:50 CPH £33

Myself: £70

Book

Share

Sam: £556

Book

Share

Kal: £659

Book

Share

Anna: £56

Book

Share

Explore while you are in Copenhagen:



Tivoli Gardens



The Little Mermaid



Palace

Group price: £1,285

Book all tickets



My travel preferences

My location: Mumbai

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

 Weekend

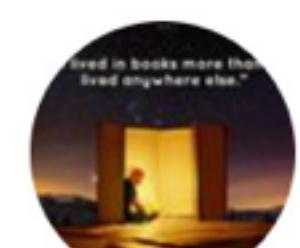
I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

↑ Istanbul, Turkey

↓ 11.12.2015 - 13.12.2015



+

↓ Jennifer

£115

↓ Soham

£383

Group: £881 (You: £383)

Explore...



Hagia Sofia Topkapi Palace

Galata Tower

Select trip



↑ Tehran, Iran

↓ 21.12.2015 - 23.12.2015



+

↓ Colin

£294

↓ Sarah

£275

↓ Lucia

£0

Group: £890 (You: £321)

Explore...



Golestan Palace Azadi Tower

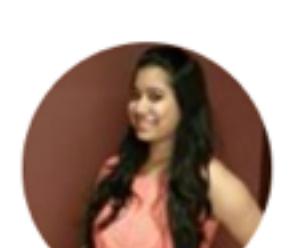
Milad Tower

Select trip



↑ Bangalore, India

↓ 01.01.2016 - 03.01.2016



+

↓ Siddhi

£202

↓ Shruti

£1,079

↓ Priyanka

£0

↓ Nikita

£46

Group: £1,411 (You: £84)

Meet there with...



Madhur Niharika

Nicole

Select trip





My travel preferences

My location: Mumbai

Kristin Nielsen

Joe Perroult

Dan Boston

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

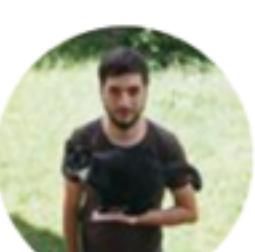
I am: Available



Trip with my friends



Kristin



Joe



Dan

Oslo

Singapore

London

August 2015

August 2015

August 2015

SEPTEMBER 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

2015

Dan
£191

Group: £1,291 (You: £391)

Explore...



Hagia Sofia



Topkapi Palace



Galata Tower

Select trip



📍 Oslo, Norway

📍 18.02.2016 - 26.02.2016

Kristin
£0

Joe
£951

Dan
£137

Group: £1,375 (You: £287)

Explore...



Viking Ship Museum



Akershus Fortress



Fram Museum

Select trip



📍 Cancun, Mexico

📍 10.12.2015 - 18.12.2015

Kristin
£812

Joe
£347

Dan
£786

Group: £2,731 (You: £786)

Explore...



Chichen Itza



Cancun Underwater Museum



Isla Contoy

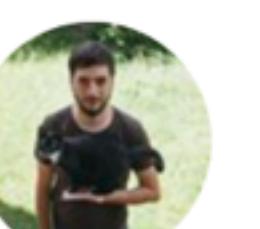
Select trip





Oslo

Invite



Singapore

Invite



London

Invite

 I will book **my** tickets I have **booked** my tickets I will book **all** the tickets

Flexible?

< Trip with my friends

Copenhagen, Denmark

11.09.2015 - 15.09.2015

- meet at the airport at the same time
 leave from the airport at the same time

Myself	Oslo, Norway	Singapore, Singapore	London, United Kingdom
Journey Duration	Journey Duration	Journey Duration	Journey Duration
Stops	Stops	Stops	Stops
Departure Times	Departure Times	Departure Times	Departure Times
Airlines	Airlines	Airlines	Airlines
Airports	Airports	Airports	Airports
02:55 14h 25m 13:50 BOM 1 change CPH Lufthansa £367	08:50 11h 5m 23:25 CPH 1 change BOM Lufthansa £290	12:40 1h 10m 13:50 OSL Norwegian £34	07:10 1h 15m 08:25 CPH OSL Norwegian £17
00:50 18h 20m 13:10 SIN 1 change CPH Emirates £299	14:55 15h 25m 20:40 CPH SIN Emirates £256	08:35 1h 50m 11:25 LTN Ryanair £37	07:00 1h 50m 07:50 CPH Ryanair £30
08:35 14h 25m 11:25 BOM 1 change CPH Lufthansa £375	20:10 11h 35m 21:00 CPH 1 change BOM Lufthansa £304	07:40 1h 10m 08:50 OSL Norwegian £22	09:20 1h 10m 10:30 CPH OSL Norwegian £33
20:10 18h 20m 08:50 SIN 1 change CPH Emirates £301	06:20 15h 25m 10:25 CPH SIN Emirates £230	08:35 1h 50m 11:25 LTN Ryanair £37	20:10 1h 50m 21:00 CPH Ryanair £30
16:55 14h 25m 19:45 BOM 1 change CPH Lufthansa £385	07:00 13h 15m 07:50 CPH 1 change BOM Lufthansa £304	22:10 1h 10m 23:20 OSL Norwegian £45	07:10 1h 15m 08:25 CPH OSL Norwegian £17
23:00 18h 40m 12:40 SIN 1 change CPH Emirates £324	20:10 17h 20m 22:30 CPH SIN Emirates £250	16:55 1h 50m 19:45 LTN Ryanair £37	07:00 1h 50m 07:50 CPH Ryanair £30
16:55 14h 25m 19:45 BOM 1 change CPH Jet Airways £385	20:10 11h 25m 21:00 CPH 1 change BOM Jet Airways £304	09:05 1h 10m 10:15 OSL Norwegian £32	09:20 1h 10m 10:30 CPH OSL Norwegian £33
23:00 18h 40m 12:40 SIN 1 change CPH Emirates £324	15:30 10h 35m 20:05 CPH SIN Emirates £291	16:55 1h 50m 19:45 LTN Ryanair £37	20:10 1h 50m 21:00 CPH Ryanair £30
07:20 15h 25m 10:10 BOM 1 change CPH Lufthansa £421	10:25 12h 25m 11:20 CPH 1 change BOM Lufthansa £394	12:40 1h 10m 13:50 OSL Norwegian £34	09:20 1h 10m 10:30 CPH OSL Norwegian £33
23:00 18h 40m 12:40 SIN 1 change CPH Emirates £324	18:55 17h 5m 21:00 CPH SIN Emirates £306	07:20 1h 50m 10:10 LTN EasyJet £40	10:25 1h 55m 11:20 CPH EasyJet £44

Myself: £657 [Book](#) [Share](#)Mina: £51 [Book](#) [Share](#)Dylan: £555 [Book](#) [Share](#)Senaka: £67 [Book](#) [Share](#)

Explore while you are in Copenhagen:



Tivoli Gardens



The Little Mermaid



Christiansborg Palace

Group price: £1,330

[Book all](#)



My travel preferences

My location: Singapore

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£50 £820

Destination(s)

Tags(s)

Trip duration

3 12 days

 Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Vienna, Austria

11.12.2015 - 13.12.2015

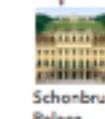


Nick Yin Somya

£82 £710 £496

Group: £1,604 (You: £158)

Explore...



