Towards a Value Chain for Mobile Value Services for Charities

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1. Introduction

Academics and specialists have widely studied mobile technologies in terms of how their use has changed everyday life in contemporary society, and also the enterprise relationships between companies and their employees [25]. The recent increase in the availability and popularity of smartphones, such as the iPhone (2007) and Android devices (2008), has raised the need to re-evaluate the role which mobile devices can play in the delivery of digital services. In this context, mobile devices have changed established value chains and are often able to co-create or add value to them.

This paper analyses the use of mobile technology associated with smartphones and its ability to add value to a value chain for charities. The paper first reviews some of the fundamental theoretical and practical aspects of general value chains for organizations, the value chain for service industries and the value-added possibilities of mobile devices. Thereafter, the methodology is introduced, consisting of market research, interviews, surveys and focus groups on the charity industry, and the development of an iPhone application called “LocAid” is presented.

Next, based on the research findings, the general charity processes are described and a new value chain for the charity service industry is proposed as a customization of established value chain concepts. The LocAid project, which exploits the corners of such a charity value chain to create added value in charities’ services, is used to indicate the possible effects of mobile technology on established value chains.

Finally, the paper analyzes and discusses such enhancements in terms of design and possible recommendations that can be used both to define what value is added to a known value chain when releasing smartphone applications, and to establish design principles for such a development. The paper concludes with limitations and directions for further research.

2. Theoretical Background

The general concept of the value chain serves as the theoretical model of this paper. In the following, the basic concept will be introduced, its adaptions in the service sector described and the effects of mobile technology identified.

2.1 The Value Chain

The theoretical model of the “value chain” was first introduced by Porter [20] in the context of strategic management, linking innovation to corporate strategy [17]. It describes how internal activities are developed inside a firm through different steps which form an economic process, from manufacturing and raw materials to the distribution of the built product.

Porter [20] proposes that a firm can create a cost advantage by reducing the cost of individual value chain activities or by reconfiguring the value chain itself. The concept distinguishes between primary activities and support activities. Primary activities refer to the physical creation of the product, from design and construction through to sales and post-sales services such as inbound logistics, operations, outbound logistics, marketing and sales and service. Secondary or support activities help to improve the effectiveness of the primary activities and Porter identifies four main types: procurement, technology development, human resource management and infrastructure [2].

Porter’s value chain concept is used to model the full range of activities which are required to bring a product or service from conception, through the different phases of production and delivery to final consumers and final disposal after use [12]. The importance of the concept derives from the fact that it draws attention to activities which “add value” to the final product or service [12]. It is considered relevant
for seeking competitive advantage, reducing costs and identifying ways to differentiate.

Some authors such as Altenburg [1] argue that the strongest advantages of Porter’s model are that it takes into account differences across organizations, suits multifaceted, multidivisional firms and provides information on a firm’s strengths and weaknesses. On the other hand, its main limitation is that it focuses mainly on products, thereby neglecting services, and only takes into account the internal strategic analysis of an organization, not the external one (industry, customers, etc.), leading to an incomplete analysis of competitive advantage.

2.2 Value Chain for Services

One limitation of Porter’s value chain, as mentioned earlier, is that it does not highlight the importance of exploring new dimensions of the concept, which focus on services, in particular digital services, rather than products. A service approach may give an insight into the flows and transformations by which value is added and may be of great relevance when analyzing service organizations.

One of the main characteristics of services is that their production and consumption happen at the same time. Hence, the service production process itself is the product and, due to the contribution of consumer value, it is more or less co-created. A further characteristic of most services is that, unlike products, services are abstract rather than physical and, therefore, are often intangible and impossible to stock. In addition, they are perceived subjectively, making them difficult to evaluate, and factors such as experience, trust, feeling and security play an important role [18]. Based on these characteristics Gabriel [8] proposes a value chain framework customized for services, as illustrated in Figure 1.

![Figure 1. Service value chain (Source: Gabriel [8])](image)

**Primary attributes**

*Service design:* The value of the service must be incorporated into the service design. Service designers must conduct market research and try to be as innovative as possible.

