



**Making a  
difference.....leveraging  
Innovation, Technology,  
Communication**

**Serving 1 Emergency every 4 seconds and Saving 1 Life every 5 minutes**



- 75,000 emergencies occur per day
  - 80% are at the bottom of the pyramid
  - 80% deaths occur in hospitals in the first hour
- 4 M deaths p.a. (Cardiac, Road Accidents, Maternal, Suicidal attempts, Neonatal / Infant / Pediatric, Diabetic related, etc) due to absence of 4As :
  - **A**ccess to a universal toll-free number
  - **A**vailability of Life Saving Ambulance to reach quickly nearest and appropriate health facility
  - **A**ffectionate Care by trained paramedics (Compassion, Ability, Resourcefulness & Energy)
  - **A**ffordability by every citizen independent of income, religion and community
- Hence, GVK EMRI was born in April 2005

# Vision of GVK EMRI

## a Non Profit Organisation

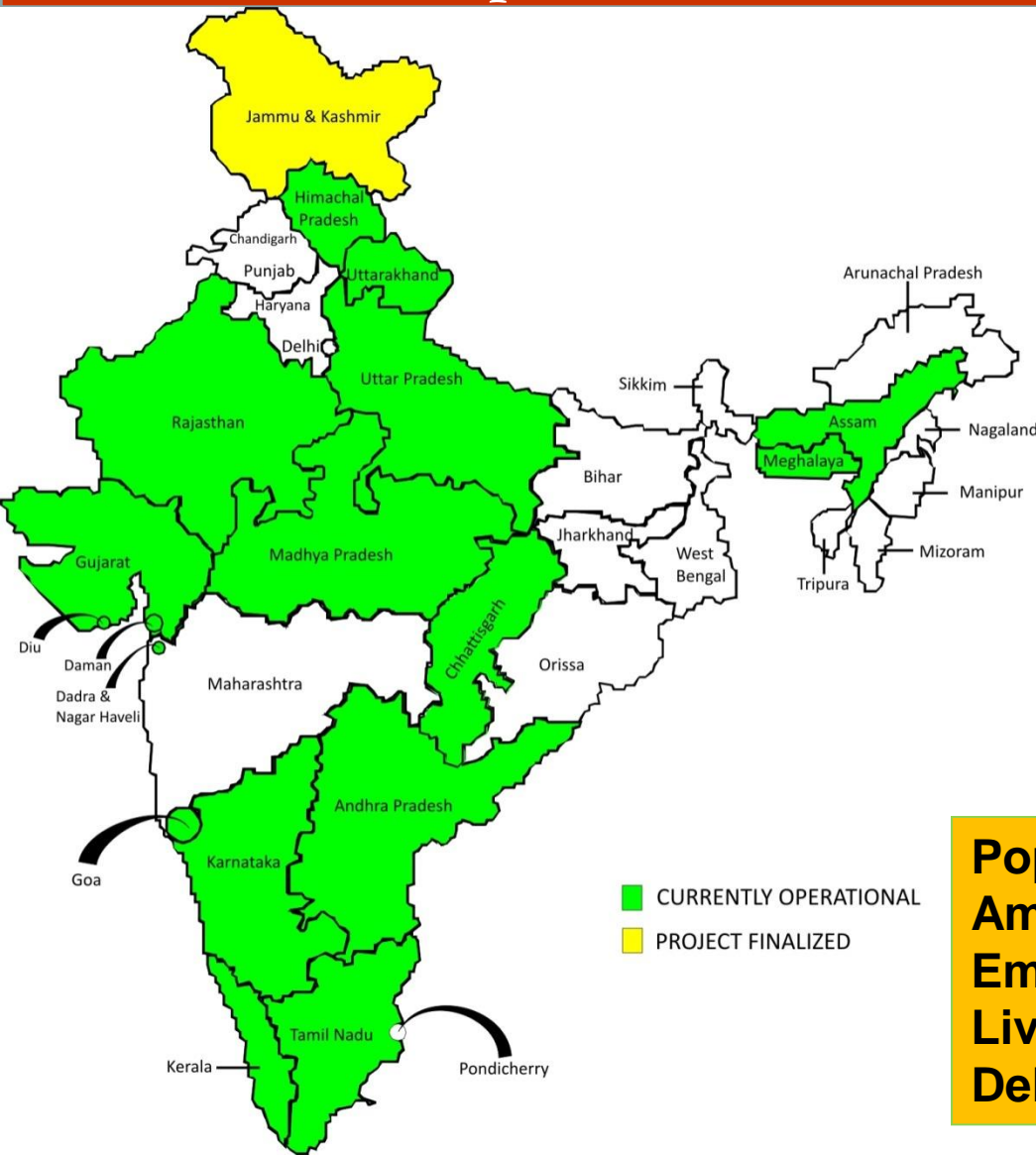
- To respond to 30 million emergencies and save 1 million lives annually
- To deliver services at global standards through Leadership, Innovation, Technology and Research & Training



