



**Dr. R. A. Mashelkar (FRS)**  
**Chairman, Council of Advisors**  
**Jamnalal Bajaj Foundation**

As I stand before you, I remember the evening of 15 November 2018. Revered Justice Dharmadhikari rose to give his usual inspiring chairman's address at the awards function. As I was leaving the function, I touched his feet, as I always did, whenever I met him. Little did I realise that this is the last time I will be touching his feet.

And also, little did I realise that the Board of Trustees of Jamnalal Bajaj Foundation will entrust me with the chairmanship of the Council of Advisors. I have accepted it with all humility, but also with a lot of trepidation, since I sit in the chair that has been previously occupied by legendary Justice Dharmadhikari, making it a special chair, a sacred chair.

I have been associated with these most prestigious awards for well over a decade now. And I have learnt so much from Justice Dharmadhikari, whether he was delivering his insightful Chairman's addresses or bringing a balanced conclusion considering the fiercely independent and sometimes differing views of our great jury with his nuanced but firm remarks.

He was well known for his deep insight, legal acumen, and above all, his zeal to give priority to human rights while rendering environmental justice. And he always coupled these with his Gandhian values. Indeed, he relentlessly protected the core values of social justice and equity all his life.

To me, Justice Dharmadhikari was not an individual. He was an institution. An institution of integrity, conviction and courage. Individuals come and go but institutions live on. So I pay my humble homage to the memory of this immortal institution called Justice Dharmadhikari, which will continue to inspire us for generations to come.

And for generations gone by and for generations to come, revered Jamnalal Bajaj, whom we fondly remember today with these awards, will continue to inspire us. He was one of the founders of independent India, a great humanitarian, compassionate philanthropist and passionate social reformer. He was a man of principles, who constantly applied those principles to his business, his social work and his personal behaviour, something that is regrettably in deficit in the society today.

I deem it my great privilege to welcome Sadhguru Jaggi Vasudev, our honourable chief guest today. Named as one of India's 50 most influential people, Sadhguru's life changing transformational programs have touched the lives of millions worldwide.

His approach does not ascribe to any belief system, but offers powerful and proven methods for self-transformation. Dedicated to the physical, mental and spiritual well-being of humanity. Sadhguru has an amazing perspective on life and living, which has positively influenced so many lives.

As a scientist, I remember getting very influenced by Sadhguru's profound statement "As there is a science and technology to create external well being, there is a whole dimension of science and technology for inner well-being".

His epochal book 'Inner Engineering: A Yogi's Guide to Joy' made me realise that one needs to be a master at inner engineering also. And this divine combination of outside and inner engineering can be truly transformative. Engineering is all about 'observe, design and solve'. To observe with empathy, to design for humanity and to solve the seemingly intractable problems affecting the downtrodden. And these are precisely the prerequisites of what I termed as 'Gandhian Engineering', more than a decade ago. Let me explain.

On 28 April 2008, I was honoured with Foreign Fellowship of Australian Technological Science and Engineering in Canberra. I was the first Indian to receive it and I thought I will tell them about what could be the greatest gift of India to the world in the 21st century, just as Gandhi was the greatest gift from India to the world in the 20th century. I said it would be Gandhian Engineering.

I recalled two of Gandhi's tenets: "I would prize every invention of science made for the benefit of all" and "Earth provides enough to satisfy every man's need but not every man's greed". The first is about designing and delivering affordability and accessibility for all. The second referred to sustainability. Indeed, affordability and accessibility to all and sustainability at all times were Gandhi's touch stones seven decades ago. And I felt they were equally relevant for solving all the problems that the world was facing today – so it was Gandhi's way based on these two tenets - his solutions – his engineering – Gandhian Engineering – that would be the saviour for the world.

