Creative Leadership: Essence of Good Governance[1]

APJ Abdul Kalam

Before you do anything, stop and recall the face of the poorest most helpless destitute person you have seen and ask yourself, "Is what I am about to do going to help him?"

.....Mahatma Gandhi

Problem cannot be our master - We Japanese will become the master of the problems.

On the night of 29 November, 2012, I was returning from Seoul, the Republic of Korea to Delhi on a non-stop seven and half hours flight after attending the Eminent Persons Group (EPG) meeting organized by the President of the Republic of South Korea prior to 2012 Seoul Nuclear Security Summit. The meet was attended by top experts in the nuclear field from different countries. The mission of EPG is to establish safety and security guidelines for 539 nuclear power plants spread all over the world. I am not going to talk about the details of that meet, but I would like to share one incident which was narrated by Prof. Shinichi Kitaoka, a Professor of Faculty of Law, University of Tokyo, to me and other EPG members. The professor explained the whole scene, the combination of highest intensity earthquake and the tsunami which affected the 40-year-old Fukushima nuclear power plant. According to him, the world has gone through three major nuclear power plant accidents. One in USA, one in former USSR and the lat est one in Japan. These three accidents, definitely have and will have positive effect on the high quality and reliability of world nuclear power plants. According to him, in the Japan accident, even though the Fukushima plant experienced a major natural havoc, leading to a major accident of the nuclear power plant, there was no single radiation induced casualty and there was no radiation leakage. Of course, it has generated, within Japan and also many parts of the world, a fear about the type of safety in the present and future shore-based nuclear power stations situated in various parts of the world. The most profound statement of Prof Kitaoka, was "Two cities of Japan were attacked by nuclear weapons in 1940s. It was a painful tragedy, but Japanese citizens withstood boldly, challenged the problem and within three decades, Japan got transformed into the most industrialized nation in the world. Now, Fukushima nuclear power plant problem is in front of us. We the Japanese will not allow this problem to become our master. With international cooperation, we the Japanese will become the master of the problem, defeat the problem and succeed, and the world will see clean-green nuclear energy flourishing all over the place."

Leadership is the Essence of Good Governance

How can we make the governance system of the country most effective and ensure development of the nation which will make and sustain the nation as an economically developed, prosperous, happy and peaceful society in the world? For that what you need is to have creative leadership at all segments of the governance of the nation.

Friends, I have seen three dreams which have taken shape as vision, mission and realization: ISRO (Indian Space Research Organization), AGNI programme of DRDO (Defence Research and Development Organization) and PURA (Providing Urban Amenities in Rural Areas) becoming the National Mission. Of course, these three programmes succeeded in the midst of many challenges and problems. I have worked in all these three areas. I would like to convey to you what I have learnt on leadership from these three programmes:

1 Address delivered at IIM Indore during interaction with the students of IIM Indore on June 12, 2013.

a. Leader must have a vision.
b. Leader must have passion to realize the vision.
c. Leader must be able to travel on an unexplored path.
d. Leader must know how to manage success and failure.
e. Leader must have courage to take decisions.
f. Leader should have nobility in management.
g. Leader should be transparent in every action.
h. Leader becomes the master of the problem, defeats the problem and succeeds.
j. Leader must work with integrity and succeed with integrity.

Let me illustrate these characteristics through our national programmes.

Vision for Self-sufficiency in Food

The vision for the First Green Revolution emanated during the 1970s, from the political leadership of Shri C. Subramaniam. Along with the visionary leadership of Shri C. Subramaniam, the team had the scientific leadership of Nobel Laureate Dr. Norman Borlaugh and Dr. M.S. Swaminathan. With the active support of Shri B. Sivaraman, Secretary, Agriculture, Dr. M.S. Swaminathan, in partnership with agricultural scientists and farmers, liberated India from the situation of what was called "ship to mouth existence". Through an effort of historical magnitude, India attained near self-sufficiency in food through "Seed to Grain" mission. As a result of this first green revolution, the country is able to produce over 236 million tonnes of food grains per year now. Of course, farmers played a pivotal role in working with agricultural scientists on the farm itself.

