Value for Money and for Many

India has demonstrated that impossible challenges can be successfully converted into possible solutions.

By RA MASHELKAR *and* SUSHIL BORDE

Industrial enterprises continuously strive to create products and services which provide higher performance and higher functionality through lower input costs, thus providing "value for money."

While "value for money" is the professed strategy, "value for many" is not something that most industrial enterprises strive for. Value for many has to mean value for many more, and not just "for a few more." If value for many means value for those four billion people in the world whose income levels are less than $2 a day, then there are special innovation challenges. Then we cannot be just satisfied with low costs, we must strive for ultra low costs. Then we cannot just seek affordability, but we must go for extreme affordability. This also means our not stopping at "incremental innovation" but striving for "disruptive innovation."

Can we really get value for money and at the same time, value for many? Can we make a laptop costing $2,000 available at $200? Can we make a Hepatitis-B vaccine costing $20 per dose available at 40 cents per dose? Can we make a psoriasis treatment costing $20,000 available at $100? Can we make an artificial foot costing $10,000 made available at $30? Or a high quality cataract eye surgery made available not at $3,000 but for $30? Can we make a comfortable, safe and fuel efficient car available at $2,000 instead of $20,000?

All these look impossible. But all the above challenges have been met, and all of them in India! *(See Low Cost Innovations, p. 33)*.

Let us begin by illustrating the last example in the above list, namely that of a $2,000 car. The launch of the people's car, the Nano, the cheapest car in the world in 2008, which is on the Indian roads now is an inspiring story. The car was created by an inspiring leader, Ratan Tata and therefore we will refer to it as Tata Nano.

Tata Nano is a true example of value for money as well as value for many. Tata Nano delivers comfort, safety, aesthetics, and fuel efficiency at a very affordable price, so affordable that millions of lower middle class customers in India can buy it. Tata Nano has a rear mounted 624 cc, 35 bhp engine, a maximum speed of 125 kilometers per hour with a fuel consumption of 23 km per liter while meeting the Euro IV emission standards.

The idea of Tata Nano was conceptualized by Ratan Tata. He gave a challenge of designing and developing a very low cost four wheeler to young engineers in Tata Motors. The tight price-performance envelope was such that the price of $2,000 was emphasized with all departments, design and development to production and from logistics to marketing.

The Tata Nano team synthesized by drawing ideas from

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LOW COST INNOVATIONS

Indian examples of disruptive innovation at ultra low cost to achieve value for many.

Products/ Services	From	To
Psoriasis treatment (New Millennium Indian Technology Leadership Initiative)	$20000	$100
Artificial foot (Jaipur foot)	$12000	$28
Cataract surgery (Aravind Eye Care)	$3000	$30
Laptop (Mobilis)	$2000	$200
Hepatitis B vaccine (Shantha Biotech)	$18	$0.4

different sources from helicopters to two wheelers. There was an innovative partnership with component manufacturers as well as an innovative business model for automobile dealerships.

It is interesting to note that when adjusted to the value of $2,007, Model T (Ford Motors) was made for $19,700 in 1908. Exactly 100 years later, Tata Nano was made for $2,000, providing a brilliant example of achieving value for money as well as value for many!

Similarly, the telecom industry revolution in India, specifically in wireless communication, is another such example. This industry added around 16 million subscribers last month. The cost of a minute of a cell phone time is less than one cent, the lowest in the world. A mobile handset is available for as little as $20. The cost of one SMS text message has dropped down to as little as two by thousandth of a dollar!

This brilliant journey of delivering value for money as well as value for many began with a visionary leader Dhirubhai Ambani, founder chairman of Reliance, who had an audacious dream of bringing the benefits of telephony and communication to the common man in India. He challenged his team to innovate and bring down the cost of a phone call to that of a post card in India.

To achieve this dream of value for many, a series of inno-

vations emerged. Most notable was the birth of the "refining model of telecom." Reliance drew inspiration from their experience in building a world class refinery in India. The refinery integrated complex processes in isolation from the number of customers using the end product. So, rather than following the traditional model of purchasing telecom equipment on a cost per subscriber basis, Reliance invented its own model. Rather than paying a massive upfront cost per subscriber fee to vendors, Reliance paid them for the volume of traffic that flowed through the equipment.

Reliance also pioneered some groundbreaking marketing strategies including free text messages, free phones, free incoming calls, and more. The results were phenomenal. With Reliance' entry, outgoing call rates were dropped exponentially thus creating a revolution in the Indian telecom industry. Reliance's deal with equipment suppliers set the benchmark for the lowest equipment prices in the world. And this initial movement of providing value for money plummeted the prices and costs to the ultra-low levels mentioned earlier.

COST EFFECTIVE INNOVATION

A brilliant example of value for money and for many that stands out is the Aravind Eye Care System (AECS). Started on a modest footing by G. Venkataswamy, AECS now treats around 300,000 cataract patients in a year. Venkataswamy strongly believed that blindness is a curse that deprives humans of their independence, livelihood, and dignity. Venkataswamy's mission was to "eradicate needless blindness."

He started AECS with no money and mortgaged his house for a bank loan. The inspiration apparently came from McDonalds - delivery of same quality of products in diverse regions through highly trained staff. The model that AECS employs uses unique work flow and fee systems to achieve the objectives of providing value for money and for many. The innovative model allows AECS to treat poor patients at the lowest costs without compromising on high quality. The company is self-sustaining and profitable even after treating 60 percent of the patients for free *(see Cost Effective Health Care)*.

Let us compare the relative costs of such surgeries around the world. The cost of delivering eye care in UK is around 100 times more than that charged by Aravind Eye Care. The surgeon productivity of AECS is significantly higher than some countries such as Indonesia, Thailand, and Bangladesh. The cost of a typical cataract surgery in the U.S. is around $3,000. AECS has managed to bring down the cost between $30 and $300.