Schonbrunn Palace



Hofburg Palace



Prater

Select trip



Glasgow, United Kingdom

21.12.2015 - 23.12.2015



Calvin Jac Chris

£78 £66 £84

Group: £906 (You: £678)

Meet there with...



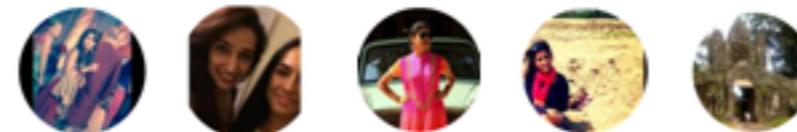
Slay

Select trip



Delhi, India

07.01.2016 - 10.01.2016



Akshita Deepshikha Ethan Sanjana Udita

£0 £0 £0 £0 £582

Group: £1,121 (You: £539)

Explore...



Qutb Minar



The Red Fort



Lodi Gardens

Select trip



My travel preferences

My location:

Create a travel group

Kristin Nielsen

Nelly Salija

Dan Boston

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

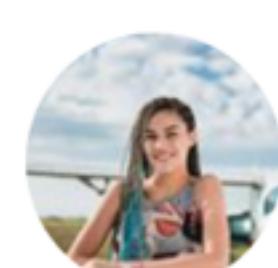
SEPT 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Kristin



Nelly



Dan

Oslo

Mumbai

London

August 2015

August 2015

August 2015

◀ SEPTEMBER 2015 ▶

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

2015

Dan

£191

Group: £1,291 (You: £391)

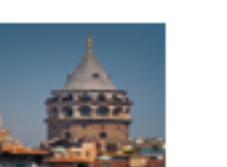
Explore...



Hagia Sofia



Topkapi Palace



Galata Tower

Select trip



📍 Oslo, Norway

📍 18.02.2016 - 26.02.2016

Kristin

£0

Nelly

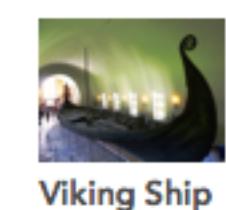
£951

Dan

£137

Group: £1,875 (You: £787)

Explore...



Viking Ship Museum



Akershus Fortress



Fram Museum

Select trip



📍 Cancun, Mexico

📍 10.12.2015 - 18.12.2015

Kristin

£812

Nelly

£347

Dan

£786

Group: £2,731 (You: £786)

Explore...



Chichen Itza



Cancun Underwater Museum



Isla Contoy

Select trip



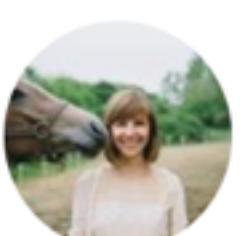


Trip with my friends

Copenhagen, Denmark

11.09.2015 - 15.09.2015

- meet at the airport at the same time
- leave from the airport at the same time



Oslo
Pending



Mumbai
Accepted



London
Pending

I will book **my** tickets

I have **booked** my tickets

I will book **all** the tickets

▼ Flexible?

Myself		Oslo, Norway		Mumbai, India		London, United Kingdom		
Journey Duration	▼	Journey Duration	▼	Journey Duration	▼	Journey Duration	▼	
Stops	▼	Stops	▼	Stops	▼	Stops	▼	
Departure Times	▼	Departure Times	▼	Departure Times	▼	Departure Times	▼	
Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼	
Airports	▼	Airports	▼	Airports	▼	Airports	▼	
00:50 SIN Emirates	18h 20m CPH £299	13:10 CPH Emirates	14:55 CPH Emirates	15h 25m SIN Norwegian	20:40 CPH £256	12:40 OSL Norwegian	1h 10m CPH £34	
07:10 CPH Lufthansa	1h 15m OSL Norwegian	08:25 OSL £17	02:55 BOM Lufthansa	14h 25m CPH £367	08:50 CPH Lufthansa	11h 5m BOM £290	08:35 LTN Ryanair	1h 50m CPH £37
09:20 CPH Lufthansa	1h 10m OSL Norwegian	10:30 OSL £33	08:35 BOM Lufthansa	14h 25m CPH £375	20:10 CPH Lufthansa	11h 35m BOM £304	08:35 LTN Ryanair	1h 50m CPH £37
07:10 CPH Lufthansa	1h 15m OSL Norwegian	08:25 OSL £17	16:55 BOM Lufthansa	14h 25m CPH £385	07:00 CPH Lufthansa	13h 15m BOM £304	16:55 LTN Ryanair	1h 50m CPH £37
09:20 CPH Jet Airways	1h 10m OSL Norwegian	10:30 OSL £32	16:55 BOM Jet Airways	14h 25m CPH £385	20:10 CPH Jet Airways	11h 25m BOM £304	16:55 LTN Ryanair	1h 50m CPH £37
09:20 CPH Lufthansa	1h 10m OSL Norwegian	10:30 OSL £33	07:20 BOM Lufthansa	15h 25m CPH £421	10:25 CPH Lufthansa	12h 25m BOM £394	07:20 LTN EasyJet	1h 50m CPH £40
09:20 CPH Lufthansa	1h 10m OSL Norwegian	10:30 OSL £33	07:20 BOM Lufthansa	15h 25m CPH £421	10:25 CPH Lufthansa	12h 25m BOM £394	07:20 LTN EasyJet	1h 55m CPH £44

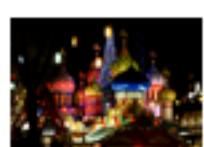
Myself: £555 [Book](#)
[Share](#)

Mina: £51 [Book](#)
[Share](#)

Niyati: £657 [Book](#)
[Share](#)

Senaka: £67 [Book](#)
[Share](#)

Explore while you are in Copenhagen:



Tivoli Gardens The Little Mermaid Christiansborg Palace



Group price: £1,330

[Book all](#)



My travel preferences

My location: Oslo

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£50 £820

Destination(s)

Tags(s)

Trip duration

3 12 days

 Weekend

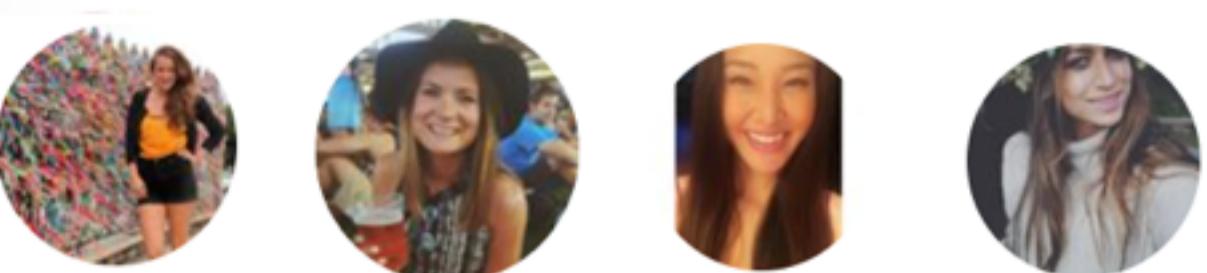
I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

↑ Istanbul, Turkey

↓ 11.12.2015 - 13.12.2015

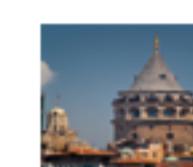


+

Nikoline £276 Line £798 Chi-Chi £276 Miriam £276

Group: £1,902 (You: £276)

Explore...



