Banking and funds transfer on the mobile platform

A user centred approach to banking the unbanked in Rural India

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By Jugaad:
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In memory of B. Mandal
The key challenge is to look to new horizons. Our growth so far has been based on our ability to identify opportunity horizons very early and build businesses to scale those horizons. In our case, we had to get the capital right, get the people right, get the technology right and get the processes right.

We believe that to break into the top league of global banks, ICICI will have to follow a course that few banks in the world have done -- and that is, leverage the rural economy. This is something that most banks don't do because it requires hard work. Market share is not easy to achieve because you need to widen your product tree. An even greater challenge is that you need to learn to do business at a fraction of the cost that you are used to.

So our challenge is to invent a new business model where we can create a distribution base effectively in 600,000 villages in India, and to learn to do that at one-tenth the cost of urban India. Just to put that on a scale that someone could understand, we believe that to succeed in urban India, we need to do be able to do business at one-tenth the cost of the West. The reason is that the ticket size of the banking product in India is one-tenth that in the West. If it is a deposit of $10,000 in the West, it will be $1,000 in urban India and $100 in rural India. Loans operate at a similar scale.

We need to be able to conceptualise how to deliver value to this market at an extremely low cost. That's where the challenge is, as well as the opportunity and the excitement. The challenge is to be able to work with partners because we believe that the branch-led model will not work in this context. The branch-led model would simply replicate our existing structure, and even though we might try to scale things down, the costs are unlikely to go down as much as we need to succeed in rural India.

That is why we need to work with partners who are either already present in the local community or who need to be there. For example, we might partner with a local financial institution, a micro-finance agency or a company -- someone who is already in the village for a business purpose. We might even partner with someone who is selling fertilizer or seed or tractors. How can we leverage these partnerships to do business? That question drives the need for a new business model to reach out to this market. If we can do this -- and we are fairly sure that we can -- I think the rewards could be enormous.

~ K.V. Kamath, CEO & MD, ICICI, Published: July 26, 2006 in Knowledge@Wharton

http://knowledge.wharton.upenn.edu/article.cfm?articleid=1529
Cost is a Key Driver for a successful business model in rural India

Current estimated cost per transaction by *branch* = Rupees 50*

Current estimated cost per transaction by *website* = Rupees 2*

Cost of *mobile call or sms* message = Rupee 1 < *telco charge* < Rupees 2

* These figures are taken from the Business India December 2006 issue on India's Number one ranked bank in 2006.

Key Challenges for the design and development of successful business model

The prospective market consists of unbanked people. A body of research knowledge must be developed on which to base a successful banking business model. Many aspects of this knowledge must be established from scratch.

To create a better fit in terms of both transaction flow and user interface, tools such as user observations, interviews and persona development will make the raw research concrete, tangible and empathetic, allowing ICICI to quickly and effectively digest this knowledge into practical and actionable results.
Wealth Flow Key to BoP New Product Success

To succeed in introducing new products to bottom-of-the-pyramid markets means understanding how to approach these issues; what they demand; their capacity to satisfy such demand; and how they prioritize their demands in the face of inherent environmental capacity limitations.

For instance, cell phones are an incredibly popular product in developing countries, despite the fact that their cost relative to income makes them very expensive. Certainly part of the reason is a lack in wireline communication infrastructure. But this is only helps explain demand, not either their capacity to pay for a cell phone nor the high priority placed on cell phone ownership.

What does allow people in developing countries to afford the high relative cost of a cell phone is the fact that these devices provide an actual return on investment they make money for their owners. They do this by accelerating the flow of existing wealth within an economy. If you have $1 and it takes a year from the day you spend it for it to come back to you (you buy a loaf of bread from a baker who buys some wheat from a farmer who buys the charcoal from you), you will not be in a hurry to spend that $1. However if it takes only a day for the $1 to come back, you won't think twice about spending it.

Now, what makes cell phone ownership a high priority for people of limited capacity? Cell phones accelerate the flow of wealth which grows purchasing power without having to first increase the total money supply in the economy. This gets into all sorts of arcane macro economics, so lets keep this practical. Imagine you live in a part of the world where it can take weeks just to negotiate a replacement part for your broken tractor. It costs you the same price for the part, but getting it this part tomorrow means harvesting your crops on time, while getting it in three weeks means getting a lower price for over ripe produce.