*Knowledge management:* Knowledge management refers to the service provider’s knowledge of the needs and dynamics of customers’ decision-making process as well as the customers’ knowledge of the service.

*Delivery systems management:* Services cannot be stored for future use or separated from the provider; this means that services are perishable and inseparable from delivery. Good management of delivery systems increases the convenience for customers and thus improves their perceived value.

*Moment of truth management:* The encounter between service provider and customer at the actual moment of delivery of the service can leave a positive or negative impression in the customer’s mind. It can build or destroy trust and confidence and can dictate future buying decisions.

*Service competition management:* Customers choose between different competitors. Therefore, providers must stimulate their clients even after the service delivery. Efficient after-sales management and a high quality of service can increase the perceived value of the service.

**Supporting attributes**

*People:* People are important in the co-creation of value owing to the simultaneous use and production of services. Customer expectations must be matched with the offered service to prevent a perception gap.

*Process information:* The service provider and their employees must be aware of their service processes and the generation and delivery of the service value. Transparency and the availability of information, e.g. through IT, are of great importance in this step.

*Physical aspects:* Physical aspects refer mainly to customer services, as well as tangible aspects such as the office’s appearance. Accommodating customer preferences throughout all primary activities and signalling the value of the service throughout this process is, therefore, crucial.

*Punctuality and reliability:* The time aspect is significant in the service industry and relates directly to service quality. Reliability implies a level of consistency and assurance for the customer.

The research question this paper seeks to answer is: how can mobile applications, through carefully crafted...
feature design, enhance different steps within the service value chain? The model described above is used as a theoretical framework for the purpose of this study, since it offers a more appropriate perspective than Porter’s original framework.

2.3 Value-Added through Mobile Technology

Mobile technologies and, more specifically, mobile applications have unique attributes which may add significant value to a company’s service value chain. The literature identifies, in particular, three features as fundamental supporters in today’s business:

Connectivity
Connectivity or mobility refers to the interdependence of time and place. A wireless infrastructure offers information exchange and “anytime, anywhere” communication [4]. It is especially valuable for time-critical, spontaneous needs [14] and it is useful to employees and customers alike in that mobile services provide both user groups with easy access to the most up-to-date information [3, 13].

Personalization
Mobile devices are typically assigned to single users, who can then personalize the interface and application settings of the devices [4]. According to Barnes [3] and Coursaris et al. [4], personalization or customization is fundamental, especially for interactive and dynamic mobile services, to support user satisfaction and the efficiency of a system. Moreover, mobile technologies enable the easy modification of content, the repetitive and simultaneous consumption of information by different users and fast and cheap reproduction [3].

Localization
The Internet has the ability to localize specific places (e.g. using IP address). Mobile technologies can extend this localization feature by locating users (e.g. a mobile worker) and items (e.g. tracking a shipment) [4]. This feature is strongly demanded, especially with respect to today’s development of mobile applications.

These three features are very valuable throughout different stages of the service value chain. They may play a significant role in service design, knowledge management and delivery system management. Moreover, mobile technologies are able to assist all supporting attributes (people, process information, physical aspects, punctuality and reliability) of the value chain.

However, improving the connection between the customer and the company may result in some problem areas. As Gabriel [8] argues, “the more convenient the system, the better the perceived value by customers”. This points to the crucial need to give attention to the ease of use and the perceived usefulness of the mobile device in order to ensure that customers actually use the device, and that they engage in the “cognitive effort” [4, 13]. Moreover, privacy and safety in information exchange [4] are often perceived as risks in mobile services. In particular, customers may lack trust in monetary transactions in mobile commerce and, therefore, these should be given special focus in the service value chain.

3. Methodology

This paper is based on the results of qualitative research conducted during the development of a mobile application prototype. The application LocAid (i.e. “Local Aid”) was developed by the authors in the context of a university project at the London School of Economics and Political Science. Four methodologies were applied in the course of the project, as shown in Figure 2, to support the development process and derive the proposed charity value chain of this paper.