Hagia Sofia Topkapi Palace



Select trip

↑ Zurich, Switzerland ↓

↓ 09.11.2015 - 14.11.2015



+

Karolien £56 Gertjan £56

Group: £256 (You: £144)

Explore...



Fraumunster Uetliberg



Select trip

↑ Delhi, India

↓ 07.01.2016 - 10.01.2016



+

Edibar £676 Joost £343 Justin £676 Kami £342 Mirthe £343

Group: £2,878 (You: £497)

Explore...



Qutb Minar The Red Fort Lodi Gardens



Select trip

My travel preferences

My location: **Oslo**

Create a travel group

Joe Perroult

Nelly Salija

Dan Boston

Go

Budget/person

£20 £820

Destination(s)

Trip duration

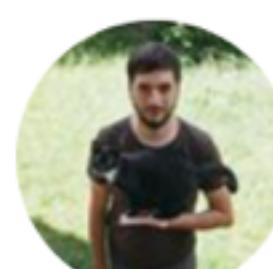
3 12 days

Weekend

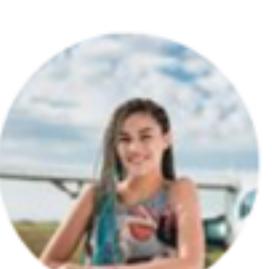
I am: Available



Trip with my friends



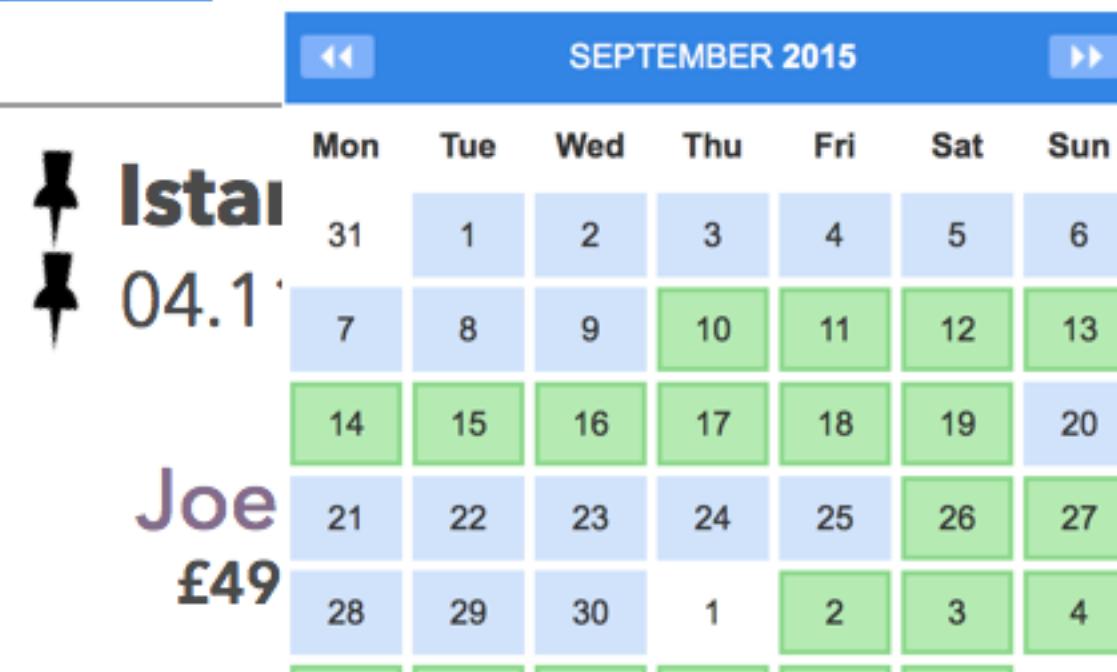
Joe
Singapore
August 2015



Nelly
Mumbai
August 2015



Dan
London
August 2015



Group: £1,691 (You: £391)

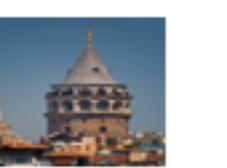
Explore...



Hagia Sofia



Topkapi Palace



Galata Tower

Select trip



Istanbul, Turkey

18.04.2015 - 24.04.2015

Joe
£49

Nelly
£751

Dan
£137

Group: £1,431 (You: £0)

Explore...



Viking Ship Museum



Akershus Fortress



Fram Museum

Select trip



Cancun, Mexico

10.12.2015 - 18.12.2015

Joe
£812

Nelly
£747

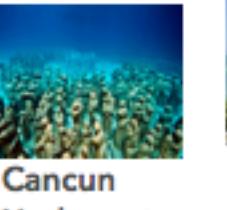
Dan
£786

Group: £3,431 (You: £786)

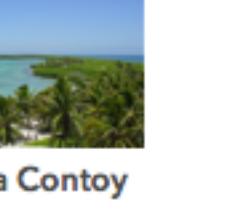
Explore...



Chichen Itza



Cancun Underwater Museum



Isla Contoy

Select trip



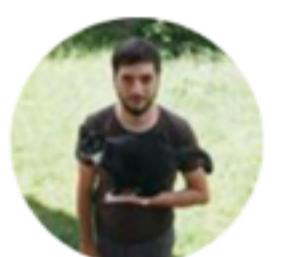


Trip with my friends

Copenhagen, Denmark

11.09.2015 - 15.09.2015

- meet at the airport at the same time
 leave from the airport at the same time

Singapore
AcceptedMumbai
AcceptedLondon
Pending

- I will book **my** tickets
- I have **booked** my tickets
- I will book **all** the tickets

▼ Flexible?

