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Andreas Springer : BarrioCom — Commerce and Communication



Success factors to introduce a community based, virtual marketplace in Latin America.

Introduction

"Increasing access to the Internet for poorer communities around the world will only be beneficial if people can find useful local content that is relevant to their lives."

Peter Armstrong, Director of OneWorld International and DOT Force delegate

The Latin American way of life is strongly oriented in communities. Family networks are very important, work is often done in cooperatives and almost every neighbourhood and district is organized as a communitarian federation. BarrioCom introduces a platform for commerce and employment in Latin America meeting the challenges of creating awareness on e-business opportunities in poor communities and promoting the virtual marketplace in a region where local content is nearly unavailable in the internet.

This *case study* examines the topic of success factors to introduce an interactive, virtual market system that is based on communities. With its specific focus and its practical approach, it builds a base for further development and reproducibility of the BarrioCom concept.

From December 2002 to September 2003 I coordinated the BarrioCom project, which is developed and carried out as a collaboration of 'Fundación ChasquiNet', Quito Ecuador with a strong support from several other institutions and individuals. The name of BarrioCom stands for various innovative strategies applied in software and concept as well as for several local networks in Latin America.

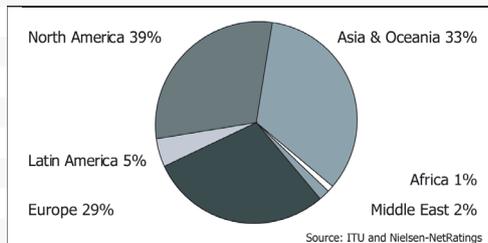


Figure 1: Internet usage worldwide by region

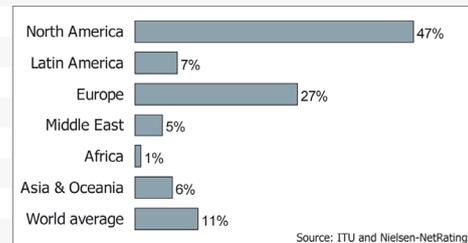


Figure 2: Percentage of population online

Background



Figure 3: District Colinas del Norte, Quito

The term *digital divide* refers to the gap between and within countries on the effective use of information and communication technologies. In a narrower sense, it refers to the rapid but uneven spread of the Internet. Usage and spread in Latin America are about five per-cent. (fig.1,2)

Economic and governmental *circumstances of Ecuador* demand individual entrepreneurial initiative. Daily life in the poor neighbourhoods of Latin America is dominated by survival strategies such as finding a job, selling or producing something to support oneself or a whole family. As a result of the very high unemployment rate, informal and micro business sectors play a very important role. A barrier for the growth of micro and small enterprises (MSE) as well as cooperatives and community organizations is the insufficient access to information, capital and skills. In particular there is a lack of knowledge on how to improve a business and reach a larger market outside of the closest neighbourhood.

The actual number of *internet users* in Ecuador is estimated to be 2.4% of the population. They use the internet for e-mail, chat and information services. E-commerce purchases are very limited.

Telecenters are defined as “Shared premises where the public can access information and communication technologies”. They are equipped with different infrastructure from telephones to computers, photocopiers and afford different levels of connectivity beginning with a simple telephone, dial up internet connection up to broad band satellite links. Investigations on various development and digital inclusion topics confirmed a strong impact of telecenters all over the world. (Colle & Roman, 1999)

Telecenters that help to build up social capital are defined as *community telecenters*. (fig.4,9) They place emphasis on social use and appropriation of technological tools and information that can be accessed through them. The network ‘somos@telecentros’ of more than 1500 Latin American telecenters is coordinated by ‘Fundación ChasquiNet’.



Figure 4: First telecenter of Itchimbia, Quito

Concept of BarrioCom

Initial idea

"Build a portal for the needs of telecenters users." This initial idea arose from my work experience in telecenters of Quito and the insight in existing platforms that all follow the needs of founders, researchers and in some cases operators, but never directly benefit the end-users of telecenters.

Functions of an employment market should be combined with some basic e-commerce tools in a dynamic and interactive, easy-to-use internet application. The commercial focus is fundamental for BarrioCom, as basic economic needs always are the first to be satisfied. Exchanging knowledge and experience remains secondary if there is no short term financial benefit.

Three main pillars

In collaboration with 'Fundación ChasquiNet', various members of 'somos@telecentros' and local grassroots organizations, I developed the concept of BarrioCom with its three innovative pillars.