# What is Unique in this Innovation ?

- Integrated Emergency Response Services for Medical, Police and Fire emergencies with single universal toll-free number '108'
- Free services (no cost to citizen)
- PPP framework
- Private Partner brings leadership, innovation, execution and technological capabilities
- Conducting Research and building capability in Emergency Medicine and Management
- Leveraging from global best including NENA, USA, Stanford University USA, CMU etc.

# Launched on 15<sup>th</sup> Aug, '05 in Hyderabad and expanded to 16 States and Union Territories



<b>Population covered:</b>	<b>750 M</b>
<b>Ambulances:</b>	<b>6,668</b>
<b>Emergencies attended:</b>	<b>25 M</b>
<b>Lives saved</b>	<b>890 T</b>
<b>Deliveries in ambys</b>	<b>300 T</b>

# Innovative Design Principals

18 Ensure long term sustainability via partnerships and strong leadership  
Establish the EMS system as a Public-Private Partnership

## Sense

- 7 Single number for all emergencies
- 8 Co-locate all call handlers into single location
- 9 Simplify processes to deliver complete service (i.e. from receipt to dispatch) in a single call
- 10 Prioritize incoming calls based upon severity

## Reach

- 11 Establish standard paramedic cadre
- 12 Standardize Ambulance variants
- 13 Deploy ambulances dynamically to optimize fleet usage
- 14 Tailor ambulance design to local needs and economics
- 15 Talent to run an EMS is often scarce, so invest in training capabilities

## Care

- 16 Establish networks and relationships with downstream providers early
- 17 Employ physicians into your call center to make qualified medical care available on-demand at economic prices

### System design and structure

- 1 Integrate Sense Reach and Care
- 2 Leverage coverage to create economies of scale
- 3 Set service levels pragmatically, after understanding the business economics
- 4 Replicate using a regional approach
- 5 Consider lower cost technological solutions before investing in highly sophisticated, but unproven technologies
- 6 Invest in research to drive continuous improvement