AECS has a dual health care delivery system. One, where patients are brought to the hospital through a highly optimized logistical system and the other where the health care goes to the patients. This is done by organizing outreach camps and conducting surgeries for thousands of patients. Ownership is created in the community and they are integrated as partners during these camps. The high cost of imported ophthalmic supplies is countered by setting up AECS' own manufacturing unit. The costs of lenses were reduced from $100 to $2, thus making cataract surgery highly affordable. AECS is now spreading its "value for money and for many model" in the rest of the developing nations by partnering with hundreds of hospitals.

This is an example from the health delivery system. However, such examples abound in the case of design and development of drugs and therapeutics also, where ultra low cost alternatives have been created by using completely novel and alternative paths.

THINK BIG

The process for getting value for money and for many can be institutionalized around the world just as it has been done in India. The challenge and the opportunity is to get the best minds in the world to direct their efforts towards the "value for many" approach.

A good start is through global foundations such as Bill and Melinda Gates Foundation (BMGF) which encourages unconventional thinking to solve the problems of the poor. For instance, BMGF has partly funded the Whitesides Group at Harvard which has developed ultra low cost paper-based

COST EFFECTIVE HEALTH CARE

The table illustrates the high quality of healthcare that AECS has managed to offer to its patients.

Event	AECS (%)	Royal College of Ophthalmologists UK (%)
Capsule rupture	2	4.4
Iris trauma	0.3	0.7
Iris prolapse	0.01	0.07
Anterior chamber collapse	0.3	0.5
Loss of nuclear fragment	0.2	0.3
Retained lens material	0.87	1.1

TARGET

The value for money and for many approach requires migration from traditional approaches.

From	To
Low cost	Ultra low cost
Affordability	Extreme affordability
Incremental innovation	Disruptive innovation
Exclusive innovation	Inclusive innovation

diagnostics that can be used in the most rural parts of the world. These products do not require electronics, and hence power, and can withstand the harsh, dusty, humid, and hot conditions very well. This opens up a new world for the poor as the main problem many a times is access to diagnostics limited by unavailability of expertise, equipment, and distance to be traveled.

Disposable "lab on chip" devices promise rapid diagnostics at diverse and remote locations. This helps effective disease management, for example, management of HIV, where delayed diagnostics becomes detrimental to the treatment of the patient. Innovative concepts such as "crowdsourcing" allow a large group of experts to take on challenges and provide solutions to pressing problems. This also brings down the costs as most of these people are outside the organization who respond to an open call. Innovative developing countries such as India, China, and Brazil are gearing up their health innovation programs. Sustained and clever utilization of their health innovation networks will help in achieving health for many.

One such network is Council of Scientific and Industrial Research's (CSIR), Open Source Drug Discovery (OSDD) consortium. The OSDD collaboratively aggregates the biological and genetic information available to scientists for discovery of drugs. The backbone is a Web-based platform which allows scientists and students from all over the world to share research and knowledge and collaborate on drug discovery for diseases of the poor such as tuberculosis, malaria, and others. The current OSDD program of CSIR now has 2,566 members from 70 countries collaborating to help each other address the needs of neglected diseases, in this case that of tuberculosis.

The above examples have some common threads: First, the "value for many" vision in most cases seems impossible with very ambitious goals and targets. Second, the leaders who practice "value for many" together with "value for money" put people first before profits. A certain unmet need of a human being is identified and then the business models, technology, talent, systems, and processes are built around this. Third, the process to achieve value for many has to be fundamentally innovative and at most times disruptive. Standard solutions do not go far.

The value for money and for many approach also requires migration from traditional approaches to achieve unconventional results *(see Target)*. The value for money and for many approach is fundamentally different from other approaches such as frugal engineering or reverse innovation. Frugal engineering is based on optimum and minimum utilization of resources to manufacture and deliver a product or a service. This is done through a resource constrained approach. Value for money and value for many approach focuses on delivering products and services to the resource constrained people and builds a price performance envelope to achieve the goals.

Similarly, reverse innovation as defined by Professor Govindrajan, who was a coauthor of a paper on reverse innovation with Jeffrey Immelt, explains reverse innovation as any innovation that is likely to be adopted first in the developing world and then move on to the developed world, exactly reverse of the current practice.

In this approach the emphasis is not necessarily on serving the "other four billion" as it is in the value for money and for many approach. The migration of products from this approach to the developed world is incidental as the focus is on fundamentally impacting the quality of life and experience of under-served customers.

The value for money and for many approach, however, derives its inspiration from "Gandhian Engineering" enunciated by one of the authors at a lecture on April 28, 2008 at the Australian Academy of Technological Sciences and Engineering in Canberra. These initial thoughts were subsequently consolidated in a firm philosophy and a strategy. Subsequently, the Gandhian Engineering strategy has evolved into a more refined and broad framework of "more from less for more" encapsulating, among others, the strategies that will be developed and deployed by firms producing products and delivering services in the future.

Going forward, as the world takes on newer and bigger challenges of dealing with the resetting of the world economic order, protecting the planet for future generations, and creating an equitable global society, the value for money and for many approach seems to provide universal solutions.

India has demonstrated that such impossible challenges can be successfully converted into possible solutions and has paved the way for the rest of the world to follow. TR

RA MASHELKAR IS PRESIDENT OF GLOBAL RESEARCH ALLIANCE AND CHAIRMAN OF NATIONAL INNOVATION FOUNDATION. SUSHIL BORDE IS INNOVATION ADVISOR AT RELIANCE INNOVATION LEADERSHIP CENTRE, RELIANCE INDUSTRIES LIMITED.