

## **CONVOCATION ADDRESS**

*Dr. S. Sivaram  
Director  
National Chemical laboratory  
Pune 411008 India  
Email: [s.sivaram@ncl.res.in](mailto:s.sivaram@ncl.res.in)*

**August 15, 2006, Pune**

I am indeed honored by the invitation to be present here today and deliver this Convocation Address. I wish to compliment the students who are graduating today and the distinguished faculty of I<sup>2</sup>IT who made it all possible. As students you leave the cloistered environment of an educational institution – with an ecosystem that is very supportive to your individual needs – to enter a world which is competitive, often unfair and where the term “level – playing field” is practically non-existent. Yet your education and training has prepared you to face this world with poise and equanimity, with a balanced application of, both, your head and the heart. I wish you all very well and hope that you bring the passion to excel in whatever you choose to do.

I<sup>2</sup>IT is, I believe, a unique institution in the country. It focuses on advanced education at a postgraduate level to create innovators and leaders. Your courses are a unique blend of IT with “old economy” subjects like oil and gas, fluid dynamics and automotive engineering. Your curriculum in microelectronics, embedded systems, robotics and wireless technologies are contemporary and represent technology at its very frontiers. The entire world of “interactive” electronics comprising of computing, communicating, guiding, positioning, imaging, sensing controlling, messaging, gaming or billing is based on the above technologies. These technologies are expected to have a profound influence on every aspect of human endeavor in the years to come.

I was, therefore, particularly pleased to see, the two words, innovation and leadership, on the cover of your prospectus. Competitiveness of institutions and nations will ultimately depend on innovation and leadership. I wish to dwell upon some of the challenges that face us today, in building innovation and leadership in organizations.

The DNA of an organization rests on four basic building blocks. They are, structure, decision rights, innovation and information.

Increasing attention is being paid to the structure of an organization. Structure matters, since it unlocks organizational and human capital. Highly centralized hierarchical and command structures are being dismantled in favor of flexible organization with small sub units empowered to take decisions. Modern enterprises are a self-organizing systems with distributed governance, seamlessly blending both cooperation and competition and infinitely malleable, yet durable. If you look at companies like Walmart or Dell and ask what is their competitive advantage, it is really their structure. If you ask, how Nokia and IBM reinvented themselves, the answer is once again, structure.

In a modern organization, every employee is a potential innovator and, hence, has decision rights. Enterprises can create organic growth only through innovation and creativity. Yet when we think of innovation, the image that conjures up immediately in our minds are the men and women in white coats working in laboratories. In reality, a study by Booze Allen Hamilton in 2005 concluded that there is no relationship between R&D spending and the primary measures of economic or corporate success. Thus, organizational creativity is not on one dimensional process. Innovation and creativity can blossom anywhere in the organization. Only a properly structured organization can capture its value.

To enable this, organizations are creating new matrices, which encourage teamwork and collaboration. Formal and informal networks (called “The Linux Community”) are encouraged. New technologies are being deployed within organizations, which ensure free flow of information, enabling employees to find for themselves whatever they want to know powerful intranet portals, sophisticated online directories, skill and competence data base are helping to create “innovation clusters” within organizations. As Peter Drucker said, “to make knowledge worker productive will be the great management task of the 21<sup>st</sup> century, just as to make labor more productive was the great management task of the 20<sup>th</sup> century.

Innovative organizations reduce transaction costs in doing things. Innovative organizations and knowledge workers thrive in an environment whose underlying belief is that individuals will exercise self direction and self control in the achievement of organizational objectives to the degree that they are committed to those objectives.

To create innovative organizations, we need to nurture leadership. Unlike managers, leaders embrace chaos and can work under conditions, which lack process. Leaders have a high degree of emotional quotient, namely, self-awareness, self-regulation, motivation, empathy and social skills – all soft skills, which do not come from organized learning. Leaders tolerate dissent, encourage a culture of open inquiry and have great skills in synthesizing information. Leadership is not defined by the exercise of power, but by the capacity to increase the sense of power among those who are led.

Organizations of the future are full of new challenges. Every passing year, the present is becoming a less reliable guide to the future. As Albert Einstein, once said, “we cannot solve the problems by using the same kind of thinking we used when we created them in the first place”.

As you graduate today and go forth into this world, you will confront these challenges in every work place environment. Your ability to “think out of the box” and to use your head and heart in a balanced way will separate the winners from the losers.

I wish every one of you an exciting future.