Myself				Singapore, Singapore				Mumbai, India				London, United Kingdom											
Journey Duration				Journey Duration				Journey Duration				Journey Duration											
Stops				Stops				Stops				Stops											
Departure Times				Departure Times				Departure Times				Departure Times											
Airlines				Airlines				Airlines				Airlines											
Airports				Airports				Airports				Airports											
12:40 OSL Norwegian	1h 10m	13:50 CPH £34	07:10 CPH Norwegian	1h 15m	08:25 OSL £17	00:50 SIN Emirates	18h 20m	13:10 CPH £299	14:55 CPH Emirates	15h 25m	20:40 SIN £256	02:55 BOM Lufthansa	14h 25m 1 change	13:50 CPH £367	08:50 CPH Lufthansa	11h 5m 1 change	23:25 BOM £290	08:35 LTN Ryanair	1h 50m	11:25 CPH £37	07:00 CPH Ryanair	1h 50m	07:50 LTN £30
07:40 OSL Norwegian	1h 10m	08:50 CPH £22	09:20 CPH Norwegian	1h 10m	10:30 OSL £33	20:10 SIN Emirates	18h 20m	08:50 CPH £301	06:20 CPH Emirates	15h 25m	10:25 SIN £230	08:35 BOM Lufthansa	14h 25m 1 change	11:25 CPH £375	20:10 CPH Lufthansa	11h 35m 1 change	21:00 BOM £304	08:35 LTN Ryanair	1h 50m	11:25 CPH £37	20:10 CPH Ryanair	1h 50m	21:00 LTN £30
22:10 OSL Norwegian	1h 10m	23:20 CPH £45	07:10 CPH Norwegian	1h 15m	08:25 OSL £17	23:00 SIN Emirates	18 40m	12:40 CPH £324	20:10 CPH Emirates	17h 20m	22:30 SIN £250	16:55 BOM Lufthansa	14h 25m 1 change	19:45 CPH £385	07:00 CPH Jet Airways	13h 15m 1 change	07:50 BOM £304	16:55 LTN Ryanair	1h 50m	19:45 CPH £37	07:00 CPH Ryanair	1h 50m	07:50 LTN £30
09:05 OSL Norwegian	1h 10m	10:15 CPH £32	09:20 CPH Norwegian	1h 10m	10:30 OSL £33	23:00 SIN Emirates	18h 40m	12:40 CPH £324	15:30 CPH Emirates	10h 35m	20:05 SIN £291	16:55 BOM Jet Airways	14h 25m 1 change	19:45 CPH £385	20:10 CPH Jet Airways	11h 25m	21:00 BOM £304	16:55 LTN Ryanair	1h 50m	19:45 CPH £37	20:10 CPH Ryanair	1h 50m	21:00 LTN £30
12:40 OSL Norwegian	1h 10m	13:50 CPH £34	09:20 CPH Norwegian	1h 10m	10:30 OSL £33	23:00 SIN Emirates	18h 40m	12:40 CPH £324	18:55 CPH Emirates	17h 5m	21:00 SIN £306	07:20 BOM Lufthansa	15h 25m	10:10 CPH £421	10:25 CPH Lufthansa	12h 25m	11:20 BOM £394	07:20 LTN EasyJet	1h 50m	10:10 CPH £40	10:25 CPH EasyJet	1h 55m	11:20 LTN £44

Myself: £51

[Book](#)[Share](#)

Dylan: £555

[Book](#)[Share](#)

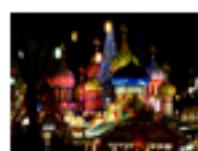
Niyati: £657

[Book](#)[Share](#)

Senaka: £67

[Book](#)[Share](#)

Explore while you are in Copenhagen:



Tivoli Gardens



The Little Mermaid



Palace

Group price: £1,330

[Book all](#)



My travel preferences

My location: London

Create a travel group

Joe Perroult

Nelly Salija

Dan Boston

Go

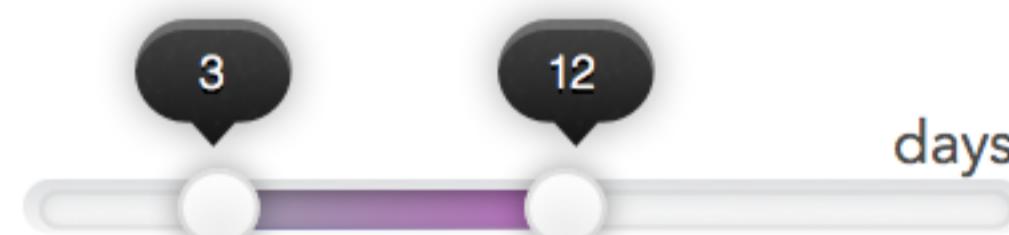
Budget/person



Destination(s)

Tags(s)

Trip duration

 Weekend

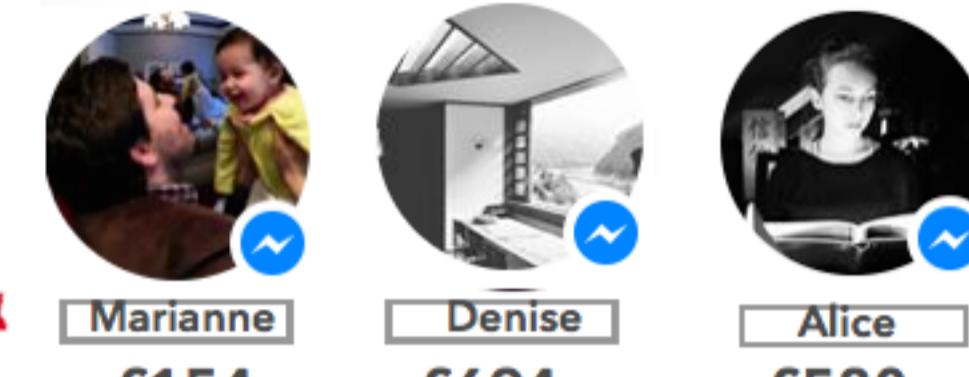
I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

† Bucharest, Romania

11.12.2015 - 13.12.2015



Marianne

£154

Denise

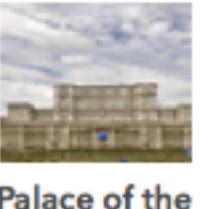
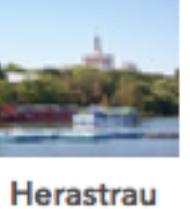
£694

Alice

£580

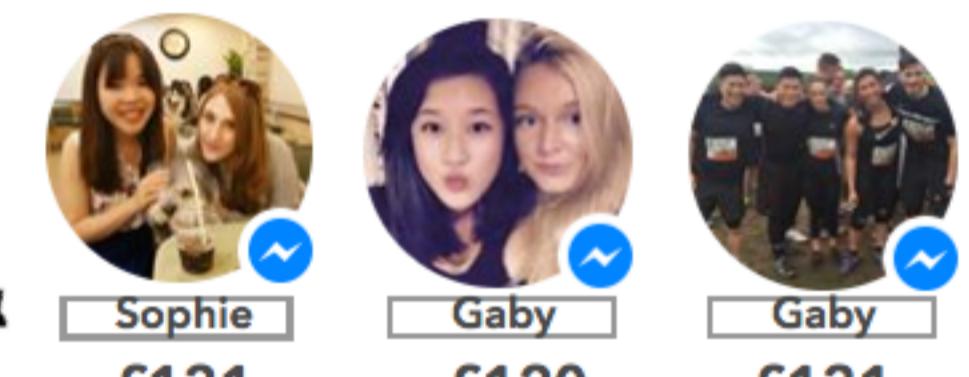
**Group: £1,482 (You: £54)**

Explore...

Romanian
AthenaeumPalace of the
ParliamentHerastrau
Park**Select trip**

† Zurich, Switzerland ↵

23.11.2015 - 28.11.2015



Sophie

£131

Gaby

£120

Gaby

£131

**Group: £513 (You: £131)**

Explore...