# Building Blocks of GVK EMRI's Innovation

**CALL 108**  
**EMERGENCY**  
•MEDICAL•POLICE•FIRE

Three digit toll-free No.  
Accessible from Land lines  
and Mobile phones



Modern, spacious and open ERC



GIS / GPS to locate victim / ambulance and hospital



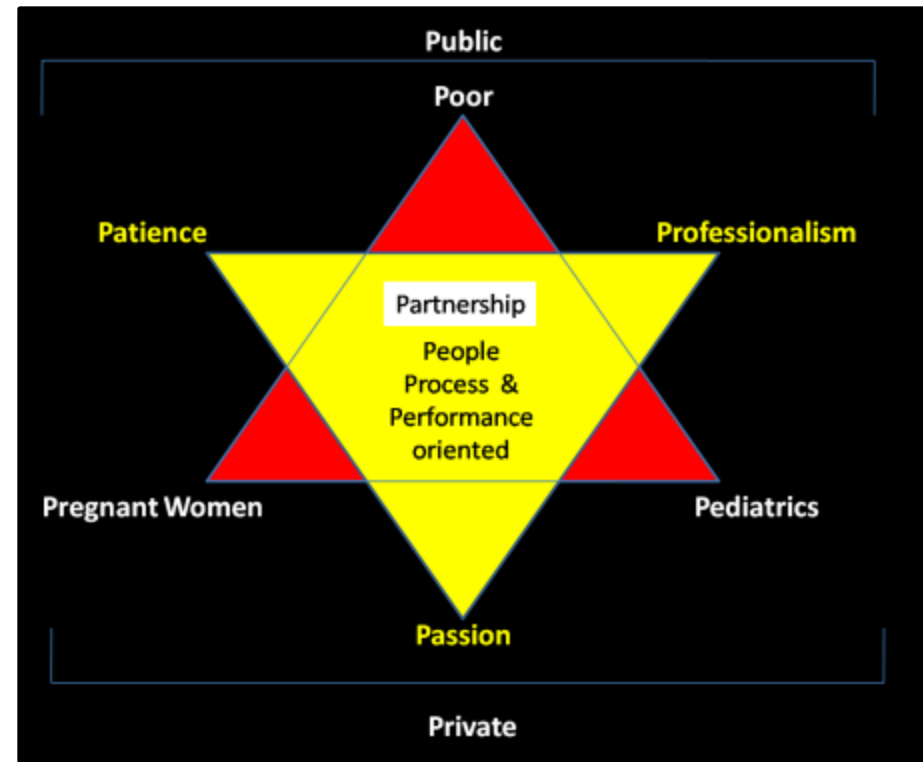
Cost effective ambulances to provide quality care for Indian emergencies with facilities for rescuing and balancing patient care with public safety and patients relatives comfort



Trained personnel for providing

# Successfully Implemented by GVK EMRI in PPP Framework

- Political will, Public Servants' commitment and Public Support
- Direct Capital and Operational cost by Government (Public)
- GVK funds Leadership, Innovation (Infrastructure, Process), Collaborations, Research and Training, Knowledge transfer and Quality assurance
- Tech Mahindra provides free IT solutions as technology partner
- GVK EMRI manages and leverages government resources for better outcomes to serve poor





