



# Serving the World's Poor: Innovation at the Base of the Economic Pyramid

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## Abstract

If firms want to reach the 4 billion customers at the bottom of the economic pyramid, they need to focus on the 4As – availability, affordability, acceptability and awareness. Take Smart Communications Inc., the largest mobile network operator in the Philippines. By leveraging the power of the 4As, Smart was able to deliver not only a highly innovative pre-paid mobile telecommunications proposition for people living in poverty, but also substantial profits for the company. By the end of 2003, just ten months after launch of its innovative 'Smart Load' proposition, Smart customer numbers had grown to 10 million, representing a 47% year on year growth over 2002. In 2004 the company had amongst the highest profit margins in the Asia-Pacific region.

## Author Professional Biography

**Jamie Anderson** is Senior Lecturer in Strategy and Innovation at esmt European School of Management and Technology, and Fellow of the Centre for Management Development, London Business School. His current research focuses on innovation in developing markets, and he has worked with a number of multinational firms towards the development of strategies to reach low-income consumers. A previous article on innovation in the mobile telecommunications industry was awarded as one of 'the top 50 articles in management for 2004' by Emerald Management Reviews.

**Niels Billou** is an Assistant Professor at esmt European School of Management and Technology and received his doctoral training at London Business School. His research interests include corporate entrepreneurship, the growth of start-up ventures, entrepreneurship in emerging markets, and the effect of institutional context on firm performance. Niels consults to both public and private organisations; past clients have been in the telecommunications, information technology, financial services, and government sectors.

## Acknowledgments

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## Introduction

It is without a doubt that the market for products and services among the globe's poor is huge. Those consumers at the very bottom of the economic pyramid – those with per capita incomes of less than \$1,500 – are estimated to number more than 4 billion. For more than a billion people - roughly one-sixth of the world's population - per capita income is less than \$1 per day. The 20 biggest emerging economies include more than 700 million such households, with a total annual income estimated at some \$1.7 trillion, and this spending power is about equal to Germany's annual gross domestic product<sup>1</sup>. The spending power of Brazil's poorest 25 million households amounts to \$73 billion per annum, while China's poor residents account for 286 million households with a combined annual income of \$691 billion. India has 171 million low-income households with a combined \$378 billion in income. But the success of MNCs in penetrating these low-income customers has been patchy at best, with most companies based in the developed world choosing to focus on the middle and upper income segments of the developing world.

Why hasn't the business world seized the opportunity at the bottom of the economic pyramid? The explanations are well known; corruption, poor infrastructure, non-existent distribution channels, illiteracy, lack of robust and enforceable legal frameworks, religious or racial conflict, and sometimes even war or violent insurgencies can stifle the enthusiasm of companies in serving people living in poverty. Indeed, most large firms have elected to leave these consumer segments to local companies or government agencies, and focus on the 'low hanging fruit' – the middle and upper classes.

**About the research.** This article derives from research on serving customers at the bottom of the economic pyramid in industries such as fast moving consumer goods (fmcg), financial services, telecommunications, construction, health care and home appliances. The research has used an action-based methodology, founded on enquiry, analysis and testing. It has aimed to articulate best practices as companies deal with the challenges of serving low-income customers in developing markets, and in many respects has explored strategies that are still evolving. A two-year research project was undertaken to test the hypothesis that there were common challenges and approaches in serving BOP customers, and that these could be articulated and refined to get better business results. Field visits were made to China, Egypt, India, Mexico and the Philippines, and in depth interviews took place with companies that had succeeded in serving customers living in poverty. Companies were identified from the existing body of literature, observation and personal contact. Additionally, data was collected from developing case studies on multinational corporations (MNCs) and local firms that have been successful in serving low-income customers in developing markets. From the academic literature, field visits, the research and writing of case studies and hands on experience with managers, the 4As framework was refined during 2004-2005 in a reiterative process of application, testing and adaptation. Then, through feedback from our academic colleagues (the authors would especially like to thank C K Prahalad and Jagdish Sheth for

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<sup>1</sup> Prahalad, C. K and Hart, S. L (2002), 'The Fortune at the Bottom of the Pyramid', *Strategy and Business*, Issue 26, pp 2-3.

reviewing and commenting upon earlier drafts of this article), classroom discussions and further interviews with executives involved in the application at companies, shared approaches to the 4As were identified and used to build theory and make the concepts generic enough so they could be utilized by other managers.