3.1 The Case of LocAid

The LocAid application is a mobile application that allows users to find, support and connect to local charity organizations. The application offers the three main functionalities of donating to local charity projects, registering for local fundraising events and finding local charity shops. The innovations put forth through LocAid are driven primarily by the three distinct characteristics of high transparency, local applicability and mobility. The idea is based on the concept of offering value added for users and charities through enhanced information provision and local charity awareness in order to increase local charitable giving.
The application development project was organized into two parallel, interrelated work streams, one focusing on the development of the application, and the other on market research and potential user feedback in order to support the development.

The first stream, the development process, consisted of four main steps. It was based on the waterfall development model [22], allowing iterations between all process steps and using unified modelling language (UML) to complement the design process. The implementation was carried out in two steps: firstly, a functioning GUI prototype was created and feedback on further improvements was received through the second stream; secondly, the development of a rudimentary real prototype was started in XCode. The prototype has yet not been tested in practice due to legal issues around mobile payment and the requirement for charity cooperation.

The second stream, the qualitative research, concerned the specification, refinement and evaluation of the requirements and functionalities of LocAid. The results were also used to derive the charity value chain. The next section describes in more detail the methodology of LocAid and thus this paper.

3.2 Methodology

Four data collection methods were chosen: documentation, semi-structured interviews, (online) surveys and two focus groups (Figure 2).

Documentation was gathered from physical sources such as charity websites, and mainly from reports of the Charities Act of 2006 (Charity Commission, 2006) and the UK government’s (2009) Citizenship Survey 2008-09. The aggregated data served as a basis to identify general charity processes and hence the charity value chain.

Semi-structured interviews were chosen due to their combination of a structured (planning of questions and interview sequence) and non-structured approach (loose evolution in any direction). The interviews were conducted in three UK charities with local projects and focused on general charity donation and fundraising processes and common issues. Data were used mainly to enhance understanding of the charity market in order to complete the value chain and verify the need for the mobile application LocAid. Results also supported the definition of the application and its required functionalities and design.

The surveys focused more on the concrete application and were used to justify different aspects of the initial requirements. Users (n=100) as well as charities (n=25) were asked to answer ten questions to provide an overall picture from both perspectives. The users were selected as a potential user audience, in order to evaluate the importance of different features of the application from their perspective.

Two focus groups (n=3; n=4) were conducted with frequent donors to evaluate the innovation and usefulness of the application, and potential, additional functional requirements. The participants first introduced their current charity habits and then discussed issues of the charity market and how these might be solved. Finally, the LocAid application was introduced and its features critically discussed by the group.

Regarding this paper, the market research and semi-structured interviews were used mainly to gain an understanding of the charity market, to identify its major challenges and to derive the charity value chain. The surveys and focus groups emphasised specific functionalities and provided an understanding of the effects of mobile technology on established value chains.


This section analyzes how an innovative mobile service might add value to established value chains using the example of the mobile application, LocAid, in the context of the charity industry. It shows how LocAid’s specific design features, identified through market research and from interviews with charities and the charitable society, add value to the value chain of charity services. The general process and work of charities will be described and a framework for a charity value chain proposed, and finally the design of the LocAid project and its effects on the charity value chain will be illustrated.

4.1 General Processes and Activities of Charities

A charity organization can be defined as a non-profit organization providing help to and raising money for those in need. According to the Charities Act 2006 [26], charitable activities include, among others, support for health care, poverty prevention, community development and raising awareness of environmental issues. These activities range from a local to an international level. To finance their work, charities rely mainly on external funding. Individual donors constitute the main source of income, followed by charitable trust grants, fundraising initiatives, asset investments, trading subsidiaries and charity shops [26].

The general relationship between charities and the beneficent public, and the basic charity operations
required to pass resources to those in need, is illustrated in Figure 3.

Figure 3. Charity process (Source: Own illustration)

Figure 3 shows that charities may receive financial, human or physical resources from charitable citizens through a range of activities. These activities can be broadly categorized into donating, fundraising and giving to/buying from charity shops. The overall supply of resources is then used to support the external and internal demands of charities, such as the funding of specific campaigns and the management of the organization, in order eventually to help people in need.

The activities of donation, fundraising and charity shop use, with which people may engage, are somewhat diverse. Figure 4 depicts the different ways of contributing within each category.