The political leadership and the scientific leadership have been able to build the capacity among our scientists, researchers and farmers to take up the mission of a "second green revolution" which is indeed a knowledge graduation from characterization of soil to the matching of the seed with the composition of the fertilizer, water management and evolving pre-harvesting techniques for such conditions. The domain of a farmer's work would enlarge from grain production to food processing and marketing.

India has now embarked upon the Second Green Revolution which will enable it to further increase productivity in the agricultural sector. By 2020 India would need to produce over 340 million tonnes in view of population growth and increased purchasing power. The increase in production would surmount many impeding factors such as shortage of water and reduced availability of agricultural workforce. Our agricultural scientists and technologists, in partnership with farmers, have to work for increasing the average productivity per hectare. This has to be increased three times compared to present productivity. The type of technologies needed would be in the areas of development of seeds that would ensure high yield varieties even under constraints of water and land.

Passion to Realize the Vision

Now let me describe to you an example of how passion to realize the vision has facilitated the successful and on-time implementation of a two billion dollar metro-rail project by the Managing Director of a public sector organization.

The Delhi Metro Rail Project has given to the nation the potential of executing a fast transportation system using high technology with reliability, through a time bound mission mode operation. Delhi, the Capital of the country with over 20 million population, has the distinction of having a world class metro rail with frontline technologies. The work on the metro rail commenced on 1st October 1998 and the first phase with three lines covering 66 kms had been completed by December 2005. Today overall route length created by Delhi Metro is around 190 Kms. Every day, the metro handles a minimum movement of 2 million passengers.

Delhi Metro Rail Corporation has brought to the country, for the first time, the most advanced rail technologies. Here is a leader who has passion and passion for excellence. The notable gains to the country are, light weight stainless steel, sleek, modern trains with pneumatic springs, regenerative braking, public information display, wide vestibules and automatic doors. The sophisticated coach technology which was not available in the country so far, has been transferred to M/s. Bharat Earth Movers Ltd. (BENL), Bangalore, which is now assembling these trains with progressive

indigenization. BEML is now in a position to supply train sets needed for Phase-II of Delhi Metro Rail Project and meet the requirement for Metros coming up in other cities of the country.

Mr. E. M. Sreedharan, the Managing Director of Delhi Metro Rail Corporation has ensured through his programme management skills that all the scheduled sections were completed by their target date or even before, and within their respective budgets. The dedicated and transparent leadership backed up with professional competence of Mr. Sreedharan has given to the nation, one of the best transportation systems of the world at the most economic cost. He is a recipient of many national and international awards. Also, he is in demand for undertaking the development of metro systems in different countries of the world which he has politely declined due to pre-occupation with committed Indian programmes.

Now I would like to talk about a leader who ventured to travel on an unexplored path.

Traveling In Unexplored Path

I was fortunate to work with Prof. Vikram Sarabhai for seven years and while closely working with him, I saw the dawn of the vision for the space programme in a one page statement. Witnessing the evolution of this one page by a cosmic ray physicist, a great scientific mind and being a part of the team which worked ceaselessly for many years on the vision, have been really great learning for me. Also I am thrilled to see the fruition of the famous vision statement of Prof. Vikram Sarabhai, made in the year 1970, which states, "India with her mighty scientific knowledge and power house of young, should build her own huge rocket systems (satellite launch vehicles) and also build her own communication, remote sensing and meteorological spacecraft and launch from her own soil to enrich the Indian life in satellite communication, remote sensing and meteorology. The projects selected in space programme, are designed to meet the societal needs". Now a total 150 transponders are present in the geo-synchronous orbit for providing connectivity to the nation. If I look at this vision statement today, I am overwhelmed to see the results of this statement. Today India can build any type of satellite launch vehicle, any type of spacecraft and launch them from Indian soil. India also has launched Chandrayaan and has successfully placed the satellite in Lunar Orbit and now it is preparing for manned missions to other planets. India has proved that through space science and technology, we can provide effective communication, resource mapping, disaster predication and disaster management systems.