Gandhian Engineering has a profound message. It is getting more (performance) from less (resource) for more (people) not just for more (profit). It is about creating the magic of access to equality despite income inequality. Remember, what Gandhi had said – benefit of all – not for just a few but for more and more people. Getting More from Less for More (MLM) became the mantra that would get constantly repeated. I myself was invited to speak on Gandhian Engineering all around the world, from Brussels to Beijing, from Boston to Bangkok, from Cambridge to Copenhagen, from Munich to Melbourne and from Paris to Washington.

But among all these lectures, most memorable for me was the public lecture on Gandhian Engineering in Wardha on 26 December, 2009, when Rahul bhai had invited me to inaugurate the Bajaj Science Centre. I had the unique privilege of Justice Dharmadhikari chairing it, and what was most gratifying for me, was his endorsing and blessing the concept of Gandhian Engineering.

The concept got further consolidated with paper that I and late C.K. Prahalad wrote in July-August 2010 issue of Harvard Business Review titled 'Innovation's Holy Grail: More from Less for More'. It shows how Gandhian Engineering can help businesses in 'doing well by doing good'. It is now ranked among the top ten must read papers on innovation. And the message continues to reverberate even today.

For instance, Global Solutions Summit 2019 was held at United Nations Headquarters in New York on 13 May 2019. The theme was, 'leaving no one behind'. The Report has just come out. Gandhian Engineering using MLM dominates the discussion on the right way forward.

Let me at the end remind us all that this is the 150th birth anniversary of Mahatma Gandhi. Let us take just one challenge that was close to his heart, sanitation. He had said “sanitation is more important than political freedom”. So concerned was he, that he even established a college for scavengers in Gandhi Ashram. But where are we today?

On 17 September 2019, the Supreme Court came down heavily on the Government on the issue of the plight of manual scavengers saying that “Sewers are gas chambers where manual scavengers are sent to die. Every month four or five persons are losing their lives in manual scavenging.”

Indeed, manual scavenging remains the epitome of violence in urban India. How can we end this violence? Only through Gandhian Engineering.

The 9th Anjani Mashelkar Inclusive Innovation Award was given on 17 November, 2019 in Pune to Gandhian Engineering that can potentially eliminate the blot of manual scavenging.

Thiruvananthapuram-based GenRobotic Innovations was adjudged as the winner. Their breakthrough innovation is a robot called ‘Bandicoot’ that cleans manholes remotely using robotic arms and computer vision – a ‘first to the world’ innovation. This robot utilises high technology and is remotely operated. Brabo Robotics (a Tata Group subsidiary), which is the best in industrial robotics today, has signed an MoU with them for mass manufacturing. Deployment in some states has begun and is gradually rising.

Manual scavengers will not lose their jobs as they are being rehabilitated to become robot operators and get employed in the high technology sector, thus giving back extreme dignity to them and their future generations. I am sure this is the most fitting celebration of the 150th birth anniversary of Mahatma Gandhi.

Finally, what is the relevance of Gandhian thought and philosophy in the 21st Century? In 2010, I invited fifty of India’s foremost thought leaders to answer these questions. It was virtually India’s who’s who. From India’s greatest sportsmen to scientists, from iconic industry captains to social crusaders, from soulful politicians to creative artists, from blissful musicians to profound diplomats. Each of them brought a perspective by contextualizing it in one’s specific area and emphasizing the contemporary aspects of Gandhi’s philosophy.

I published their views in a book titled ‘Timeless Inspirator: Reliving Gandhi’ as a part of 30 years’ celebration of Gandhi National Memorial Society, of which I am a trustee. Their unanimous opinion was that Gandhi’s teachings are even more relevant in the 21st century than they were in the 20th century.

And that’s what makes our Jamnalal Bajaj Foundation Award, on practicing and propagating Gandhian principles for constructive work, so precious, so relevant, even after 42 years!

I finally want to congratulate all the award winners today. To me, this is not an award though. It is our grateful felicitation of your noble work. You are exemplars. You are lighthouses. You illuminate our minds and show the path forward.

We salute you all. Ladies and gentlemen, let us give them a thunderous applause.

Thank you.