The first activity, **donating**, is the process of giving money to a specific need. While charitable people can donate on a one-time or regular basis (single/regular donation), they can also make donations on behalf of somebody else (gift donation) or in their own will (legacy).

The research for the LocAid project revealed that most charities do not specifically state to whom/which organization their donations will be given. Many charity websites do not show which particular projects they operate and remain relatively inexplicit about the general work they do. This lack of transparency may discourage donors from becoming involved in charitable giving and reduce their trust in charity organizations.

The second activity, **fundraising**, can be defined as the process of giving time and effort to a specific need. Potential participants may need to gather information on event details, register for an event, pay a participation fee and collect sponsorship from other people. Moreover, the nature of the event and the degree of involvement influence the fundraiser’s activity. Fundraisers may just turn up to support others mentally (e.g. cheering at a marathon), buy an event ticket or items at the event (e.g. registering for a party or buying a cake), donate at an event (e.g. donating at a gala dinner) or actively take part in the event (e.g. running a marathon).

Internet research on fundraising events showed that charities do list their own events on their websites. However, only a few websites list collectively the events of various charities in a specific area. Hence, a higher level of participation might be achieved with a clearer overview of such events.

Finally, people may donate their resources or money to **charity shops** by bringing their own goods or purchasing second-hand items. The traded items may be textiles (e.g. clothes, shoes), furniture (e.g. mirrors, photo frames), equipment (e.g. sport equipment, books, CDs) or accessories (e.g. bags, jewelry).

The project’s research revealed that the number of charity shops is growing, especially in Western countries. This may be due to the throwaway culture which has emerged over the last few decades, and also to the current recession, which makes people feel less able to give money yet perhaps still able to donate unused items. Moreover, a social trend was observed, whereby people would like to do something “good” while buying something. Campaigns such as Fair Trade confirm this trend.

### 4.2 Charity Value Chain

In contrast to services in the commercial sector, the charity sector is strongly driven by the beliefs of people who want to support a specific cause [15, 23]. It is crucial that charities understand why people give to causes and communicate their services accordingly to achieve long-term commitment [9]. Market research and interviews conducted throughout the LocAid
project revealed that the most common challenges for charities are the lack of information made available, their trustworthiness and their transparency, all of which affect the willingness of people to give more to charities. Moreover, some charity services, especially Internet-based services, were identified as inconvenient to use. For example, immediate donations were found to be rather complicated and time-consuming, and fundraising event applications were seen as confusing and not clearly presented. Hence, in this paper, attention will be drawn to the problems of information, and related general charity awareness, trust, transparency and convenience. This section introduces the charity value chain and shows how these issues might be addressed and potentially mitigated through any kind of value added.

Some researchers have tried to identify ways to create value within charity processes, that is, to increase charitable giving. According to Saxton [23], people can be motivated to give charitably for different reasons, from a shared identity (“I share their vision”) to the effects on their local environment (“It makes a difference to me”). Other scholars identify the distinct importance of brand management for charities in order to communicate and symbolize the specific beliefs of charitable people, motivate them and facilitate the process [11, 10]. Hakinson [10] divides a brand into functional attributes (the cause) and symbolic values (brand values) such as humanity, impartiality, neutrality or independence. Her research shows that charity managers use brands to fulfill a range of organizational objectives such as raising awareness, building trust, fundraising, educating or lobbying. The small amount of existing research on charity organizations and their processes shows that, in order to create value, a distinct focus on the cause and its symbolic values is required.

The framework in Figure 5 identifies the potential aspects of a charity value chain as a service. It is based upon the service framework of Gabriel [8], with some adjustments taken from the literature above and the qualitative research of the LocAid project.

![Figure 5. The charity value chain (Source: Own illustration)](Image)

**Primary attributes**

**Service design:** The design of a charity’s service should be oriented towards beneficent people and their specific motivations toward a cause. The literature suggests that marketing may play an important role in incorporating the cause, the charity value and the resource provision into the service design or even in building a specific charity brand. Customer segments, and specifically their intrinsic motivations, as suggested by Saxon [23], may be identified through market research to enable effective service design. For example, as the surveys conducted throughout the LocAid project showed, young people were more motivated toward active participation in fundraising events, while older people preferred (and were more able) to donate money to a specific cause.