One common virtual market • Various suppliers, producers, cooperatives and individuals contribute to one common attractive market platform creating local content about products, services and employment. The focus on promotion in the local markets sets a starting point and impact close to the existing situation, leaving further development to regional (electronic) commerce open.

Based on telecenters • The marketplace is technically and conceptually based in local telecenters. Telecenter operators, as part of the community, build the link to the virtual market, provide introduction workshops and offer support to facilitate the first contact and successful use of the system.

Leverage existing networks • Existing social networks and infrastructure build the base of a virtual network. Leveraging community networks and structures as well as technical infrastructure are key factors for social and technical sustainable projects.

The system of BarrioCom

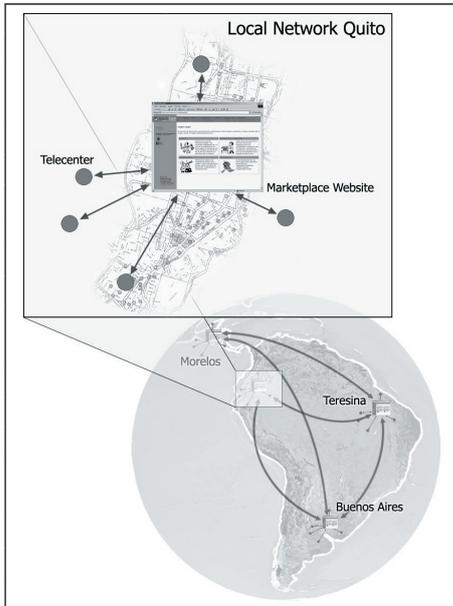


Figure 5: Structure of the network

BarrioCom consists of local networks, with their own marketplace websites that publish adverts for products, services and employment. (fig.6) The website of the marketplace dynamically *merges the contents* from the telecenters participating in the local network. (fig.5) In the telecenter, community members can register an account in the BarrioCom system and *publish adverts* to promote their business. (fig.7) Every user has his personal page showing his adverts and received messages. The BarrioCom communication functionality facilitates communication with the customer even if the user does not have e-mail address or telephone. Operators of the local community telecenters assist the users and update the telecenter contents with the master server by using the synchronization tool of BarrioCom during a temporary internet connection.



Figure 6: Marketplace website BarrioCom Quito



Figure 7: Detail view of an advert

The internet application

The Open Source BarrioCom software is a framework for the creation of a network of marketplaces. The completely dynamic system that is based on ZOPE stores data in a database. The master server handles the public websites of all local networks. The software for telecenters that works as a local web server can be installed in less than ten minutes.

Theoretical Framework

Similar projects

There are a limited number of similar projects, which contain the generalized topic "introduction of a community based exchange platform in Latin America" and deal with problems like diffusion of ICT, connectivity, community participation, content generation and commercial factors. Some of the most important projects in this context are shortly described and reflected in comparison to the basic ideas of BarrioCom.

Camari with Catgen • Ecuadorian fair trade system with stores in Ecuador and a web-shop. Small-scale Ecuadorian producers sell their agricultural and artisan products locally and for Ecuadorian retail. The e-commerce software 'CatGen' is used for the shop website. *The combination of a real network of fourteen producers, real shops in various cities and an internet presence makes this project very comparable to BarrioCom. Since the web-shop went online in 2002 it was used for making contact with potential customers, but no direct transaction has been processed.*

MiPyme.com • Portal for small and medium enterprises (SME) in Latin America that contains a large information section and an online catalogue tool that is provided for free. The 'FUNDES' network focuses on know how distribution for SME offering training, consultancy and facilitates access to financing.

Offering a variety of tools and services to improve business and to make first steps using the internet for commerce, mipyme.com does not create a virtual market itself. Based in 'FUNDES' and their knowledge network it might have personal connections to SME of the network but it is not suitable for informal and micro business in a local market.

"There is a small defect of the entrepreneurs of Manabí, their efforts to expand horizons, to benefit from new opportunities and to find new customers are very scattered and individual."

Jinsop B. Lavayen, President of 'Manabivende

Open knowledge network • Builds a global peer to peer network to share knowledge in local languages on vital topics like health, agriculture and education. OKN is an initiative of 'OneWorld International' and the 'Digital Opportunity Task Force' (DOTForce) that will terminate its pilot phase with a public launch in December 2003.