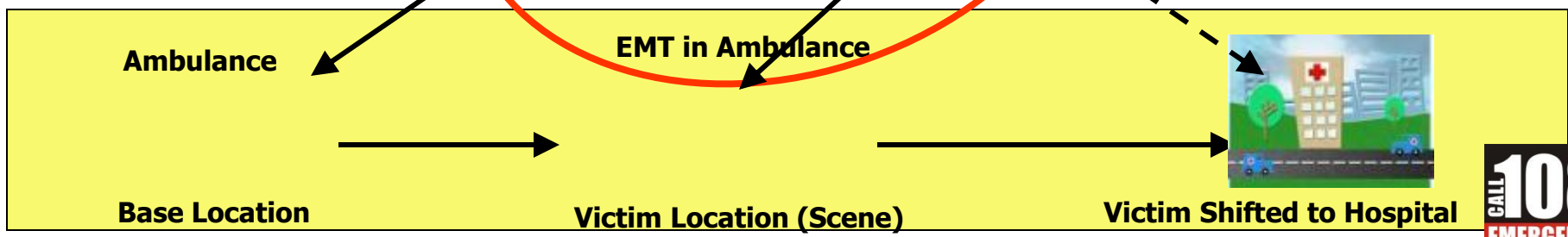
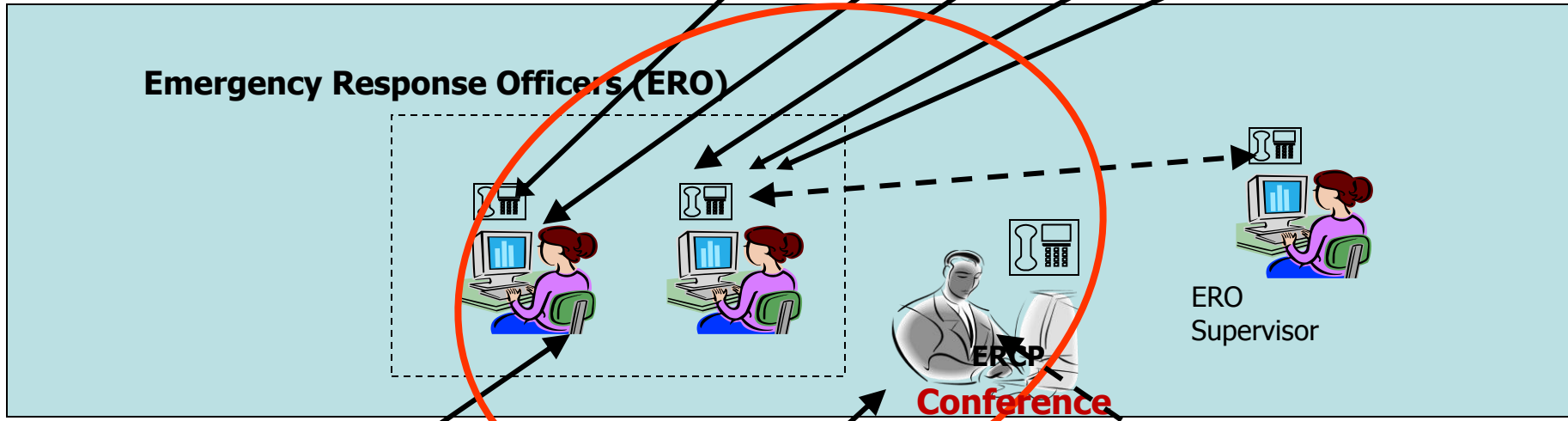
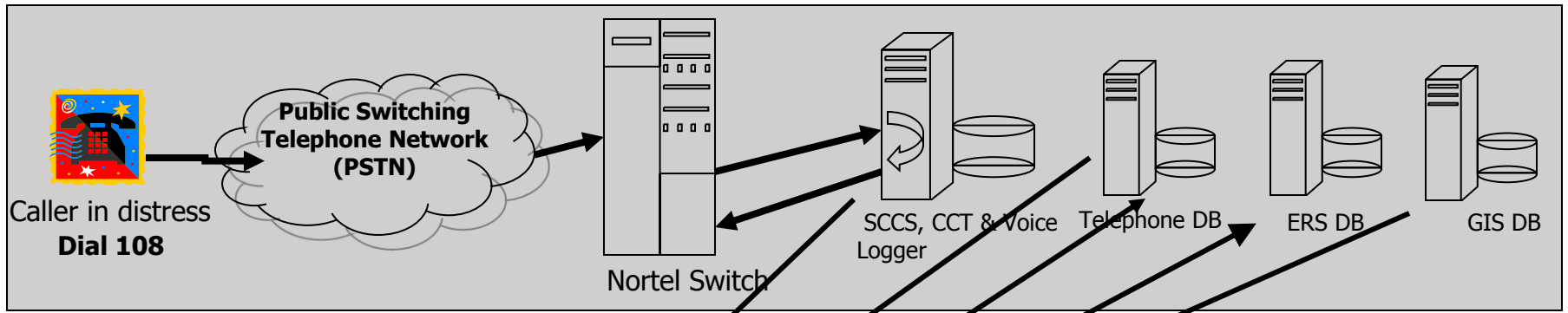
# Innovative Process