**Knowledge management:** The knowledge management phase describes the effective provision of information about donors and their profiles. Customer data must be stored intelligently in order to match the specific needs of customers with identified relevant causes and projects. A well-known charity, interviewed during the LocAid project, reported that it already conducts this kind of data collection and analysis. The organization must also ensure that beneficent people are aware of and sufficiently informed about the charity and its service value. Interviewees of the focus groups in the LocAid project often argued that there is a lack of information and transparency in the charity industry, deterring them from more charitable giving (“I don’t know exactly my money goes to” or “I don’t know what specific cause my donation is for”).

The interviewees confirmed that strong communication and feedback processes through customer service could support the effectiveness of information exchange and thereby the knowledge management phase.

**Delivery systems management:** Trust, transparency and convenience, identified as the most prevalent challenges during the LocAid research, are issues that should be specifically addressed during the delivery phase of a charity service. Firstly, as emphasized in the focus groups, specific attention must be paid to the convenience of the search, selection, payment and registration processes for a cause. As one interviewee argued: “When I wanted to register for a fundraising event, I was transferred to three different websites with different information requirements until I was registered for the event. This was really annoying.” The convenience issue is equally relevant for all service channels, whether on the web, via a mobile, via a call-center or by personal interaction. Secondly, suggestions by the focus groups to enhance trust and
transparency within the delivery phase included a strong focus on payment security, an immediate donation confirmation, trust seals and successful fundraising events.

Service competition management: Although most charities belong to the non-profit sector, strong competition for donations was observed during LocAid’s market research. According to the UK Charity Commission, 162,000 charities were registered in the UK in 2006 [26]. Therefore, the service competition management phase constitutes a potential value chain step to signal the positive difference of the charity in comparison with its rivals in the market. As charities try to incentivize customers to donate on a regular basis, long-term satisfaction will be crucial for charities. A focus on trust, individual needs and the visible effects of donations was seen by the LocAid survey participants as most important in order to build strong customer relationships. As indicated before, communication after donations, that is, feedback about donation transactions, could be targeted, for instance through regular updates on a cause.

Supporting attributes

People: The LocAid project’s research also revealed that the value of charity services is heavily dependent on the co-creation of value with customers. A charity would be meaningless without the active involvement of charitable people giving physical help, money or resources. Hence, donors should be aware of their crucial role throughout the whole value chain.

People may also come into contact with employees of the charity, who should represent and believe in the underlying causes. They should signal seriousness, generosity, sensitivity and customer-friendliness and try to build trust in order to match the offered service with the donor’s expectations.

Process information: The process information component of the value chain helps to make the charity process as transparent as possible. In LocAid’s interviews and surveys, charitable people stated that they want to know the destination of their contribution and its effects on a specific cause. Therefore, it is proposed that employees should be able to access this information and provide it, if appropriate, to customers. Optimized information technology might help in this step to ensure data quality, tracking and provision.

Physical aspects: Physical aspects of charities are suggested to signal the service value with an emphasis on trustworthiness and the charitable behavior of giving people. As one of the interviewees argued:

“When there are two charity websites, I would always donate my money to the charity with a higher quality website design, because quality implies for me trustworthiness.” The physical aspects component might be divided into “Marketing” – both online (e.g. website, application) and offline (e.g. catalogue, flyer) - and “Facilities” (e.g. office, furnishings, charity shop).

Punctuality and reliability: According to the charities interviewed, reliability and punctuality are crucial components in a charity value chain to build trust. Customers must be assured that the charity’s service is serious and reliable, for instance in providing the donated money efficiently to the corresponding cause. Immediate payment transfer and confirmations, real-time data, regular data check-ups and security check-ups on causes before and after donations were suggested by focus group participants as supporting factors in this value chain step.

4.3 Value Added Mobile Application

As described in section 4.2, the literature identifies brand and belief creation as two ways to support charities and their value creation. Mobile technology may be another way to add value to the charity value chain. Through its distinctive characteristics - localization, personalization and connectivity - it may be able to tackle the most common problems of charities which deter people from engaging more with them, in particular the lack of awareness and information, trust, transparency and convenience. The mobile application, LocAid, was designed to address these issues and constitutes another way to achieve value added in the charity value chain, introduced in section 4.2.