Dealing with the topic of knowledge exchange on a general and worldwide level the aim is to include commercial contents, but public internet marketplaces are not provided.

Virtual showcases • 'InforCauca' is an initiative to use ICT for the benefits of local communities in the south western part of Colombia. 'Manabivende' is a new Ecuadorian commercial platform for product and service promotion of the region de Manabí. *These two small scale platforms that emerged recently from local initiatives and organisations show the need of networks, which build a link between MSE and the internet. Without using a database solution they are limited to small number of participants, but have a significant impact on creating awareness for commercial opportunities using ICT.*

Methodology

Internet projects in Latin America can hardly be compared with projects in Europe. As BarrioCom also is a *development project* such a comparison would not make sense. Its objectives are very different and demand other action lines and strategies.

Using the 'Logical framework approach' goals, outcomes and their *indicators* were defined precisely to have a base for further project planning, execution and evaluation. These strategies and the corresponding actions were checked for the important aspects of sustainability, relevance and reproducibility.



Figure 8: Publicity of a plumber looking for a job



Figure 9: Inside the telecenter of Itchimbia

<p>Focus on introduction</p>	<p>A characteristic of many digital products is the dependency of benefits from the number of users. This so called 'network effect' is very important for BarrioCom as it consists and depends on the <i>participation</i> of users and customers. The introduction of BarrioCom can not be compared neither with the introduction of a not network product to market, nor with the introduction of a similar product on the other side of the digital divide.</p>
<p><i>"However the platform is important and a condition for the process, the creation of a virtual market depends on the dynamic in each local network of usage and appropriation of the tool."</i></p>	<p>Introduction of a virtual market system as treated in this study is defined as the process from the concept development phase until the retrieval and analysis of first results. With the virtual market system, BarrioCom introduces an e-commerce concept, awareness on ICT opportunities and a software in the target group.</p>
<p>Olga Patricia Paz, CIAT Colombia</p>	
<p><i>"I think it would be interesting to explore the opportunities of a virtual show case, not only to display products but as well to promote and share projects, job offers and initiatives."</i></p>	<p>Introduction <i>strategies</i> and <i>processes</i> in the 'ICT for Development' sector are badly documented. Through personal contacts I received some documentation on adjoining topics and had interesting discussions by e-mail and instant messenger.</p> <p>The detailed analysis of existing projects and discussion with project managers and local operators lead to the synthesis of six key factors that are used as strategies and evaluated during the introduction.</p>
<p>Olga Patricia Paz, CIAT Colombia</p>	<ul style="list-style-type: none"> • Establish communication channels to keep the target audiences informed, include them into the process and let users recognise that the project adds value to their business. • Follow existing dynamics to achieve real participation. Pressure will never produce sustainable benefits. • Be close to where it is happening and invest much time in personal contacts and discussions. • Success stories and local champions are needed to build confidence. Build a base for further project development with first small results. • Leverage existing infrastructure and focus on use, not on technology. Compatibility is the base for collaboration with similar projects. • Experiment in various contexts and interpretations of the initial idea and be open for alternative use of the new product.

Implementation

The pilot phase started in April 2003 with the launch of the first local network in Quito, Ecuador. To achieve the objectives of the pilot introduction phase as defined in the 'Logical framework', a series of actions were undertaken applying the earlier isolated key factors to the three main pillars.

Building supply and demand side

Telecenters in the region of Quito were invited to participate in a *focus group* in the early phase of the project. Questions and uncertainties as financial factors, confidence in the virtual market and publicity strategies were identified and discussed. Later on these telecenters built the base of the first local network.



Figure 10: Flyer and media reactions

Publicity on the *supply side* was covered by using the direct contact with community leaders and telecenter operators whom we assisted with publicity materials such as flyers (fig.10), banners and stickers as well as presentation and documentation materials. To make the most of the very limited financial resources for publicity on the *demand side*, we used existing media channels and joined on other events in Quito. The publication of an article about BarrioCom in 'El Comercio', a national newspaper, led to a peak of 500% increase in traffic on the BarrioCom website.

The staff of 'Fundación ChasquiNet' held a publicity and research *event* to present BarrioCom on the widely known place where unemployed workmen meet to wait for somebody hiring them. The following days thirty persons showed up in the ChasquiNet telecenter to get more information about the newly created market, register an account and place an advert.

Leverage effect of telecenters

The first discussions in the mailing list of the network of Latin American telecenters made clear that a big effort is necessary to *explain* what BarrioCom is and how communities can benefit from it.