- Developed detailed process understanding and well defined responsibilities through out the organization
- Maintained all information related to emergency in Patient Care Records (PCRs)
- Patient information is shared with the hospital on arrival
- 48 hour follow up with the patients admitted to hospital



COMPUTER SERVER ROOM



**CCT:** Communication Control Toolkit; **SCCS:** Symposium Call Centre Server; **ERCP:** Emergency Response Center Physician; **EMT:** Emergency Medical Technician



# Innovative Pre-Hospital Care

- Emergency Medical Technician (EMT) in the ambulance is trained not only to provide pre-hospital care but also to handle emergency situations
- EMT gets support over phone from qualified medical practitioner called ERCP (Emergency Response Centre Physician) located at the ERC
- ERCPs are in the ERC round the clock to provide support to EMT and to people at emergency scene until ambulance arrives



# COLLABORATION FOR TRANSFER OF KNOWLEDGE TECHNOLOGY KNOW-HOW, BEST PRACTICES, RESEARCH & TRAINING



Carnegie Mellon University,  
USA



City of Austin  
USA



National Emergency  
Number Authority

**Tech  
Mahindra**



- ❖ 150 thousand participants trained
- ❖ Indian Emergency Journal published six monthly
- ❖ Online Medical Research (OLMR) for identified emergencies

# Impact ..

## Size

- One Center for population upto 200 M against one for every 0.05 M population in USA
- 750 M population covered in 16 States and Union Territories (increased reach of health care in rural , hilly and tribal areas)
- Trained 1,41,881 Medical professionals like EMTs, Doctors, Nurses etc.
- 22,000+ emergencies handled per day
- 6668 Ambulances
- 32,000 GVK EMRI Associates

## Type of Emergencies and Lives saved

- Pregnancy related - 35%, Vehicular Trauma – 12%, Acute Abdomen – 13% Cardiac – 4%, Respiratory – 4%, Suicidal – 4%, Animal Bites 2%
- 630+ lives were saved per day (**884 thousand**) and 22000+ victims per day received timely, high-quality pre-hospital care
- 321 deliveries assisted by EMTs everyday (**298 thousand**)

## Speed

- India's most populous state Uttar Pradesh with a population of over 200 million entirely covered by GVK EMRI in less than 5 months
- 96% calls taken in first 2 rings
- ~15 minutes (urban) and ~ 25 minutes(rural) Ambulances reached

## Qualitative Outcomes

- Angel of Mercy – 108 Ambulance
- Successful PPP that has built more trust in the health system as a whole
- Well documented systems, impressive EMT training, high order management competence
- A historic landmark in health care delivery system
- Increased institutional deliveries and reduced maternal mortalities by 20 – 25%
- A model for replication across the Country any state

# Impact - Doing More with Less for More



# Reaching the unreachable



# Improving Access





## Tanzania PS - Health Dr. Mohammed Saleh Jiddawi



# AWARD WINNING – GVK EMRI

1. NASSCOM-CNBC Best IT User Award 2008
2. CSI Nihilent e-Governance Special Jury Award
3. The Computer World 2008 finalist in Health category
4. Best NGO Award – ICONGO, 2010
5. GVK EMRI – 108 Service wins 7<sup>th</sup> eINDIA award for enabling IT in Saving Lives, 2011
6. NASSCOM 2012 – Multi stakeholder partnership
7. Marico - Innovation for India Awards 2012 for public service– 30.3.2012



8. PMI Award - 13<sup>th</sup> April 2012
9. GVK EMRI – 108 Service wins GLOBAL CSR EXCELLENCE & LEADERSHIP AWARD 2013 in Best use of CSR Practices in health Care.
10. GVK EMRI – 108 Services wins Skoch Award in Health category – 12<sup>th</sup> Nov 2013
11. GVK EMRI wins 4<sup>th</sup> E North East Award 2013 in E-Health category on 13<sup>th</sup> Dec 2013

# Innovative....a Miracle??....it is commitment to serve the society!

— Nikhil Mehta —

**N**eed CEO each Ram Charan and Maro chairman of the board Marwa discuss innovation with the winners of the Marwa Innovative Foundation awards. Aditya Ghosh, President, Institute, Sobash Satyarthi, CEO of Emergency Management Research Institute, L. K. Karmar, Managing Trustee, Central Foundation.