But while the vast majority of corporations have seen these challenges as insurmountable barriers, other have quietly pursued strategies of experimentation in developing unique product and service propositions for some of the world's most needy consumers. And our research has revealed that these companies are not exclusively those at home in countries such as India, China or the Philippines. We have also discovered MNCs that have accepted the challenge of serving the poor and have been able to do so profitably. At the heart of virtually all of these organizations' success has been the development of an approach that delivers the 4As - availability, affordability, acceptability and awareness.

### **Availability**

One of the biggest challenges of serving BOP markets is to ensure availability of products and services. Unlike in the developed world, distribution channels in BOP markets can be fragmented or non-existent and the task of simply getting products to people can be a major hurdle to overcome. Consider the challenge facing companies wishing to target low-income consumers in India's 627,000 villages, which are spread over 3.2 million square kilometers. In many parts of the country roads are little more than rutted dirt tracks, and in the monsoon season these can be literally washed away. In the north, roads to isolated villages cut across snow-covered mountain passes that can be closed for weeks at a time. The time to cover even small distances under such conditions can be long, stretching supply chains and adding cost. So while there might be a BOP market of more than 700 million Indians, delivering goods and services to them is not easy.

In the Philippines, Smart Communications Inc. recognized that availability was perhaps one of the biggest barriers to providing mobile telecommunications to BOP consumers. More than 65% of the Philippines' population lives in rural areas, and the country is comprised of more than 7,000 islands. While Smart had network coverage for 75% of the population by early 2003, the 50,000 resellers of its pre-paid cards were predominantly medium sized storeowners and dedicated mobile resellers in towns and cities, and the company had very limited penetration of the small 'Sari-Sari'(Sari-Sari means varied in Tagalog) stores in non-urban areas. The company recognized that providing such stores in isolated rural areas with pre-paid cards would make supply chain management costly and difficult. Many analysts claimed that it simply could not be done profitably.<sup>2</sup>

INSERT EXHIBIT A ABOUT HERE

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<sup>2</sup> For a detailed discussion of Smart Communication Inc. in the Philippines see Jamie Anderson, A V Vedpuriswar and Arun Khan (2005), 'Smart Communications Inc. Case A and Case B', European School of Management and Technology Case Study 2005003. The case study is available for free download from the European Case Clearing House <http://www.ecch.com/freecase>

To overcome the complexity of distributing pre-paid cards, Smart developed an innovative over-the-air (OTA) payment system. Called Smart Load, the new technology allowed a retailer to load a customer's airtime from a specially designed retailer SIM (the small electronic network access card inside the retailer's mobile handset) - all electronically. With the launch of Smart Load, Smart minimized physical product distribution costs by creating a demand response stocking system for pre-paid airtime. Product distribution became faster, more efficient, and more secure. The special retailer packs allowed retailers to "open" or "close" their retail handsets via SMS and enabled them to sell their service outside a physical location, and outside regular store hours. The ability to reload electronically meant consumers could purchase airtime even in remote rural locations. Retailers did not have to obtain stock and sell pre-paid cards. The Smart Load service eventually allowed Smart to eliminate the distribution of lower denomination re-load cards altogether.

But it is not just in the Philippines where companies are developing innovative solutions to provide availability to poor consumers. Global fast moving consumer goods (FMCG) company Unilever believes that poor countries could well hold the key to the company's long-term profitability. The company anticipates that by 2010, half of its sales will come from the developing world, up 32% from at the turn of the millennium. Hindustan Lever Ltd (HLL), the giant of India's US\$13.8 billion consumer goods market, is a model for that shift and has spent years developing a distribution system which enables its products to reach even the most isolated BOP consumers. To access far-flung towns and villages, HLL distributors use auto rickshaws, bullock-carts and even canoes. In Brazil, in remote mining towns such as Cripurizao, 1,500 kilometers away from anything like civilization, Avon saleswomen travel along the Amazon and its tributaries in ferries, small boats and even canoes to serve male gold miners who regularly purchase perfumes and beauty supplies.

### **Affordability**

The second hurdle to overcome in serving BOP consumers is to ensure that products or services on offer are affordable. BOP consumers have low disposable incomes, and products may also need to match the cash-flows of customers who frequently receive their income on a daily rather than weekly or monthly basis. Two-thirds of Indian villagers are in the bottom income band making them acutely sensitive to price, and more than two-thirds of their income is typically spent on food. Other products such as soaps, scents, shampoos and even telecommunications services must be purchased with the meager income that is left over.