"The platform is very friendly, I am working daily with computers, though it could be different for telecenters users that don't have a permanent internet connection."

Diana Andrade, EcuaneX Ecuador

A first prototype of the software helped very much to *concretise the expectations* of the group that was already active in the project. Results of intensive discussions with future users and my partner in Ecuador had already been included into the prototype.

The installation of BarrioCom in the first telecenters, an *introduction workshop* and a manual enabled the operators to start publishing first offers on BarrioCom. The manual was extended and improved reflecting the first experiences and questions of the operators. Together with the improved software installer it was now possible to *distribute* the system and set up the second network in Argentina.

Creating the network

The first important knot of the virtual network was woven already in 2002 through the collaboration with 'Fundación ChasquiNet' in Quito, Ecuador.

Discussion lists of the 'somos@telecentros' network formed the second knot. They were used to discuss parts of the initial concept and build it on experiences made in telecenters. A variety of *statements, ideas and problems* that helped developing the first concept were contributed by persons from all over Latin America. With the creation of local networks in Quito and Buenos Aires and a strong interest from Mexico, communication shifted from the general mailing list to personal e-mails and instant messaging that are more appropriate to satisfy the needs of an intense and specific conversation.

The third main knot formed the documentation website, where actual concepts and project reports are *published*. Together with the mailing lists and a monthly newsletter a group of interested people that has grown to over hundred, are kept informed about the project.

On the second international meeting of Latin American telecenters I presented BarrioCom and held a *workshop* with more than thirty operators and project coordinators from all over Latin America. (fig.11) Many collaborators could touch for the first time the product of past discussions.



Figure 11: BarrioCom workshop

Evaluation

The 'Logical framework' includes indicators for the project evaluation, which are mainly quantitative. During the project execution it became obvious that the experimental pilot phase will produce mainly results that can be evaluated in a *qualitative* way. Interviews with operators, discussions with other local network coordinators and experiences made while working with users in a telecenter became more important for the evaluation than numbers and statistics.

Experiences

During the whole process of introduction the collaborators made a lot of experiences while discussing the concept and later on working with software, users and operators. Some of the most important statements and experiences are summarised here.



Figure 12: BarrioCom user with his painting

*"Interest in paintings - I would appreciate it if you could send me information about dimensions and prices of your artwork.
Kind regards, David G."*

Message from customer August 5, 2003

Building the market

- Users in the telecenters have very limited computer literacy, but the major difficulties result from composing texts about their business, products and services.
- The difference between somebody looking for a job and somebody offering a service does barely exist in the target group that is struggling to cover livelihood.
- Users of the system invented additional uses of the platform. For example the creation of a register of violence acts in the neighbourhood.

Telecenter collaboration

- Due to the acceptance of BarrioCom in the local communities and recognition of its opportunities a strong base for social sustainability is given.
- The software can be handled by telecenter operators without any difficulties.
- Activities vary from telecenter to telecenters and depend strongly on external factors as connectivity problems and community dynamics.
- In telecenters where an intensive collaboration with the operators was established much better results were achieved.

Networking in Latin America

- Community dynamics in existing networks play a vital role for a project that is based on telecenters. On short term it is almost impossible to influence them.
- Mutual agreements about project goals are a necessary base for collaboration, but for the success of a project personal contacts and motivation are far more important.
- The complexity of the project and the fact that completely dynamic systems as BarrioCom were totally new to some operators and users demanded much effort in explaining it.

Quantitative results

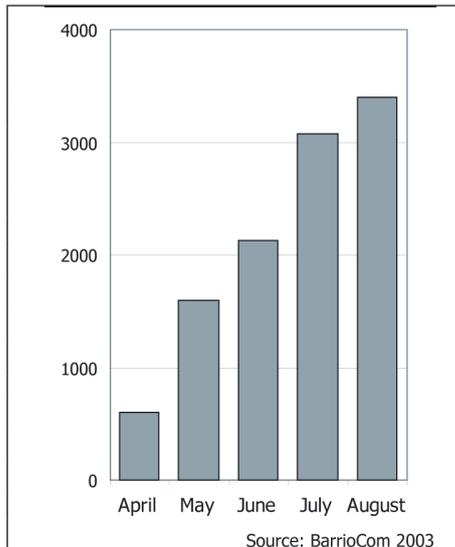


Figure 13: Visits of BarrioCom Website

The outcomes defined in the 'Logical framework' were only partially achieved. Following the community dynamics, four months of assignment were not enough time to reach the critical number of users needed for a significant statistical analysis.