Now, I would like to give an incident which demonstrates the characteristics of Dr. Vikram Sarabhai for traveling on an unexplored path.

Purpose of Life

It was during the early 1960's, the founder of Indian Space Research Programme Prof. Vikram Sarabhai with his team, had located a place technically most suited for space research after considering many alternatives. The place called Thumba in Kerala, was selected for space research as it was near the magnetic equator, ideally suited for ionospheric and electrojet research in upper atmosphere.

The major challenge for Prof Vikram Sarabhai was to get the place in a specific area. As usual, Prof. Vikram Sarabhai approached the Kerala Government administrators first. After seeing the profile of the land and the sea coast, the view expressed was that, thousands of fishing folk lived there; the place had an ancient St Mary Magdalene Church, Bishop's House and a school. Hence it would be very difficult to give this land and they were willing to provide land in an alternative area. Similarly the political system also opined that it would be a difficult situation due to the existence of important institutions and the concern for people who were to be relocated. However there was a suggestion to approach the only person who could advise and help. That was "Rev. Father Peter Bernard Pereira" who was a Bishop of the region. Prof. Vikram Sarabhai approached the Bishop on a Saturday evening, I still remember. The meeting between the two turned out to be historical. Many of us witnessed the event. Rev. Father exclaimed, "Oh Vikram, you are asking my children's abode, my abode and God's abode. How is it possible?" However, both had a unique quality that they could smile even

in difficult situations. Rev. Father Peter Bernard Pereira asked Prof. Vikram Sarabhai to come to church on Sunday morning at 9.00 AM. Prof. Vikram Sarabhai went to the church with his team again on Sunday. At that time the prayer was progressing with the recitation of Bible by Father Pereira. After the prayer was over, the Bishop invited Prof. Vikram Sarabhai to come to the dais. The Rev. Father introduced Prof Vikram Sarabhai to the people, "Dear children, here is a scientist, Prof. Vikram Sarabhai. What do sciences do? All of us experience, including this church, light from electricity. I am able to talk to you through the mike which is made possible by technology. The diagnosis and treatment of patients by doctors comes from medical sciences. Science through technology enhances the comfort and quality of human life. What do I do, as a preacher? I pray for you, for your well being, for your peace. In short, what Vikram is doing and what I am doing are the same - both science and spirituality seek the Almighty's blessings for human prosperity in body and mind. Dear children, Prof. Vikram says that within a year he will buid alternative facilities for us near the sea-coast . Now dear children, can we give your abode, can we give my abode, can we give God's abode, for a great scientific mission?" There was total silence, a pin drop silence. Then all of them got up and said 'Amen' which made the whole church reverberate.

That was the church where we had our design centre, where we started rocket assembly and the Bishop's house was our scientists' working place. Later the Thumba Equatorial Rocket Launching Station (TERLS) led to the establishment of Vikram Sarabhai Space Centre (VSSC) and the space activities transformed into multiple space centers throughout the country. Now this church has become an important centre of learning, where thousands of people learn about the dynamic history of the space programme of India and the great minds of a scientist and spiritual leader. Of course, the Thumba citizens got well equipped facilities, worshiping place and educational centre in an alternate place at the right time.

When I think of this event, I can see how enlightened spiritual and scientific leaders can converge towards giving reverence to human life. Of course the birth of TERLS and then VSSC gave the country the capability for launch vehicles, spacecrafts and space applications that have accelerated social and economic development in India to unprecedented levels. Today, Prof Vikram Sarabhai is not here among us, Rev Peter Bernard Pereira is not here either. Those who are responsible for the creation and making flowers blossom are themselves be a different kind of flower as described in the Bhagwat Gita: "See the flower, how generously it distributes perfume and honey. It gives to all, gives freely of its love. When its work is done, it falls away quietly. Try to be like the flower, unassuming, despite all its qualities". What a beautiful message to humanity, on the purpose of life reflecting the spiritual component!