With close to 50 percent of the population in the Philippines living below the poverty line, affordability of mobile telecommunications was a major issue. Socioeconomic breakdown in the Philippines falls into five categories A, B, C, D and E. The A, B and C segments are upper, upper middle and lower middle income families, while the D and E segments are lower income and below the poverty line groups. Smart discovered that while 100 Philippine pesos (US\$ 1.80), the lowest price for a prepaid card in 2002, was not a lot of money for a consumer from the A or B segments, this amount represented a significant cash outlay for a family living in poverty.

Indeed, one hundred pesos represented a more than 80% share of daily income for over half of the families in the country. Quite simply, said the analysts, a very large segment of the population would be unable to afford mobile telephony, and mobile penetration was likely to peak at no more than 30% of the population by 2008.

To develop propositions to reach the low end of the market, and particularly consumers in the D and E segments, Smart recognized that it could not benchmark others in the mobile industry, as there were very few cases of mobile network operators who had successfully developed propositions for very low income consumers. Instead, the company looked at companies that already served this segment with other products and services, and undertook its own market research on consumer buying behavior.

INSERT EXHIBIT B ABOUT HERE

Not surprisingly, when Smart looked to companies such as Procter & Gamble and Unilever that served the D and E segments with fast moving consumer goods they discovered that these firms had developed low-priced micro-packs for daily necessities such as shampoo, soaps, cigarettes and food. While these 'sachets' did not represent the most economical way of purchasing goods, they met the needs of consumers in terms of low purchase price. The vast majority of these items were sold through the country's small 'Sari-Sari' stores that survived on high turnover low value transactions. Indeed, "tingi-tingi" or "purchasing goods in small amounts" was part of daily life. Customer surveys revealed that low-income Filipinos made an average of four to five trips a week to their local Sari-Sari store.

To reach its BOP consumers, Smart Communications built on its over the air recharge technology and developed prepaid pricing plans that offered airtime in sachet-like packages, with prices that were broken down into much smaller denominations than had previously been available – as low as PHP 30 (US\$0.54). The new pricing packages were a huge success, and within ten months these lower denomination packages were generating 3 million daily top-ups, with revenues of more than US\$2 million a day. Smart subsequently launched Pasa (transfer) Load, making re-loads even more accessible for low-income customers. The new service allowed consumers to transfer loads as low as PHP 10 (US\$ 0.18), from one account to another. By January 2004, denominations of PHP 2 (US\$0.03), PHP 5 (US\$0.08), and PHP 15 (US\$0.27) were added to the Pasa Load lineup.

While Smart offered sachet pricing, the profits margins on these sachets matched or exceeded those that had been made on pre-paid cards – as is the case for sachet products in much of the fast moving consumer goods world. The result – as of end 2004 Smart had amongst the highest profit margins (63.7%) of any network operator in the Asia-Pacific region, despite having amongst the lowest average monthly revenues per user.

## Acceptability

The third challenge in serving BOP markets is to gain acceptability for the product or service. Therefore, there is a need to offer products and services that are adapted to the unique needs of both customers and distributors. Because of the lack of electricity and refrigerators in many of its markets in the developing world, Coca-Cola provides simple ice boxes to help its distributors keep products cool.

In the mid 1990s Haier Group, China's leading home appliance manufacturers, discovered that poorer customers in rural areas believed that the purchase of a washing machine only to be used for washing clothes was somewhat frivolous. Indeed, many rural consumers used their washing machines not only to launder clothes, but also to do other tasks such as cleaning vegetables. Some companies might have told customers to stop such behavior and voided warranties for clogged drainpipes, but instead Haier product managers asked the company's engineers to modify existing products by installing wider pipes that would not clog with vegetable peels. The company then affixed instructions on the modified washers, with easy to understand directions on how to clean potatoes and other vegetables using the machine. The company also developed a washing machine to make cheese from goats' milk. Innovations like these increased the acceptability of washing machines and helped Haier to win market leadership in China's rural provinces, while avoiding the price wars that have plagued the country's appliance industry. Several factors have contributed to Haier's success, but a lynchpin has been its ability to increase the acceptability of its products amongst low-income Chinese consumers. No wonder Haier was the first mainland Chinese company to be featured in a Harvard Business School case study<sup>3</sup>.