More creative ideas aren't enough — how do you create value from them?  
Ram: Innovation is about converting an idea into reality. In the corporate context, innovation is compelling because it can change the game and create new markets. Today, it's not hard to source ideas from all over the world. But you also need results in terms of increased revenues and margins. So taking those ideas and converting them to a leadership play. Leaders have to figure out how to put innovation at the centre of their business. You can have labour or currency arbitrage, but if you're an engineer, they need to have innovation at their core. Their innovation is credible, measurable and we're not even looking for the idea to be repeatable, scalable or profitable.

## INDIAN INNOVATION LEAGUE

Do creative ideas alone generate value? CD brings together Ram Charan, Harsh Marwala and India's innovation heroes to crack the code.



Ram Charan, CEO, CEIR; Harsh Marwala, Chairman, MARCO; Aditya Ghosh, President, IIMB; Sobash Satyarthi, CEO, EMRI; Nikhil Mehta, Managing Trustee, Central Foundation.

Mr Marwala, Marwa being speaking of innovation as early as 1960s. How has incubating a culture of innovation in your organisation helped your business?  
Harsh: We began our efforts in 2008. In the mid-2000s, we started working on creating a consumer product into a brand product because of our innovation. With Parag, we did a series of innovative like conversion in plastic and mid-month packs, sachets, jellified powder and easy-to-pour cups, etc. But for this, we wouldn't have gained market share. From fresh curries to becoming market leaders... all of them. Growth comes to our brands as people and innovation.

The way India has engaged the market is a case study. How did you manage to be relevant and stay profitable?  
Harsh: For us, it's not only the sector itself, but the physical infrastructure backbone, which is around 15 years ago complicated the problem. Government, the standard of living, the consumer propensity, low cost of capital — debt or cancelled flights, dry pipelines — cost a vast amount about a billion dollar of loss — there was a series of small innovations.



Ram: When you have many small innovations, it builds the traditional needs of the corporation and becomes a routine. If your leadership is engaged in searching for and creating innovation on a consistent, dedicated basis, you're likely to get the power of compound interest, so you don't have to wait for that other halcyon day.

Aditya: If you can create an army of leaders inside India who are chasing their grand dreams and if we're each one who only does every day what others do, we will be successful. Ideas come from the ground, not the boardroom.

Innovations can have dramatic results even in social enterprises. CEIR EMRI is an Indian PPP model that has innovated to address dramatic results.  
Sobash: In India, India has a large number of accident deaths and deaths occur because victims do not get medical assistance when the accident happens. When EMRI was started, we wanted to change that. We focused on four AAs — Access through a toll-free number, Availability of life-saving ambulances, Affordability and timeliness of services, and Accountability. Around 30% of people who move with accidents are from the bottom of the pyramid. So we kept this service free. We also started similar models around the world and came out with a unique

innovated PPP model leveraging public resources for better outcomes. We started with 1 city and 2 ambulances, perfect, and, and expanded to the whole state of Andhra Pradesh. Six years later, we cover 100 million people daily.

Is innovation expensive?  
Ram: It is a capital intensive business. It needs an ecosystem to create value. The second part is the conversion of that idea into a game where you seek it and execute it. The third part is actual execution. The middle part needs a very small amount of investment, the larger an amount you spend on the first part, that is a business decision, not an innovation decision. So you have to create a certain amount of money to get your people, focus on it, find more and find them.