Fraumunster



Uetliberg

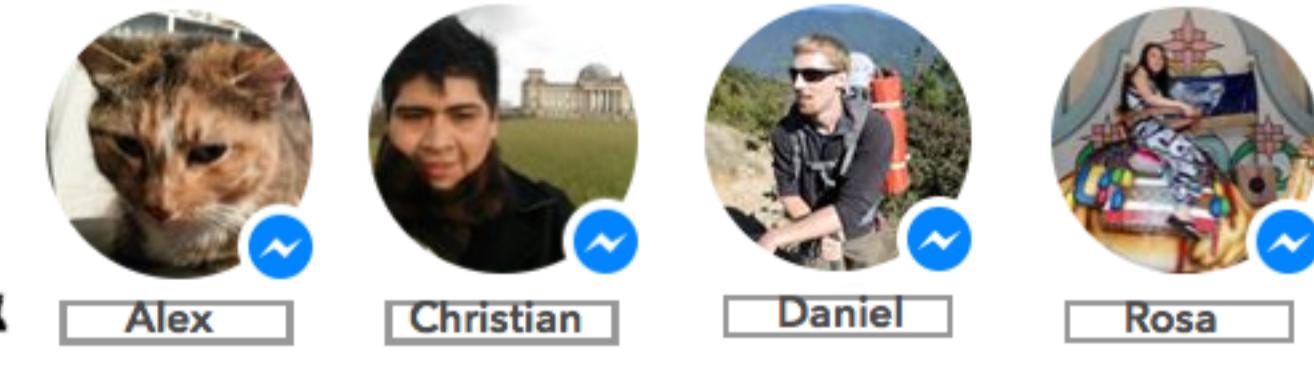


Casa Mila

**Select trip**

† Delhi, India

07.01.2016 - 10.01.2016



Alex

£498

Christian

£498

Daniel

£498

Rosa

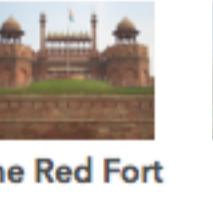
£498

**Group: £2,531 (You: £539)**

Explore...



Qutb Minar



The Red Fort



Lodi Gardens

**Select trip**



My travel preferences

My location: London

Create a travel group

Joe Perroult

Nelly Salija

Kristin Nielsen

Go

Budget per person

£20 £820

Destination(s)

Trip duration

3 12 days

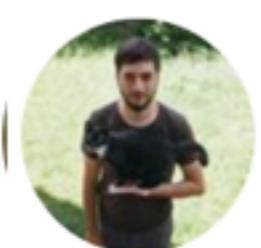
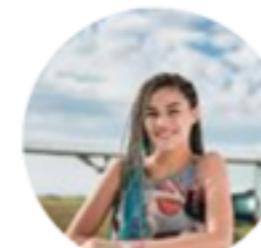
 Weekend

I am: Available

SEPTMBER 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends

Joe
SingaporeNelly
MumbaiKristin
Oslo

Budget: £1,000

Budget: £1,000

Budget: £900

Availability

Availability

Availability

SEPTEMBER 2015

Istanbul, Turkey

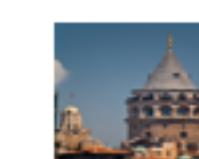
04.11.2015 - 09.11.2015

Joe
£499Nelly
£643

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Group: £1,735 (You: £194)

Explore...



Hagia Sofia Topkapi Palace



Select trip

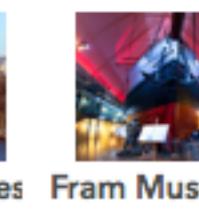
Oslo, Norway

18.02.2016 - 26.02.2016

Joe
£547Nelly
£753Kristin
£0

Group: £1,439 (You: £139)

Explore...

Viking Ship
Museum Akershus Fortres

Select trip

Cancun, Mexico

10.12.2015 - 18.12.2015

Joe
£815Nelly
£748Kristin
£789

Group: £3,439 (You: £787)

Explore...

Chichen Itza Cancun
Underwater Museum

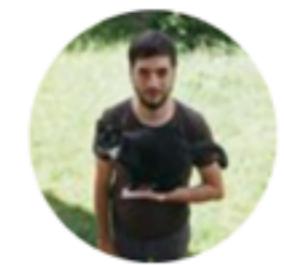
Select trip

Trip with my friends

Copenhagen, Denmark

11.09.2015 - 15.09.2015

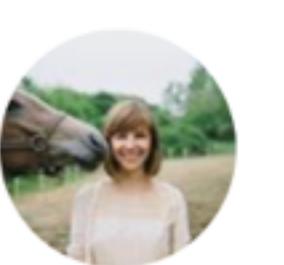
- meet at the airport at the same time
 - leave from the airport at the same time



Singapore



Mumbai



Oslo
Accepted

- I will book **my** tickets
 - I have **booked** my tickets
 - I will book **all** the tickets

✓ Flexible?

Myself		  Singapore, Singapore		 Mumbai, India		 Oslo, Norway		 							
Journey Duration	▼	Journey Duration	▼	Journey Duration	▼	Journey Duration	▼	Journey Duration	▼						
Stops	▼	Stops	▼	Stops	▼	Stops	▼	Stops	▼						
Departure Times	▼	Departure Times	▼	Departure Times	▼	Departure Times	▼	Departure Times	▼						
Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼						
Airports	▼	Airports	▼	Airports	▼	Airports	▼	Airports	▼						
Departure	Return	Departure	Return	Departure	Return	Departure	Return	Departure	Return						
08:35 LTN Ryanair	11:25 CPH £37	07:00 CPH Ryanair	07:50 LTN £33	00:50 SIN Emirates	13:10 CPH £299	14:55 CPH Emirates	20:40 SIN £257	02:55 BOM Lufthansa	13:50 CPH £367	08:50 CPH Lufthansa	23:25 BOM £292	12:40 OSL Norwegian	13:50 CPH £34	07:10 CPH Norwegian	08:25 OSL £22
08:35 LTN Ryanair	11:25 CPH £37	20:10 CPH Ryanair	21:00 LTN £30	Expand to see flight alternatives		Expand to see flight alternatives		Expand to see flight alternatives							
16:55 LTN Ryanair	19:45 CPH £37	07:00 CPH Ryanair	07:50 LTN £33	Dylan: £556 Book Share		Niyati: £659 Book Share		Mina: £56 Book Share							
16:55 LTN Ryanair	19:45 CPH £37	20:10 CPH Ryanair	21:00 LTN £30												
07:20 LTN EasyJet	10:10 CPH £44	10:25 CPH EasyJet	11:20 LTN £46												

Myself: £70

Explore while you are in Copenhagen:



Tivoli Gardens The Little Mermaid Christiansborg
Palace



Little Mermaid



Christiansborg
Palace

Your ticket: £70

Book your ticket

My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



+

Victor

£29

Mariza

£57

Andreas

£69

Iasonas

£101

Group: £299 (You: £43)

Meet there with...



Ofelia



Select trip

Geneva, Switzerland

21.12.2015 - 23.12.2015



+

Lito

£147

Danai

£154

Group: £301 (You: £154)

Explore...



Jet d'Eau



Palace of Nations



St. Pierre Cathedral



Select trip

Stuttgart, Germany

01.01.2016 - 03.01.2016



+

David

£44

Juj

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian



Select trip

My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



Victor
£29



Mariza
£57



Andreas
£69



Iasonas
£101

+

Group: £299 (You: £43)

Meet there with...