Accelerating the flow of wealth like this is almost like getting something for nothing: increased purchasing power with no foreign direct investment, no charity and no bloating work hours.

Toothpaste, dvd players, and even dishwashers will not have this same kind of direct and immediate effect on an economy. So while folks in bottom of the pyramid market may want such things, they can neither pay for them nor will they prioritise such purchases because these kinds of products don't repay their investment price the way a cell phone does.

Distinguishing products this way (those that accelerate the flow of wealth vs. those that don't) seems to provide a lot of insight into what kinds of new products will and won't succeed in bottom of the pyramid markets.
Our Proposal: Banking on the mobile platform

We have identified some existing models on the mobile platform that work in the area of finance, microfinance, fund transfer, purchases etc from other emerging markets. These models are already in place and can be studied, evaluated and analysed in the field, then adapted, changed or upgraded for the current situation prevalent in India. One example is South Africa's Wizzit.

We propose is that we prototype these in one selected rural area - district Sawai Madhopur - implement and test it until a suitable workable model can be replicated systematically wherever there are cellular circles across the nation.

Why the Mobile platform?
India is the fastest growing mobile phone market in the world. It is growing by around 55% a year and the country now has 140 million mobile phone subscribers. An average of 6.5m subscribers have been added in each of the past three months.

By 2010 there will be 500 million mobile phones in India.

With regard to the geographical coverage, there is expected to be 85 per cent mobile coverage of the country by 2007

Why Sawai Madhopur?
We believe that this business model can make a significant difference by using the existing infrastructure as we have observed in Sawai Madhopur and the surrounding villages. No further technological investment is required.

Relevant applications must, however, be developed. We believe that the maximum impact with the minimum amount of investment of time and money could be achieved in banking and funds transfer. Currently one branch of Bank of Baroda serves 7 villages and surrounding hotels. It is a designated backward district. Aditya Singh of The Ranthambhore Bagh will be our regional liaison and host for the duration of the project.

Why Wizzit?
A WIZZIT account is as much as one-third cheaper as an account at one of South Africa's big retail banks for the same basket of services. These mobile banking services make banking easier and more accessible, and the government will also be able to use the accounts to deposit millions of dollars in monthly pensions and grants, helping the elderly receive needed funds without long walks to disbursement centers.

We believe that if this is successfully implemented and tested in a rural location with maximum technological and environmental constraints the successful model can then be upgraded for Tier 1, Tier 2 and major metros. Further, can be adapted for other emerging markets in Africa, Asia, etc and upgraded even for developed markets
Immersion in the field uncovers user needs and constraints peculiar to the environment through ethnographic research techniques like user observation, interviews etc. Insights thus derived drive not only the design of the business model and transaction process but also the design requirements of the user interface at every touch point from the mobile handset through every phase of the fund deposit, transfer, withdrawal, payment and authentication process.

The results of this phase allow us to frame the problem correctly, in the cultural and socioeconomic context in which the proposed concept would be expected to work. This is critical as addressing the correct issues to be resolved and identifying the real needs of the user is half the solution.

Deliverables

1. Revenue based business model in collaboration with ICICI based on the insights from understanding the rural customer and his particular needs in close detail:
   a. Transaction process flow diagram
   b. PRD for user interface with visual representation
   c. Estimated costs for implementing the prototype
   d. Consumer Insights on rural banking needs, user needs.

Budget: Appendix A
Estimated time frame: 12-16 weeks
Phase Two: Design and Development
* note external software development required

Based on the results of the research phase where user needs are identified and the process mapped out, the PRD would guide the design and development of the mobile banking application.

1. The front end is where we see the crucial need for insightful design research (designing for small screens, web for mobile etc)
2. With respect to the back end (bank OS) Jugaad would have some oversight of this aspect.
3. The intent is to outsource the coding, but monitor and supervise the design and development.

Based on the flow of the transactions and process map developed at the end of phase one i.e where the funds would be deposited, bank or post office branch etc, all other permissions, arrangements, organization and coordination required for the implementation of the first prototype would also be coordinated simultaneously during the period.

Budget: TBD
Estimated Time frame: TBD

Phase Three: Prototyping and Testing

After the development of the system including the back office interaction with the banking network, the user interface on the mobile platform and the transaction processing, the prototype would be implemented within dist. Sawai Madhopur serving a limited region in order to facilitate testing and tweaking of the prototype, any design changes or process/transaction changes that may be required as and when they emerge during field testing and observation.