Mr Marwala, did you have a separate team managing for separate products in your portfolio?  
Harsh: When you're already a big idea that takes complementary effort or decide to enter a new business, we have separate teams. But when it's an existing product portfolio like Parag, it's very much the responsibility of the current brand team. It's a collaborative effort, you need boundary issues, openness and dialogue within the organisation. Also, people should be aligned to that. So we start with a product or experience with a smaller market. When we launched Sulfadiazine, we put a pilot in 100% outlets to test the response. Major research has to be done.

How did you push the innovation agenda at CEIR EMRI?  
Sobash: Figuratively speaking, the role of CEO or managing director is to create a vision and a strategy and to execute it. So for example, when we started the US market, we had a pilot programme in 100% planned. There are 50% of emergency services, as a program, it's not an innovation. We started EMRI to combat delivery in ambulances. We provided a pilot with 100% coverage for this.

Ram: How important is CEO's role in driving innovation?  
Sobash: Innovation is the ultimate driver of competitive advantage. If the CEO accepts that, it has to make it very easy in the company's values, mission and strategy. Everybody talks about this, but you also require measures to be able to execute in

the market, by recognising people and through regular reviews. I can't put an innovation car and have him alone.

Aditya: In our business, 90% of the time, the entrepreneur person a customer pays is a slight amount or customer service agent. Can that person be responsible and accountable and have the power to act like the CEO? We're not there yet, but that is an opportunity for us — making that person an entrepreneur.

Mr Karmar, Central Foundation had a ground-breaking idea of using micro-spinning to help foundation wearers and ultimately connect better with buyers. What was the thought behind the innovation?  
Karmar: We recognised that there is the largest economic activity worldwide and India has been traditionally very strong in this area. But within a short span of 2-3 decades around the time of the Industrial Revolution, the sector fell on its back. We found out that the difficulty is not so much as a local entrepreneur who we know as entrepreneurs. But the industry ecosystem is not designed. So we spent time thinking those people get their perspective. And then we identified technology which could undo this and around the age, recognised the industry in a different way. It's not just about an idea, but a whole culture change. We're making a beginning and have a small number of people who believe in the idea — an army of artists, content creators, etc.

Should we focus on learning or results?  
Ram: Learning from failure and success has to be an everyday daily thing. The success in has to show results. You start on the path, there are no road signs, but you have to go through road humps. When you're not succeeding, fall, rise, start and often. At EMRI, they campaign the learning after every innovation project. In case of Sobash, the important people had delivered him and he led with the idea that the information would be available in non-applicable people.

It is hard to scale a great idea, like what happened at India. Why is that?  
Sobash: We were the youngest kids off the block and we weren't doing a unique business. The success is everything. But the success is the ultimate driver of competitive advantage. If the CEO accepts that, it has to make it very easy in the company's values, mission and strategy. Everybody talks about this, but you also require measures to be able to execute in

currently challenging themselves, to see something, people have done thousands of times. You walk into any gathering and anyone who's over there will tell you how to run a start-up. You have to think of something different. But the success comes from taking to people who are on the front line. How do you consistently draw those thousands of voices from your team? That can be the end of my life.

How quickly or often do you revise plans?  
Sobash: Almost on a real-time basis. We have a dashboard on the basis of which we're increasing when emergency services are expected to happen and how many calls we will receive. Someone else said that he'd rather than fail, because the call is picked up before the first ring ends. We monitor call flow in real time and adjusting and adjusting people to them. During the day, we know there's going to be a spike when the emergency services are going to come from. So we deploy ambulances and doctors to those spike areas.

Question: How difficult is to get buy-in from people at the bottom of the pyramid?  
Karmar: It's not always in every human being to be creative and find better ways to do something. When we present people with an opportunity, they are excited about it and also have some skepticism. Because for them, one failure can have serious consequences. But as we tell them, to start to fail is just as you learned something. We are a culture that

embraces failure. So we have to give them that safety net.