Ofelia

Select trip



Geneva, Switzerland

21.12.2015 - 23.12.2015



Lito
£147



Danai
£154

+

Group: £301 (You: £154)

Explore...



Jet d'Eau



Palace of Nations



St. Pierre Cathedral

Select trip



Stuttgart, Germany

01.01.2016 - 03.01.2016



David
£44



Juj
£84



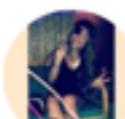
Robert
£84



Mahera
£84



Irina
£89



Lisa
£89



Dragos
£289

+

Group: £847 (You: £84)

Meet there with...



Brian

Select trip



My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



+

Victor

£29

Andreas

£69

Iasonas

£101

Group: £242 (You: £43)

Meet there with...



Ofelia

Select trip



Geneva, Switzerland

21.12.2015 - 23.12.2015



+

Lito

£147

Danai

£154

Group: £301 (You: £154)

Explore...



Jet d'Eau



Palace of Nations



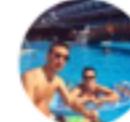
St. Pierre Cathedral

Select trip



Stuttgart, Germany

01.01.2016 - 03.01.2016



+

David

£44

Juj

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian

Select trip



My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



Nikolas Mpogdanopoulos

Victor

£29

Andreas

£69

Iasonas

£101

Group: £242 (You: £43)

Meet there with...



Ofelia

Select trip

Geneva, Switzerland

21.12.2015 - 23.12.2015



Lito

£147

Danai

£154

Group: £301 (You: £154)

Explore...



Jet d'Eau



Palace of Nations

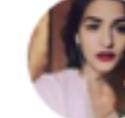


St. Pierre Cathedral

Select trip

Stuttgart, Germany

01.01.2016 - 03.01.2016



David

£44

Juj

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian

Select trip

My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



Victor

£29

Andreas

£69

Iasonas

£101

Nikolas

£43

Group: £285 (You: £43)

Meet there with...



Ofelia



Select trip

Geneva, Switzerland

21.12.2015 - 23.12.2015



Lito

£147

Danae

£154

Group: £301 (You: £154)

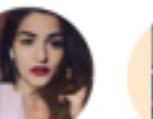
Explore...



Select trip

Stuttgart, Germany

01.01.2016 - 03.01.2016



David

£44

Ju

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Meet there with...



Brian



Select trip

My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

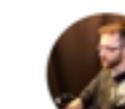
I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



Victor

£29

Andreas

£69

Iasonas

£101

Nikolas

£43

Group: £285 (You: £43)

Meet there with...



Ofelia

Select trip



Zurich, Switzerland

07.01.2016 - 09.01.2016



Lito

£217

Danae

£196

Group: £609 (You: £196)

Explore...



Select trip



Stuttgart, Germany

01.01.2016 - 03.01.2016



David

£44

Ju

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian

Select trip



My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20

£820

Destination(s)

Trip duration

3

12

days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



Meet there with...



Ofelia



Victor

£29

Andreas

£69

Iasonas

£101

Nikolas

£43

Group: £285 (You: £43)

Select trip

Zurich, Switzerland

07.01.2016 - 09.01.2016



Explore...



Lito

£217

Danai

£196

Group: £609 (You: £196)

Select trip

Stuttgart, Germany

01.01.2016 - 03.01.2016



Meet there with...



Brian



David

£44

Ju

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Select trip

My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

Cologne, Germany

11.12.2015 - 13.12.2015



Victor

£29

Andreas

£69

Iasonas

£101

Nikolas

£43

Group: £285 (You: £43)

Meet there with...



Ofelia

Select trip



Zurich, Switzerland

07.01.2016 - 09.01.2016



Lito

£217

Danae

£196

Group: £609 (You: £196)

Explore...



Fraumunster



Uetliberg



Lake Zurich

Select trip



Stuttgart, Germany

01.01.2016 - 03.01.2016



David

£44

Ju

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian

Select trip



My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

Go

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

↑ Berlin, Germany ↘

↓ 11.12.2015 - 13.12.2015



Victor

£56

Andreas

£43

Iasonas

£78

Nikolas

£52

Group: £281 (You: £52)

Meet there with...



Ofelia

Select trip



↑ Zurich, Switzerland ↘

↓ 07.01.2016 - 09.01.2016



Lito

£217

Danae

£196

Group: £609 (You: £196)

Explore...

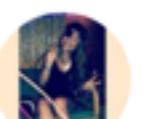


Select trip



↑ Stuttgart, Germany ↘

↓ 01.01.2016 - 03.01.2016



David

£44

Juj

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian

Select trip



My travel preferences

My location: London

Create a travel group

Add travel companion

Add travel companion

Add travel companion

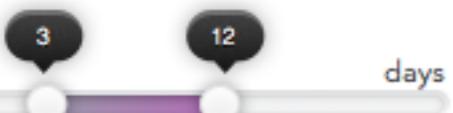
Go

Budget/person



Destination(s)

Trip duration



Weekend

I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

↑ Berlin, Germany ↓

↓ 11.12.2015 - 13.12.2015



Victor

£56

Andreas

£43

Iasonas

£78

Nikolas

£52

Group: £281 (You: £52)

Meet there with...



Ofelia

Select trip



↑ Zurich, Switzerland ↓

↓ 07.01.2016 - 09.01.2016



Lito

£217

Danai

£196

Group: £609 (You: £196)

Explore...

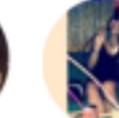


Select trip



↑ Stuttgart, Germany ↓

↓ 01.01.2016 - 03.01.2016



David

£44

Juj

£84

Robert

£84

Mahera

£84

Irina

£89

Lisa

£89

Dragos

£289

Group: £847 (You: £84)

Meet there with...



Brian

Select trip



My travel preferences

My location: London

Create a travel group

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Go

Budget/person

£20

£620

Destination(s)

Trip duration

3

12

days

Weekend

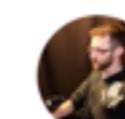
I am: Available

DECEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Travel suggestions

→ Berlin, Germany ←

↓ 11.12.2015 - 13.12.2015



↓

Victor

£56

↓

Andreas

£43

↓

Iasonas

£78

↓

Nikolas

£52

Group: £281 (You: £52)



Meet there with...



Ofelia

Select trip

→ Zurich, Switzerland ←

↓ 07.01.2016 - 09.01.2016



↓

Lito

£217

↓

Danae

£196

Group: £609 (You: £196)



Explore...



Select trip

→ Stuttgart, Germany ←

↓ 01.01.2016 - 03.01.2016



↓

David

£44

↓

Ju

£84

↓

Robert

£84

↓

Mahera

£84

↓

Irina

£89

↓

Lisa

£89

↓

Dragos

£289

Group: £847 (You: £84)



Meet there with...



Brian

Select trip

My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

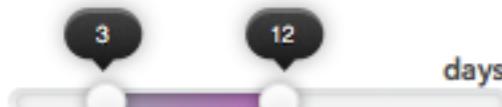
Senaka Yad

Budget/person



Destination(s)

Trip duration



Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis

Athens

August 2015



Christos

New York

August 2015



Senaka

London

August 2015

↳ Istanbul, Turkey

↳ 04.11.2015 - 09.11.2015

Giannis Christos Senaka

£97

£612

£91

Group: £891 (You: £91)

Explore...