Budget: TBD
Estimated Time frame: TBD

Phase Four: Rollout and handover to the company. This would be across other regions, following bottom up system of prioritization - rural, semi rural, Tier 1 and 2 cities, major metros etc.

Phase Five: Monitoring/Adaption. We also recommend a monitoring market research phase with each level of rollout in order to adapt the original design and develop it for the next stage of technological capability.
Jugaad
"Health, wealth and the freedom to choose."

Jugaad is a global cooperative venture, drawing together a handful of people, each born under a different sun on the continents of Africa, Asia, Europe, North and South America, who use their myriad talents and skills to create value. Their goal is to increase the flow of wealth to the bottom of the pyramid through innovative win-win business models, innovative products and services using a combination of strategic planning, visual communication and industrial design. Their design philosophy centers on our common humanity, the world in which we live and the ecosystem in which it all comes together.

Project Team

**John Trenouth**
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John is based in Vancouver, British Columbia and has over a decade of experience in designing interactive products and systems in both telecommunications and healthcare for global brands such as Verizon and Cardinal Health. He holds a Masters degree in design from Carnegie Mellon University and specializes in product development, scenario planning and innovation processes. He is a design thinker and writer who can be found online at www.niblettes.com/blog. John is fluent in English and French.

**Niti Bhan**
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Niti is based in San Francisco, California and has over 15 years of experience in conceiving, developing and implementing strategies for entering new markets for global brands such as Hewlett-Packard, Bank of America, Phillips, Scientific Atlanta, Creative Labs, HCL and the Cybermedia group of publications. She has worked for The Second City, the Institute of Design, Core77, McCann Erickson Worldwide, Hewlett-Packard India and advised the CEO's of Method, Metadesign and NewDealDesign. She holds a first class degree in Industrial and Production Engineering from Bangalore University and an MBA in Strategy and Marketing from the University of Pittsburgh. She also studied Product Design at the National Institute of Design, Ahmedabad and innovation planning and new product development at the Institute of Design, IIT, Chicago. She is the founding editor of the Core77/BusinessWeek Design Directory and her articles on design, strategy and innovative business practices have been published in BusinessWeek, Core77, New Design magazine, and on Perspective, her blog. Niti is fluent in English, Hindi and Bengali.
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Tasos is an industrial designer and the managing director of Readymade, a product design and innovation consultancy. Readymade applies design thinking to the products and experiences of global companies like Motorola, Mitsubishi and Body Glove. Readymade has won several design awards including the Red Dot Design Award and Chicago Athenaeum Good Design Award. Their work has been published around the world in periodicals like Stuff, T3 and Design Indaba. Tasos holds a B.Tech degree in Industrial Design from Johannesburg University and has lectured at universities in South Africa, the USA and Canada. He is a member of his alma mater's Advisory Council for Industrial Design and their Peer Review Panel. Tasos has also served on the panel of judges for some of South Africa's most prestigious design awards. In addition, he is a mentor to the George Brown College/Bruce Mau Institute Without Boundaries World House Project. He contributes regularly to the BusinessWeek/Core 77 Design Directory. Tasos is fluent in English and Afrikaans.

Anya Calantzis  
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Anya is a co-founding director of Readymade, a product design and innovation consultancy, based in Pretoria, South Africa. She has over 10 years experience working with and managing creative teams. Anya holds a B.Admin (Hons) degree in International Relations from the University of Pretoria. Anya has recently assisted in the early stage development of an innovative new business model for a subsidiary of Barclays Bank in Africa. She is fluent in English and Afrikaans.

David Tait  
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David is creative director of Readymade, a product design and innovation consultancy where he is involved in research and strategy at Readymade. He has also worked as a chef in the UK and South Africa.David holds B.Tech degrees in fine arts and interior design from Tshwane University.
Appendix A

Phase One estimated cost breakdown (3 months costs in US$)

Fixed costs

- boarding and lodging $ 15,600
- office rental $ 8,400
- equipment $ 2,670
- travel $ 20,000
- office expenses $ 6,000
- manpower expenses $ 1,100

Subtotal $ 55,270

Consulting fees (@ $150/hr) $200,000

Contingency fee: A contingency fee of 5% will be applied to the total amount.