Smart's consumer research revealed that mobile phone ownership was viewed as important by BOP consumers in the Philippines not only for 'entertainment and enjoyment' purposes. Many consumers indicated that access to mobile telephony could help to make their lives easier (and possibly even allow them to save money), by reducing the need for travel to adjacent villages or towns to search for work or to check market prices for their agricultural produce. For example, the cost of a text message to an employer in an adjacent village to check for work availability could be as little as one-tenth the cost of traveling to that village by public transport. Other consumers indicated a desire to be able to seek medical advice or call a doctor.

One of the major barriers for consumers to use mobile telephony had been the high-cost of mobile handsets. Few consumers in the D and E segments had bank accounts or an income high enough to be considered for a subsidized mobile device, so handset acquisition had been a significant barrier to usage. But since 2001, a major development in the Philippines market had been growth of used handset imports, with thousands of devices being imported from more developed markets. Smart's research revealed that second hand handsets were becoming available at US\$35 to US\$40, drastically decreasing barriers to ownership.

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<sup>3</sup> Lynn Sharp Paine & Robert J. Crawford (1998), The Haier Group A, Harvard Business School Case 398101

In the presence of strong consumer demand and low-cost handsets, Smart recognized that one of the major 'acceptability' barrier to overcome was the reluctance of Sari-Sari stores to stock pre-paid cards due to the relatively high inventory costs and security concerns. These issues were largely dealt with by Smart's introduction of over the air recharge technology and sachet-based pricing. Furthermore, Smart worked to ensure that the start-up costs associated with becoming a retailer were minimal. A prospective merchant needed a bank account, a GSM handset, a retailer starter pack costing PHP100 (US\$1.80), and an initial load balance of just PHP 300 (US\$5.37). With such low capital requirements several hundred thousand retailers were attracted as Smart partners in a few months, allowing the company to build an extensive retail footprint. In turn, these retailers reached a broader market area since sales could take place electronically, eliminating any need for consumers to travel to a retailer.

The user-friendly SMS distribution interface could be sold in a personal fashion complementary to sari-sari business practices. In some cases merchants extended their existing on-credit purchasing model already used for staples and sachets to Smart Load. End retailers received a 15% mark-up on sales, and many indicated that they could make as much or more revenue selling mobile phone minutes as they could from other consumer goods sales. According to Smart, some retailers earned up to PHP 1000 (US\$18.00) per day in re-Load sales, and the company's electronic distribution network spurred thousands of entrepreneurs to become resellers. Smart estimated that, of the more than 500,000 retailers at end 2004, approximately 90% of which were micro businesses.

In other cases, it is the acceptability of a product or service by low-income customers that is the key issue. Consider Indian women and their hair. In a country in which many poor communities have cultural taboos related to displays of luxury, hair grooming is often a woman's only indulgence. Women rarely leave home with a hair out of place, and they are willing to explore opportunities for caring for their tresses. But there is also an ingrained belief that cheaper shampoos are too harsh, with many low-income women preferring to use a single soap for both hair and body. Rather than try to fight this widely held perception through marketing efforts to increase the acceptability of low-cost shampoo, Hindustan Lever decided to create a cheap general purpose soap with special ingredients for healthy hair. The highly successful new soap was called Breeze 2-in-1, and distribution was targeted at smaller towns and rural areas.

Also in India, homegrown FMCG company CavinKare's successful entry into the fairness cream segment with its brand 'Fairever' was based on the first-hand insight of people in rural India drinking saffron mixed with milk for a fairer complexion. Based on this, the company created a saffron-and-milk formulation face cream in low-cost

sachets – just INR 5 (US\$ 0.11) for the smallest 9-gram pack. By end 2004, just 24 months after launch, the company had achieved an 18.5 per cent market share among fairness creams<sup>4</sup>.

## Awareness

With many BOP customers largely inaccessible to conventional advertising media — for example in India only 41 per cent of poor rural households have access to TV — building awareness is another challenge for companies wishing to serve low-income consumers in the developing world. To overcome these constraints, Smart invested heavily in billboards along roads, in urban areas and in rural communities, and also developed point of sales marketing materials tailored specifically for Sari-Sari stores. The company also developed advertisements suitable for attachment to Jeepneys (the most pervasive form of public transport in the Philippines) and three-wheeler taxis.