Hagia Sofia



Topkapi Palace



Galata Tower

Select trip



↳ Oslo, Norway

↳ 18.02.2016 - 26.02.2016

Giannis Christos Senaka

£120

£751

£37

Group: £468 (You: £37)

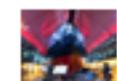
Explore...



Viking Ship Museum



Akershus Fortress



Fram Museum

Select trip



↳ Cancun, Mexico

↳ 10.12.2015 - 18.12.2015

Giannis Christos Senaka

£812

£347

£786

Group: £2,731 (You: £786)

Explore...



Chichen Itza



Cancun Underwater Museum



Isla Contoy

Select trip



My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis

Athens



Christos

New York



Senaka

London

August 2015

August 2015

August 2015

SEPTMBER 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

2015

is Senaka

£91

Group: £871 (You: £91)

Explore...



Hagia Sofia



Topkapi Palace



Galata Tower

Select trip



↳ Oslo, Norway

↳ 18.02.2016 - 26.02.2016

Giannis

£120

Christos

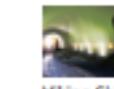
£751

Senaka

£37

Group: £468 (You: £37)

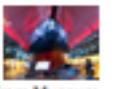
Explore...



Viking Ship Museum



Akershus Fortress



Fram Museum

Select trip



↳ Cancun, Mexico

↳ 10.12.2015 - 18.12.2015

Giannis

£812

Christos

£347

Senaka

£786

Group: £2,731 (You: £786)

Explore...



Chichen Itza



Cancun Underwater Museum



Isla Contoy

Select trip



My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis
Athens



Christos
New York



Senaka
London

August 2015

August 2015

August 2015

SEPTEMBER 2015

↳ Istanbul

↳ 04.10.

Gigar

£97

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Group: £891 (You: £91)

Explore...



Galata Tower

Select trip



↳ Oslo, Norway

↳ 18.02.2016 - 26.02.2016

Giannis

£120

Christos

£751

Senaka

£37

Group: £468 (You: £37)

Explore...



Select trip



↳ Cancun, Mexico

↳ 10.12.2015 - 18.12.2015

Giannis

£812

Christos

£347

Senaka

£786

Group: £2,731 (You: £786)

Explore...



Select trip



My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Budget/person

£20 £820

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis
Athens



Christos
New York



Senaka
London

August 2015

August 2015

August 2015

SEPTEMBER 2015

↳ Istanbul, Turkey

↳ 04.11.2015 - 09.

Giannis Christos

£97 £61

Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Group: £891 (You: £91)

Explore...



Galata Tower

Select trip



↳ Oslo, Norway

↳ 18.02.2016 - 26.02.2016

Giannis Christos

£120 £751

Senaka

£37

Group: £468 (You: £37)

Explore...



Viking Ship Museum

Akershus Fortress

Fram Museum

Select trip



↳ Cancun, Mexico

↳ 10.12.2015 - 18.12.2015

Giannis Christos

£812 £347

Senaka

£786

Group: £2,731 (You: £786)

Explore...



Chichen Itza

Cancun Underwater Museum

Isla Contoy

Select trip



My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Budget/person



Destination(s)

Trip duration



Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis

Athens

August 2015



Christos

New York

August 2015



Senaka

London

August 2015

Copenhagen, Denmark

11.09.2015 - 15.09.2015

Giannis

£146

Christos

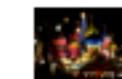
£274

Senaka

£21

Group: £462 (You: £21)

Explore...



Tivoli Gardens



The Little Mermaid



Christiansborg Palace

Select trip



Montreal, Canada

02.10.2015 - 10.10.2015

Giannis

£542

Christos

£351

Senaka

£242

Group: £1,377 (You: £242)

Meet there with...



Bess

Select trip



Barcelona, Spain

12.09.2015 - 18.09.2015

Giannis

£113

Christos

£347

Senaka

£49

Group: £558 (You: £49)

Suggested

Meet there with...



Laura

Select trip



My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Budget/person

£20 £400

Destination(s)

Trip duration

3 12 days

Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis

Athens

August 2015



Christos

New York

August 2015



Senaka

London

August 2015

Copenhagen, Denmark

11.09.2015 - 15.09.2015

Giannis

£146

Christos

£274

Senaka

£21

Group: £462 (You: £21)

Explore...



Tivoli Gardens



The Little Mermaid



Christiansborg Palace

Select trip



Marrakesh, Morocco

07.11.2015 - 14.11.2015

Giannis

£245

Christos

£384

Senaka

£77

Group: £783 (You: £77)

Explore...



Jemaa el-Fnaa



Majorelle Garden



Koutoubia Mosque

Select trip



Barcelona, Spain

12.09.2015 - 18.09.2015

Giannis

£113

Christos

£347

Senaka

£49

Group: £558 (You: £49)

Suggested

Meet there with...



Laura

Select trip



My travel preferences

My location: London

Giannis Giannakopoulos

Christos Vlachos

Senaka Yad

Budget/person

£20 £400

Europe

Trip duration

3 12 days

Weekend

I am: Available

SEPTEMBER 2015						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

Trip with my friends



Giannis

Athens

August 2015



Christos

New York

August 2015



Senaka

London

August 2015

Copenhagen, Denmark

11.09.2015 - 15.09.2015

Giannis

£146

Christos

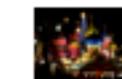
£274

Senaka

£21

Group: £462 (You: £21)

Explore...



Tivoli Gardens



The Little Mermaid



Christiansborg Palace

Select trip

Rome, Italy

02.10.2015 - 10.10.2015

Giannis

£82

Christos

£351

Senaka

£54

Group: £541 (You: £54)

Meet there with...



Evi



Chrysothalia



Dione

Select trip

Barcelona, Spain

12.09.2015 - 18.09.2015

Giannis

£113

Christos

£347

Senaka

£49

Group: £558 (You: £49)

Suggested

Meet there with...



Laura

Select trip

Trip with my friends

Copenhagen, Denmark

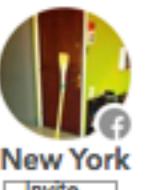
11.09.2015 - 15.09.2015

- meet at the airport at the same time
- leave from the airport at the same time



Athens

[Invite](#)



New York

[Invite](#)



London

[Invite](#)

I will book **my** tickets

I have **booked** my tickets

I will book **all** the tickets

[Flexible?](#)