Managing Success and Failure

Three decades ago while I was working at ISRO, I had the best of education which cannot come from any university. I will narrate that incident. I was given a task by Prof. Satish Dhawan, the then Chairman, ISRO, to develop the first satellite launch vehicle SLV-3 to put ROHINI Satellite in orbit. This was one of the largest high technology space programmes undertaken in 1973. The whole space technology community, men and women, were geared up for this task. Thousands of scientists, engineers and technicians worked together, resulting in the realization of the first SLV-3 launch on 10th August 1979. SLV-3 took off in the early hours and the first stage worked beautifully. Even though all stage rockets and systems worked, the mission could not achieve its objectives, as the control system in second stage malfunctioned. Instead of being placed in the orbit, the Rohini satellite went into Bay of Bengal. The mission was a failure. After the event there was a press conference at Sriharikota. Prof. Dhawan took me to the press conference. And there he took the responsibility for not achieving the mission, even though I was the project director and the mission director. When we launched SLV-3 on 18th July 1980, successfully injecting the Rohini Satellite in to the orbit, again there was a press conference and Prof. Dhawan put me in the front to share the success story with the press. What we learn from this event is that a leader gives the credit for success to those who worked for it, and absorbs and owns responsibility for any failure. This is true

leadership. The scientific community in India had the fortune to work with such leaders, which resulted in many accomplishments. This success generated great happiness among all my team members. This is an important lesson for all youth who are aspiring to be tomorrow's leaders. The great lesson we learn: the leader in any field - political, administrative, scientific, education, industry, judiciary, or any other human activity - should have creative leadership capacity and the courage to absorb failure and give the success to his or her team members.

Leader Has the Courage to Take Decisions

Friends, I still remember a scene during May 1996. It was 9 O'clock at night. I got a call from the then Prime Minister's House that I should meet the Prime Minister Shri PV Narasimha Rao immediately. I met him just two days before the announcement of the results of General Elections. He told me "Kalam, be ready with your team for the N-Test. I am going to Tirupati. You wait for my authorization to go ahead with the test. DRDO-DAE teams must be ready for action." Of course, the election result was quite different from what he anticipated. I was busy in Chandipur missile range. I got a call saying that I must immediately meet the Prime Minister designate Shri Atal Bihari Vajpayeeji with Shri Narasimha Raoji. I witnessed a unique situation. Shri Narasimha Raoji, the outgoing Prime Minister, asked me to brief the details of the N-programme to Shri Vajpayeeji, the incoming Prime Minister, so that a smooth take over of such a very important programme can take place. This incident reveals the maturity and professional excellence of a patriotic statesman who believed that the nation is bigger than the political system. Of course after taking over as Prime Minister in 1998, the first task given by Shri Vajpayeeji to me was to conduct the nuclear test at the earliest. Both these leaders had the courage to take difficult decisions boldly, even though the consequences of such a decision have great national and international significance.

Nobility in Management

Friends, the next leader I would like to discuss is Prof. Brahm Prakash. When I was the Project Director of SLV3 programme, Prof. Brahm Prakash, a great scientific leader with nobility, was the Director of Vikram Sarabhai Space Centre (VSSC), which integrated multiple institutions based on the advice of Prof. Kamala Chowdhuri, a management guru from IIM. Prof Brahm Prakash took hundreds of decisions for the growth of space science and technology. One important decision which I will always cherish was that once a programme such as SLV3 was sanctioned, the multiple laboratories of Vikram Sarabhai Space Centre and also the multiple centres of ISRO including the Space Department, had to work to realize the stated goals of the programme as a team. Particularly during 1973 - 1980, there was a tremendous financial crunch and competing requirement from many small projects. He converged all scientific and technological work to be focused towards SLV3 and its satellite. When I say that Prof. Brahm Prakash is famous for the evolution of management with nobility, I would like to give a few instances. He enabled for the first time evolution of a comprehensive management plan for SLV-3 programme towards the mission of putting the Rohini satellite in orbit. After my task team prepared the SLV3 management plan, in a period of 3 months time, he arranged nearly fifteen brainstorming meetings of the Space Scientific Committee (SSC). After discussion and approval, this management plan was signed by Prof. Brahm Prakash and became the guiding spirit and working document for the whole organization. This was also the beginning of converting the national vision into mission mode programmes. During the evolution of the management plan, I could see how multiple views emerged and how many people were afraid of losing individuality due to the main mission, displaying anger in the meetings. I could also see how Prof. Brahm Prakash radiated with smile in the midst of continuous smoke coming from the cigarettes, continuously being lit one after the other. The anger, fear and prejudice have all disappeared in the presence of his nobility in thinking. Today, the space programme, launch vehicle, spacecraft, scientific experiments and launch missions all are taking place in the centres of Indian Space Research Organization in a cohesive and cooperative manner. I learnt the hard way from this great mighty soul "before starting any programme, it is essential to have the project management plan with the details of how to