Do you have a system where people on the ground contribute to the innovation process?  
Sobash: It is not just their duty, we try and involve them in that process for solving issues. And that process helps us in creating their commitment and loyalty. We annual to 12000 entrepreneurs every day. Each case is different and each case to be approached totally case specific and companies. So we take ideas from people and publish a case study on the best ones from each district in every month, which is shared with other people, medical experts, etc. That helps motivate them.

How do large companies measure innovation?  
Ram: There are three buckets to success. If something fails in the third area, it has no value to us with innovation. It's the second bucket. But one you're able to measure it, you're taking risk. That gives you the ability to measure them. Some innovations work around, but you gauge how the innovation capability increased, there they go away. And people come up on those teams because it's a builder of capability.



Sunday, April 05, 2009  
Miracle called 108  
Publication: The Pioneer, Edition: Delhi, Supplement: Agenda, Journalist: A Surya Prakash, Page No: 1, Location: Fulsage, Width(cms): 33, Height(cms): 42, Size( cms.cms): 1388



## Miracle called 108

An emergency medical service in Andhra Pradesh, Gujarat, Uttarakhand, Goa and Meghalaya has revolutionised health care in these States. Its success could bring political dividends in this election season, writes A Surya Prakash

The 108 service has revolutionised health care in these States. Its success could bring political dividends in this election season, writes A Surya Prakash. The 108 service is a unique initiative that has emerged as a lifeline for millions of people in India. It is a toll-free number that connects people to a 24-hour emergency medical service. The service is available in Andhra Pradesh, Gujarat, Uttarakhand, Goa and Meghalaya. The 108 service is a unique initiative that has emerged as a lifeline for millions of people in India. It is a toll-free number that connects people to a 24-hour emergency medical service. The service is available in Andhra Pradesh, Gujarat, Uttarakhand, Goa and Meghalaya.



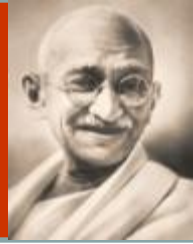
The 108 service, which operates with remarkable speed, would easily qualify as the most efficient public service programme in the country. But thinking to meet a short-term goal, it is India's best kept secret. The 108 service is a unique initiative that has emerged as a lifeline for millions of people in India. It is a toll-free number that connects people to a 24-hour emergency medical service. The service is available in Andhra Pradesh, Gujarat, Uttarakhand, Goa and Meghalaya.

# GVK EMRI *tes* spreading hope & happiness



Recognition for doing something relevant for society

# A Gandhian Innovation that Synthesized Technologies



 **Harvard  
Business  
Review**

[www.hbr.org](http://www.hbr.org)

July-Aug 2010

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*A few Indian pioneers have  
figured out how to do more  
with fewer resources—for  
more people.*

## Innovation's Holy Grail

by C.K. Prahalad and R.A. Mashelkar

“Combined cutting edge technologies (telecom, computing, medical and transportation) to create new capabilities for the first time in the World Scaled rapidly keeping costs low with Public Private Partnership (PPP) Drawn on the knowledge base of specialized institutions overseas and set the standards in India and developed unique research capabilities”

# To Conclude

- Reduction in poverty and increase in Quality of Life can be achieved by Caring, Valuing and Respecting Life with Humaneness, Humility and Commitment to serve people
- This Joy of Giving back to society increases Dopamine (Satisfaction), Oxytocin (Attachment) and Frontal Cortex Activity (Morals)



108 Ambulance service recently Conducted a Triplet Delivery in its Dayapar Ambulance of Kutch District. On receiving the call Dayapar Ambulance reached the scene in just 12 Minutes and conducted safe delivery of two babies in the Ambulance enroute and the third one is conducted in CHC Dayapar. The Medical Officer at Dayapar CHC could only appreciate the safe and diligent job done by 108 team in the instant case and issued an letter of appreciation.

## THANK YOU

Subodh Satyawadi, Chief Executive Officer

[www.emri.in](http://www.emri.in)