Smart also worked closely to train its seven largest national dealers, who in turn trained sub-dealers and others in the distribution channel such as Sari-Sari storeowners, students and housewives who could also become resellers. A key element of this process was winning support for the system from these seven dealers through a series of workshops. Smart agents also visited colleges and universities to promote Smart Load, hosting seminars on how to enroll as a Smart retailer and typical commission and mark-up structures. In return for universities allowing agents on to their campuses, Smart in return provided sponsorship of school activities and events. Similar seminars were held in low-income suburbs of urban areas, rural communities and villages to enroll Smart retailers. Smart admits that the most powerful tool for building awareness of Smart Load came from these micro-entrepreneurs who marketed over the air reloads directly to friends, family and members of their local communities.

Hindustan Lever has also tailored its marketing activities to build brand awareness. The company makes widespread use of street performances -- magicians, singers, dancers and actors – to promote products such as soap and toothpaste. Lever and Ogilvy Outreach, a marketing arm of Ogilvy & Mather, recruit local performers in areas that the company wants to target. Scripts are changed for different dialects, education levels, and religions. Following a series of such performances in northeastern India, HLL saw the awareness of Breeze, its low-cost 2-in-1 soap, increase from 22% to 30%. Similarly, a similar program to promote Rin Shakti, a

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<sup>4</sup> For more information on CavinKare's innovative product developments for BOP markets in India see 'Does Market research help increase sales', [www.CavinKare.com](http://www.CavinKare.com)

moderately priced detergent bar and powder brand, saw awareness increase from 28% to 36% over a six month period.<sup>5</sup>

### Concluding remarks

Up until now, business managers have lacked a comprehensive framework for profitably addressing BOP consumers in developing countries. But as we have shown, by leveraging the 4As - availability, affordability, acceptability and awareness - companies can achieve growth and profit, two elusive goals in many developed markets. The strong financial performance of Hindustan Lever is well documented, and the Haier Group is now among the top five appliance makers in the world with self-reported 2004 revenues of more than US\$10 billion. And look to Smart Communications Inc. - in early 2005 Philippine Long Distance Telephone Company (PLDT), Smart's parent organization, revealed a net profit of US\$ 512 million for the full year 2004, up from US\$ 38 million the previous year. The record results beat market expectations, thanks in the main to explosive growth in revenues coming from Smart's new customers in the D & E segments, and PLDT had the largest market capitalization among Philippine listed companies. Mobile penetration reached 30 percent at the end of 2004, is expected to reach 50 percent by end 2005, and some industry observers now predict penetration rates of 70 percent or more by 2008. But beyond financial success for companies such as Haier, Hindustan Lever and Smart, delivering the 4As has also enabled companies to provide significant social good. Low income consumers have benefited from access to life-enhancing products and services uniquely tailored to meet their needs, and often at a lower cost than in the past.

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<sup>5</sup> For a good discussion of Hindustan Lever's use of street performances see Balu, *ibid.* For more detailed information in the company's strategy in the detergent market see M. Gorman, P. Werhane and J. Mead (2004), 'Hindustan Lever Limited and Project Sting, Darden Business Publishing Case Study. For a wider discussion of the FMCG industry in India, see A. Neela Radhika (2004), 'Changing trends in retailing and FMCG industry in India', ICFAI Centre for Management research Case Study.

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## Exhibit A – Text box 'A Smart Idea'

**A Smart idea** In early 2002 most industry analysts believed that the Philippines market for mobile telecommunications services was headed towards saturation. The majority of the population was unable to afford mobile services, and it was estimated that in a best case scenario only 30% of the population would be using a mobile phone by 2008. The CEO of Smart Communications Inc., Napoleon L. Nazareno questioned if it might be profitable to serve the massive but still untapped pool of low-income consumers, and spurred his company to develop and implement a highly innovative strategy to reach low-income customers. At the heart of this approach was Smart Load, a mobile proposition involving sachet-based pricing (similar to that seen in the FMCG world), a revolutionary over-the-air (OTA) mobile reloading technology, and a decentralized sales and marketing approach. Through the implementation of this strategy, mobile penetration in the Philippines hit 30% at year-end 2004, and industry analysts now estimate that penetration could reach upwards of 70% by 2008.