steer the project during different phases of the project and foresee the possible critical paths and possible solutions, keeping time, performance and schedule as key factors." I thank this great mighty soul who evolved the concept of management with nobility and was a very famous professor in metallurgy at the Indian Institute of Science. He was also a pioneer for giving the country nuclear material by establishing the Nuclear Fuel Complex (NFC).

Work with Integrity and Succeed with Integrity

Dear friends, in 2010, I visited Mussoorie and interacted with the 85th foundation batch of newly inducted members of Civil Services and also addressed the Mid-Career Civil Services Officers Trainees (18 years service). I talked to the Civil Service officers about creative and innovative leadership and evolution of a better world. After the session, some unique questions were raised by the participants which highlight the opportunities and challenges in governance faced by the nations' highest level of bureaucracy. I thought of sharing them with you and get your views on them.

I asked the young officers to find how they could be creative leaders who can pioneer great missions in life. After the lecture, one young lady officer got up and asked, "Dr Kalam, the bureaucracy is trained and known for maintaining status quo. In this context, how can I be creative and innovative?" Another young officer said, "Dear Sir, right now, at the start of our service, we are all ethically upright and resolute for integrity. We all want to work hard and make a change. But in a decade's time, in spite of our surroundings, how do I still maintain the same values with enthusiasm?" To these questions, I replied that the young officers entering into the governance have to determine a long term goal for which they will be remembered. This goal will inspire them at all times during their career and help them overcome all problems. I told them that the young bureaucrats of the nation have to remember that when they take difficult missions, there will be problem. Problem should not become our captain, we have to defeat the problem and succeed.

Then I told the young officers that they can definitely establish a brand of integrity for themselves which will be called circle of your brand to keep away all those who want to make them compromise. Of course, this may mean facing some problems in individual growth. Finally the best in human being will succeed in life.

Friends, so far I have discussed with you nine unique dimensions of creative leadership for governance. Here, let me recall a profound saintly message to all of us by Maharishi Patanjali, 2500 years ago.

"When you are inspired by some great purpose, some extraordinary project, all your thoughts break their bounds. Your mind transcends limitations, your consciousness expands in every direction, and you find yourself in a new, great and wonderful world. Dormant forces, faculties and talents come alive, and you discover yourself to be a greater person by far than you ever dreamt yourself to be."

Conclusion

Since I am in the midst of management community and interested members, I would like to put-forth a thought: What would you like to be remembered for? You have to evolve yourself and shape your life. You should write it on a page. That page may be a very important page in the book of human history. And you will be remembered for creating that one page in the history of the nation - whether that page is the page of evolution of a new policy, the page of innovation in a way of working, or the page of creating action oriented missions for the people or the page of fighting injustice or the page of contributing towards inclusive growth of the nation in a time bound manner.

APJ Abdul Kalam is a renowned scientist and engineer. He was the President of India from 2002 to 2007. He has been honored with India's highest civilian awards Padma Bhushan, Padma Vibhushan and Bharat Ratna.