Myself		Athens, Greece		New York, United States		London, United Kingdom													
Journey Duration	▼	Journey Duration	▼	Journey Duration	▼	Journey Duration	▼												
Stops	▼	Stops	▼	Stops	▼	Stops	▼												
Departure Times	▼	Departure Times	▼	Departure Times	▼	Departure Times	▼												
Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼												
Airports	▼	Airports	▼	Airports	▼	Airports	▼												
08:35 LTN Ryanair	1h 50m → £37	11:25 CPH Ryanair	07:00 CPH Ryanair	1h 50m → £30	07:50 ATH Alitalia	12:40 24h 35m 1 change ATH KLM	12:15 CPH £88	19:10 16h 40m 1 change ATH KLM	12:50 ATH £68	23:00 JFK Norwegian	7h 40m → £180	12:40 CPH Norwegian	12:05 15h 25m 1 change JFK Norwegian	21:30 JFK £222	08:35 LTN Ryanair	1h 50m → £37	11:25 CPH Ryanair	07:00 CPH Ryanair	07:50 LTN £30
08:35 LTN Ryanair	1h 50m → £37	11:25 CPH Ryanair	20:10 CPH Ryanair	1h 50m → £30	21:00 LTN Air Serbia	16:40 17h 10m 1 change ATH Air Serbia	08:50 CPH £98	20:10 18h 0m 1 change ATH Air Serbia	22:30 ATH £70	21:55 JFK Norwegian	15h 25m → £194	19:20 CPH Norwegian	12:15 15h 25m 1 change JFK Norwegian	21:30 JFK £230	08:35 LTN Ryanair	1h 50m → £37	11:25 CPH Ryanair	20:10 CPH Ryanair	21:00 LTN £30
16:55 LTN Ryanair	1h 50m → £37	19:45 CPH Ryanair	07:00 CPH Ryanair	1h 50m → £30	07:50 ATH Aegean Airlines	06:50 5h 30m → ATH Aegean Airlines	11:20 CPH £101	11:30 3h 10m → ATH Aegean Airlines	15:40 ATH £75	23:00 JFK Norwegian	7h 40m → £196	12:40 CPH Norwegian	20:10 8h 20m 1 change JFK Norwegian	22:30 JFK £250	16:55 LTN Ryanair	1h 50m → £37	19:45 CPH Ryanair	07:00 CPH Ryanair	07:50 LTN £30
16:55 LTN Ryanair	1h 50m → £37	19:45 CPH Ryanair	20:10 CPH Ryanair	1h 50m → £30	21:00 LTN Aegean Airlines	08:20 3h 25m → ATH Aegean Airlines	10:45 CPH £86	11:30 3h 10m → ATH Aegean Airlines	15:40 ATH £95	23:00 JFK Norwegian	7h 40m → £180	12:40 CPH Norwegian	15:30 10h 35m 1 change JFK Norwegian	20:05 JFK £291	16:55 LTN Ryanair	1h 50m → £37	19:45 CPH Ryanair	20:10 CPH Ryanair	21:00 LTN £30
07:20 LTN	1h 50m → £40	10:10 CPH	10:25 CPH	1h 55m → £44	11:20 LTN Alitalia	12:40 24h 35m 1 change ATH Alitalia	12:15 CPH £88	15:40 18h 50m 1 change ATH KLM	11:30 ATH £93	23:00 JFK Norwegian	7h 40m → £180	12:40 CPH Norwegian	18:55 32h 5m 1 change JFK Norwegian	21:00 JFK £306	07:20 LTN EasyJet	1h 50m → £40	10:10 CPH EasyJet	10:25 CPH EasyJet	11:20 LTN £44

Myself: £67

[Book](#)

[Share](#)

Giannis: £156

[Book](#)

[Share](#)

Christos: £402

[Book](#)

[Share](#)

Senaka: £67

[Book](#)

[Share](#)

Explore while you are in Copenhagen:



Tivoli Gardens



The Little Mermaid



Palace

Group price: £551

[Book all](#)

Trip with my friends

Copenhagen, Denmark

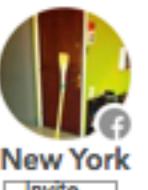
11.09.2015 - 15.09.2015

- meet at the airport at the same time
- leave from the airport at the same time



Athens

Pending



New York

Invite



London

Invite

I will book **my** tickets

I have **booked** my tickets

I will book **all** the tickets

Flexible?

Myself		Athens, Greece		New York, United States		London, United Kingdom													
Journey Duration	▼	Journey Duration	▼	Journey Duration	▼	Journey Duration	▼												
Stops	▼	Stops	▼	Stops	▼	Stops	▼												
Departure Times	▼	Departure Times	▼	Departure Times	▼	Departure Times	▼												
Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼												
Airports	▼	Airports	▼	Airports	▼	Airports	▼												
08:35 LTN Ryanair	1h 50m → £37	11:25 CPH Ryanair	07:00 1h 50m → £30	07:50 LTN Ryanair	12:40 ATH Alitalia	24h 35m 1 change CPH £88	12:15 KLM	19:10 CPH 1 change KLM	16h 40m ATH £68	12:50 JFK Norwegian	23:00 JFK Norwegian	7h 40m 12:40 £180	12:05 CPH Norwegian	15h 25m 1 change JFK £222	21:30 JFK	08:35 LTN Ryanair	11:25 CPH £37	07:00 1h 50m → £30	07:50 LTN Ryanair
08:35 LTN Ryanair	1h 50m → £37	11:25 CPH Ryanair	20:10 1h 50m → £30	21:00 LTN Ryanair	16:40 ATH Air Serbia	17h 10m 1 change CPH £98	08:50 CPH Air Serbia	20:10 18h 0m 1 change ATH £70	22:30 ATH Norwegian	21:55 JFK Norwegian	15h 25m 1 change CPH £194	19:20 CPH Norwegian	15h 25m 1 change JFK £230	21:30 JFK	08:35 LTN Ryanair	11:25 CPH £37	20:10 1h 50m → £30	21:00 LTN Ryanair	
16:55 LTN Ryanair	1h 50m → £37	19:45 CPH Ryanair	07:00 1h 50m → £30	07:50 LTN Ryanair	06:50 ATH Aegean Airlines	5h 30m → CPH £101	11:20 CPH Aegean Airlines	11:30 ATH Aegean Airlines	3h 10m → ATH £75	15:40 JFK Norwegian	23:00 JFK Norwegian	7h 40m 12:40 £196	20:10 CPH Norwegian	8h 20m 1 change JFK £250	22:30 JFK	16:55 LTN Ryanair	19:45 CPH £37	07:00 1h 50m → £30	07:50 LTN Ryanair
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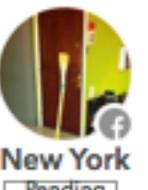
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Stops	▼	Stops	▼	Stops	▼	Stops	▼									
Departure Times	▼	Departure Times	▼	Departure Times	▼	Departure Times	▼									
Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼									
Airports	▼	Airports	▼	Airports	▼	Airports	▼									
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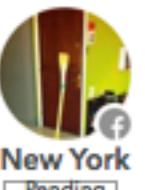
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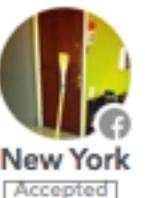
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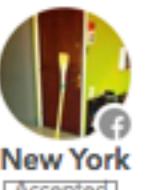
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Airlines	▼	Airlines	▼	Airlines	▼	Airlines	▼										
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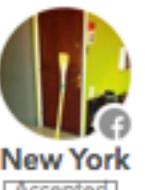
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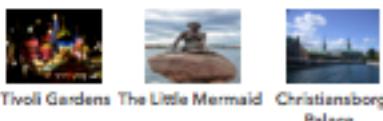
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