Awareness and Information:

Sufficient awareness and information of charities and their activities have been suggested as factors to be addressed during the “service design” and “knowledge management” phases. They are regarded as fundamental to marketing charities’ projects, events and general work. Commonly, charities send street volunteers to inform people, start campaigns to increase awareness of specific projects and have a website presence to keep users up-to-date about events and their work. However, according to the interviewed charities, these activities reveal difficulties in explicitly targeting charitable people, in identifying different segments of these people, and in addressing their individual information needs.

Mobile technologies may be able to address these difficulties through their localization, personalization
and connectivity characteristics. In the case of the LocAid application, functionalities were incorporated to locate charitable individuals and to show specific donation projects, fundraising events and charity shops “around” them, thus customizing the application to individual needs, that is, their individual current or desired location. Moreover, the application was designed in such a way that personal accounts were offered in order to tailor the content to the specific user (e.g. users get an overview of their past donations or events and receive updates on ongoing projects). Finally, LocAid was provided with a feature to give users information when and where needed, making charitable giving a real-time activity and keeping individual users informed at all times about the current status of their beneficial actions.

**Trust:**

As the research findings show, trust is identified as a critical concern throughout the whole charity value chain, especially with regard to financial transactions. The proposed charity value chain advises charities to build relationships with the charitable society and to increase their involvement in order to gain and sustain the public’s trust. Traditional advertising channels, such as physically approaching people, aim to develop trust and customer relationships through personal contact. However, many interviewees stated that they feel pressured and therefore refuse to become involved in this direct approach. For instance, one interviewee reported: “Most of the time, when a street volunteer approaches me, I do not have time to talk to him. I feel bad passing by, but it is just not good timing, because I am always on my way to some appointment”.

Mobile technologies may be able to create a two-way connection between the charity organizations and the users without pressurizing them, through their “anywhere, anytime” feature. Moreover, customer relationships may be built through personalization and individuality. According to these principles, LocAid, for example, includes features to display updates of projects to which users have donated and the most popular projects of other users. In addition, the local focus of the application was chosen to address the trust issue, as local charities may often be better known and their projects can be visited in person. Finally, during the development of LocAid, a networking functionality was considered, connecting charitable people through the application, creating a community and thus eventually developing trust and a lock-in effect.

**Transparency:**

The above analysis and creation of a charity value chain has shown that transparency may strongly influence trust and therefore constitutes a crucial factor in supporting activities in the value chain such as “process information” and “systems delivery management”. The surveys and interviews conducted during the LocAid project showed that charitable people demand not only a transparent process for money transactions, but also a clear indication of the money’s destination and its effect on a specific cause. Charitable people were critical of the fact that they do not know where their money ends up and their perception of charities’ transparency was very often low. Almost all reported that their most important concern is to see the actual result of their charitable actions, leaving them with the desired satisfaction of having done something good.

The local applicability and customized content of mobile technologies may be able to increase the transparency and effect of financial transactions. Accordingly, LocAid was designed to give attention to local projects and events in order to increase the perceived visibility of donated money and its effect on local causes. Beneficent people may help causes where they see the actual results, in contrast to foreign aid support, where users often feel wary about the destination and use of their money. In addition, personalized features, such as receiving feedback and updates on projects to which a user has donated money, were chosen to foster customer relations management and, thereby, to increase transparency.

**Convenience:**

Convenience is a factor which has received more attention in recent years due to the time constraints of contemporary society. As the interviews with charities showed, it has become a core focus in the charity value chain process, especially during the “service delivery” phase. As one charity reported: “Nowadays it is much more difficult to contact people on the street or on the phone for donations, because they simply do not have the time. We rather try to get their attention through marketing and brand development, in order to be a name in their head when they consider donating at a time convenient to them.” Users engage with a service if it is simple, convenient and efficient, according to one charity interviewee. Conventional efforts to offer convenience to charitable people, such as actively approaching people on the street rather than asking them to go onto websites or visit charity offices, or sending forms for event registration via email, cannot meet individual needs to engage in charitable activities at the right time and in the right place.