## Exhibit B –

## Defining the 4As

**Availability** – The extent to which customers are able to readily acquire and use a product or service. Distribution channels in BOP markets can be fragmented or non-existent and the task of simply getting products to people can be a major hurdle to overcome. Companies need to explore alternative methods of delivering their products and services to even the most isolated BOP communities.

**Affordability** – The degree to which a firm's goods or services are affordable to BOP consumers. Many low-income consumers in developing countries survive on daily wages, meaning that cash-flow can be a significant problem. Companies need to be able to deliver offerings at a price point that enables consumption by even the poorest consumers.

**Acceptability** – The extent to which consumers and others in the value chain are willing to consume, distribute or sell a product or service. In BOP markets, there is often a need to offer products and services that are adapted to the unique needs of both customers and distributors. Companies might need to respond to specific national or regional cultural or socioeconomic aspects, or to address the unique requirements of local business practices.

**Awareness** – The degree to which customers are aware of a product or service. With many BOP customers largely inaccessible to conventional advertising media, building awareness can be a significant challenge for

companies wishing to serve low-income consumers in the developing world. To overcome these constraints companies must explore alternative communication channels.

EXHIBIT C - The 4As Framework

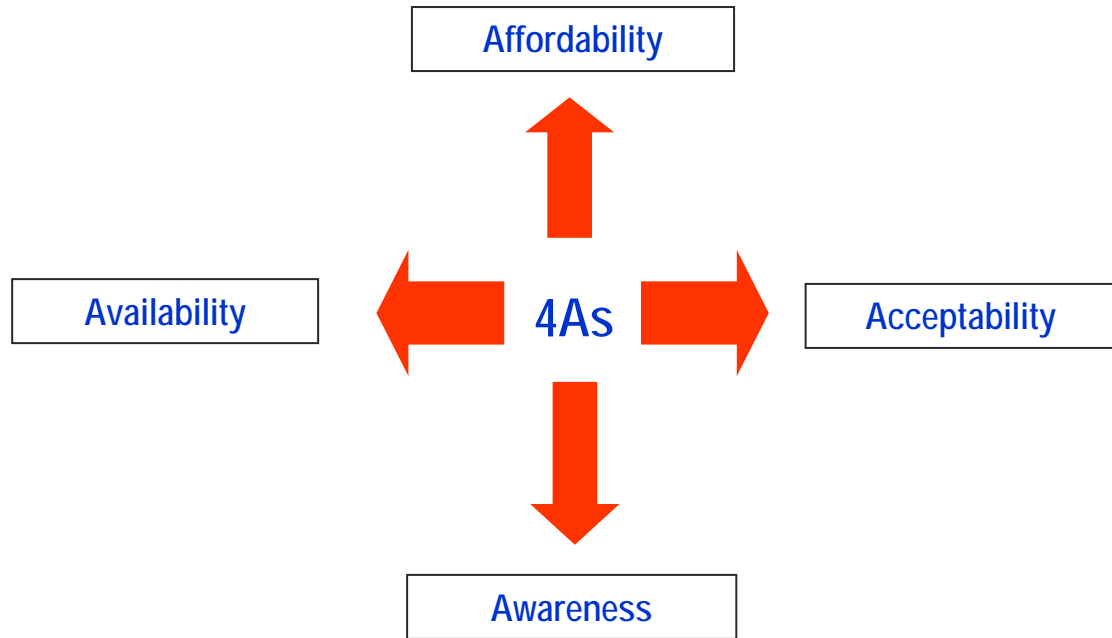


Exhibit D - The 4As Framework & Issues in Implementation

	Affordability	Availability	Acceptability	Awareness
A	X			
B		X		
C			X	
D				X

A. Failure to create affordability: Product rejected as it is too expensive or does not fit consumer cash flows. Remedy: Consider sachets, community purchase schemes, financing or alternative product configurations.

B. Failure to deliver availability: Product rejected as it is scarce or does not fit with local distribution channel requirements. Remedy: Consider alternative distribution technologies or approaches. Identify and address channel inefficiencies or rejection points.

C. Failure of product acceptability: Product rejected as it does not fit with local tastes or cultural Characteristics, or does not fit with existing business practices. Remedy: Adapt product to local tastes Or business models, or educate consumers or channel partners as to product benefits.

D. Failure to promote awareness: Product rejected due to lack of awareness. Remedy: Consider alternative marketing techniques or direct sales force.