BarrioCom at the time of the evaluation is being actively used in two *local networks* in Ecuador and Argentina. Networks in Panama, Mexico and Colombia have been recently created but have not started publishing yet.

In total 60 *offers* have been published on the BarrioCom platform by 40 *registered users* (18% women). Detailed information about offers and users was requested more than 4000 times in the first four months. 27% of the users were *contacted* through the internal message tool, direct contacts by telephone or mail could not be measured.

Indicator of the project goal is the *number of visits* from Latin America on the website of BarrioCom. The verified web statistic, excluding visits from the project staff shows a significant increase. (fig.13)

Meanwhile the *network* of 148 subscribers of the newsletter and the mailing lists spreads over 14 Latin American and 6 European and North American countries.

Conclusion

Key insights

Weave a net of interested persons and organisations to get feedback and initiate participatory processes of possible future users.

The real impetus comes from the existing community networks and their individual dynamics. Thus be present where things are happening, to stimulate these slow and subtle processes.

First results and tangible prototypes help the target audience recognize future opportunities.

The initial question: „What are success factors to introduce an interactive, virtual market system that is based on communities?“, can be answered with the three insights on the left. Reflecting the six key factors, which we applied during implementation, most of them can be confirmed as the following listing shows:

- The *establishment of new communication channels* and the benefit from existing networks helped to produce well founded results. I underestimated the necessary effort to retrieve results from the networks and the difficulties to explain a complex virtual system like BarrioCom to the target audience.
- The introduction strategy, to *follow the dynamics of the communities* and activating it with low level stimulation, stands opposite to the initially defined quantitative success indicators, as in limited time community dynamics can hardly be influenced.
- The need to *be close to where it's happening* is confirmed with the level of local activity that was much higher during the months I worked on the spot in Quito.
- Although time was very short for building *local champions or success stories* on the user level of the project, real products have been confirmed in their important role with other project results.
- Lack of *ICT infrastructure* is still a barrier. Overcoming it with technically simple solutions and offering a possibility to use the existing has a strong participatory effect, as it includes community resources.
- The strategy to use the pilot phase as *a field for experiments* by leaving many things open to the users is quite contradicting. On one hand it might have produced wider open discussions, but on the other hand it caused some uncertainty what deterred potential collaborators to include themselves more in the process.
- The *BarrioCom software* can easily be handled by telecenter operators and users. Literacy of the users to describe and write about their products or services is a much higher barrier than connectivity and computer skills.

	<p>The strong interest and motivation from operators, organisations and the target group of users from the communities confirmed the need for activities that support commercial initiatives from MSE, SME, communities and individuals. The broad local and international <i>response</i> we received with very little publicity shows that the strategy of BarrioCom can lead to a significant impact.</p>
Outlook	<p>The project is continued in two threads with the objective to start a large project that is based in the results obtained during the pilot introduction phase.</p>
	<p>The dynamics of the local networks and the participating telecenters are followed with the aim to make a more <i>complete evaluation</i> on the user side after some more months of growth and active usage of the platform. The other thread is the promotion of BarrioCom on international level by 'Fundación ChasquiNet' to obtain further <i>funding</i> from the World Bank and to establish collaborations for a follow up project. Already several organizations like the OAS and IDRC have expressed <i>interest in collaborating</i> with BarrioCom.</p>
<p>"I read about BarrioCom and I am really fascinated about the work you have done. I am Mexican and believe that projects like this are what my country needs. How can I develop this project in the community I live in Veracruz"</p> <p>Ing. Héctor E. Gutierrez Cureño, Mexico</p>	<p>The <i>follow up project</i> has a strong focus on training and SME development and is based on concept, experience and pilot networks of the BarrioCom project. The importance of training, which goes beyond workshops with operators, is necessary to build capacity in the area of basic marketing skills of micro entrepreneurs.</p>
	<p>The documented experiences of the first two actively working local networks are used to <i>improve the launch</i> of the following networks that are just about to get started.</p>
	<p>To facilitate further development of the platform, the software is published under General Public License (GPL). A next step is the establishment of a <i>group of software developers</i> among the telecenter users and coordinators. First steps are already undertaken by writing an extensive documentation of the software. Locally developed software will have an intense effect on the appropriation of the tool in the community of telecenters.</p>

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