In contrast, mobile technology can offer service “around the clock”, giving the advantage of serving customers whenever and wherever it is convenient for them. Furthermore, as previously indicated, LocAid’s functional design focused on personalization and
localization (e.g. giving reminders of upcoming events for which users have registered, or simple directions to charity shops near the user), linking charitable giving with a comfortable service provision. Related to this, simplicity in design was seen by focus group participants as fundamental to providing convenience, and led to strict guidelines during the development of the application (e.g. the steps required to carry out a donation or fundraising registration should not exceed 3 to 4 clicks).

The above discussion demonstrates the potential for mobile technologies like LocAid to add value to the existing value chain of charities. As well as their high potential to acquire, serve and satisfy charitable people in a more efficient and effective way, mobile technologies may also support charities in their information management and operational efficiency. For example, through the LocAid application donations and fundraising registrations can be tracked in real-time, new information can be communicated instantaneously and marketing can be more targeted – all offering the potential for increased competitive advantage in services and processes. Accordingly, applications like LocAid may support charities in delivering a better service, and simultaneously may offer benefits to charities, the benevolent society and the people in need, hence acting as an intermediary co-creating value between the three interrelated parties.

Overall, the case of the development of LocAid demonstrates how the effective design of mobile technologies may be able to address common problems and add value to established value chains. The characteristics of localization, customization and mobility were systematically applied to the design of the application in order to fulfill its value-added need.

5. Discussion

The LocAid case demonstrates how the characteristics of mobile technology can add value within an established industry, more specifically within the charity value chain. However, some limitations of the framework and the effects of mobile technology must be considered. Firstly, the relationship between the charity value framework and the literature will be discussed and, secondly, the issues of the mobile technology effects will be described.

The framework is closely related to Gabriel’s [8] service chain framework but, unlike the original model, the activities of “moment of truth” and “delivery system management” are combined. For charities, these two activities cannot be differentiated as the actual “service moment” of a charity often cannot be defined due to its subjective nature. People will define their service moment differently: for some, the payment to a cause will be the main service moment, while for others it will be the actual resource provision or positive effect in the future. The main connection with Porter’s original model is the differentiation between primary and supporting activities and the fundamental idea that value is created within a “chain”. However, the charity value chain is a service value chain, which emphasizes not the creation of a product but the co-creation of value with its customer.

The charity value described in this paper is derived mainly from market research and a small number of interviews. The academic literature was not found to be sufficiently detailed and in some cases was too generic to be logically conclusive. This is a shortcoming of this work, as the model may require further testing. In addition, the model framework proposed for the charity value chain is only validated for the case of London, or at most the UK; hence, attempts to extend the results to other contexts would require a reassessment of the assumptions for calibration. Ultimately, the value-added effects of LocAid are only propositions and have not yet been validated in the real world.

The positive effects of the mobile technology on the charity value chain have certain problematic characteristics, which will be critically discussed for each attribute. An issue for all attributes is that the value added can usually only be leveraged if the charity fulfills certain prerequisites (e.g. transparency can hardly be enhanced if the charity does not provide sufficient data on its processes). This issue is closely related to the key implementation issue regarding available data.

Considering the supporting attributes of the value chain framework, people and physical attributes are unlikely to be influenced by mobile technology. Process transparency and increasing trust through punctuality and reliability can be improved, but only if the aforementioned complementary attributes are present (e.g. the charity must be reliable before a mobile technology can add value). Regarding primary attributes, mobile applications add value to the service design and specifically to general charity awareness. Charities must be aware that, in the case of LocAid, these positive effects occur similarly for all cooperating partners of the mobile application service provider. Consequently, the service may be used more out of a necessity to compete rather than with the notion of gaining any value added. Knowledge management, delivery systems management and service competition can be affected very positively through a mobile application’s distinctive characteristics of personalization, localization and connectivity. Similarly to the supporting attributes,
significant value added can only be fostered if the required conditions are fulfilled.

Further limitations to the value added through mobile technology arise from the effects on trust and transparency, in combination with taking payments through a mobile application. Trust is a complex concept and a common and important factor in every financial transaction. The ability to measure trust is limited by the fact that it is a multidimensional socio-technical factor which may be differently interpreted by every individual and which has been defined in numerous different ways [7, 19, 5]. Most scholars agree that trust is a belief in “favorable expectations” [5] based on previous interactions. The problem is that a mobile intermediary increases the number of parties which need to be trusted, in this case not only the charity itself but also the mobile service, leading very often to an as yet unaddressed problem of perceived security. If not perceived by a user, trust and security have been identified as major inhibiting factors in user acceptance of payments through a mobile application [16, 5]. Security can generally be divided into objective and subjective security. Objective security denotes the concrete technical details which are unlikely to be perceived by the consumer. Subjective security is the perception of a user that the mobile payment procedure is secure and can be seen to combat the perceived risk [6, 21, 5, 24]. Consumers often perceive payment solutions to be insecure, and therefore do not trust them and are unwilling to use them.

The positive effects of mobile technology may be further reduced by the personal characteristics of charitable people, such as their age, beliefs or values. Mobile technology, and especially payments through mobile applications, are used mostly by younger generations. Since the most charitable group of people is aged between 45 and 64 years [26], their adoption or even knowledge of mobile technology is often limited. Furthermore, the local aspect of LocAid, based mainly on the localization feature, may go against the beliefs of many charitable people, who often come from developed countries and see no reason to donate or support local charities but want to help poorer developing countries. Ultimately, the idea of an extra service fee charged by an additional intermediary may put many people off, firstly because the donated sum may be reduced and, secondly because some believe that a charitable intermediary should not aim to gain any benefit whatsoever. This concern should be taken into account in any business-model development for a mobile service within a charity value chain, for instance by not charging donors at all and charging charities only to the extent that the value added exceeds the additional service charge.

Finally, the effects of the LocAid case must be critically debated from the perspective of the overall charity industry. Firstly, even though the localization feature can indeed add great value if a charity supports local projects, charities with non-local projects or no possibility of providing local individual information have only limited or no use for the mobile value service. The distinct localization feature, therefore, only applies to charities with local projects. Secondly, the application itself is limited within the charity industry because it does not consider volunteering services, which are of great importance to many charities. The volunteering process often involves a higher level of commitment, and specific skills and training, and differentiates itself from donations, fundraising and shop functionalities for any application development.

The LocAid case shows how design specifications can be derived by analyzing the specific value added of the application in relation to the industry into which it is introduced. Alongside its innovatory features, the application was designed in order to signal quality and generosity, to overcome trust constraints and also to incentivize users (e.g. the color green was chosen as the main color to signal generosity, support and money). Developers and graphic designers should work hand in hand to produce a coherent design which suits the specific requirements of an industry.

The discussion shows that the proposed charity value chain and the effects of the mobile technology and its value service can generally lead to value added, but both the framework and the value added are limited due to the framework’s uncertainty, the intermediary character of the mobile technology and the general trust issue within the charity industry.

6. Conclusion

The role that mobile applications such as LocAid can play in established value chains is an area which has not been researched in depth, and companies have so far been slow to understand and plan for future implementations.

Based on comprehensive and detailed qualitative research in the charity industry, a charity value chain framework has been proposed, which shows how value may be co-created with the customer and the specific attributes which might add value to the charity processes. The specific issues of trust, transparency, awareness and convenience in the charity sector offer a basis for analyzing the potential positive effects, i.e. the value added, of mobile technology. Moreover, specific focus is given to the distinct mobile technology features of localization, connectivity and personalization, which can be related to each value
chain attribute and have the potential to create overall added value.

In terms of design, careful attention to detail, in application design, services, trust, etc., may allow the provision of an integral solution for the delivery of this type of service, which has been positively embraced in interviews with charities in London, and where there is interest in releasing the application and its future enhancements in the real life market.

The specific effects of LocAid will remain uncertain until a possible launch. Future research should further assess the proposed value chain framework, and also try to identify more specific features of mobile technology which might create value added, and show how practitioners in related industries and developers may use these opportunities to devise practical guidelines such as design specifications.

7. References

[10] P. Hankinson, “Brand Orientation in Charity Organizations: Qualitative research into key charity sectors”.