



## IDRBT Foundation Day Lecture 2013

Hyderabad

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### Banking Technology and Societies

*Rural Empowerment through connectivity*

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I am delighted to deliver the “IDRBT Foundation Day Lecture 2013” at the Institute. My greetings to the Institute for Development and Research in Banking Technology (IDRBT), the faculty, researchers, students, special invitees and distinguished guests. I am happy to know that the Institute has produced over 150 M.Tech. Post-graduates in collaboration with the Central University of Hyderabad and a few Research Scholars have earned their Ph.D too through this Institute. The interaction between the research groups creates the synergy required for meaningful research and purposeful development of products and services for advancement of banking technology in the country. In the technology services domain, IDRBT among other services operates the INdian Financial NETwork (INFINET), which is the backbone for the payment system of the country and is also the Certifying Authority for issuing Digital Certificates for the Indian Banks and Financial Sector. Keeping this in mind, I would like to talk on the topic “**Banking Technology and Societies**”.

#### **Sustainable Rural Development through innovative Banking**

Dear friends, I visualize the following demanding scenes in the emerging India before 2020 for bringing sustainable rural development. Certainly technologies provide innovative solution to meet the Global challenges. When the banking institutions adopt the technologies, certainly that will help in meeting the challenges of the growth even in rural areas: Let me visualize the following three scenarios which the banking sector can meet with the help of technologies.

- a. **Reaching the unreached:** Reaching banking services to 250,000 panchayats/villages, which cover 600,000 villages where 700 million people are living? This involves creating the electronic connectivity with security in transaction and necessary authentication mechanism and above all the more it is important that it has to be user friendly for the village citizens to access in their local languages. 2011-12 budget proposed to provide Rural Broadband Connectivity to all 2,50,000 Panchayats in the country in three

years. Broadband technologies and banking technologies coupled with ICT implementation has to provide the secured and easy banking services as visualized to the rural citizens at lesser interest rates. Rural banking should become the partners in the rural innovation eco-system. When banks become partners to the Small Scale Industrial entrepreneurs, SME entrepreneurs and Self-Help-Group entrepreneur, certainly the economic growth will be on higher trajectory and will meet the global demand from the local products with technology infusion.

- b. **Rural Banking and secured e-Governance:** I visualize a situation by 2020, India will be transformed into a knowledge society. That means the whole banking sector will be operated by knowledge e-governance products having G2B, B2B, B2C over the cloud computing infrastructure and distributed by knowledge based secured network system thereby making the entire transaction secured raising the confidence of the clients with necessary audit trails to give easy tracking and monitoring to check the money laundering, trafficking, tax avoidance and bring responsibility and accountability in corporate governance.
- a. **Banking and Cyber warfare in the Knowledge Society:** Third one, I visualize, once the nation becomes the knowledge based society – the complete future warfare from what it is today will get transformed into knowledge warfare through cyber warfare. On multiple fronts India is facing challenges of war and its dynamics, due to its economic growth and the vision to become a developed India before 2020. Regular electronic intelligence collection and manual intelligence gathering has to be strengthened. Most important aspect should be to strengthen our cyber warfare technologies with the capability to penetrate any kind of network which operates the adversaries' strategic command. India should achieve mastery over encryption and decryption of the certain unique languages which we are not accustomed and use in the cyber warfare technologies and its algorithms for detecting the threat. At the same time evolve a scheme to respond quickly and able to jam the network with our intelligent software agents. We also need to establish the intelligence gathering network by observing the behaviour of the mobile systems, wireless systems used and will be able to build the possible war scenarios and its dynamics through the pattern which will help the strategic command ready to face the challenge at any time. When we encourage mobile banking, mobile commerce and internet banking and internet commerce, the technology has emerged to track the behavioral pattern of the mobile usage and money transaction to analyze the fraudulent activities across the country and borders.

With this ambience, let us see how India will transform by 2020, so that friends from Banking sector can plan how you can become a partner in the 'developed India vision 2020'. Now let me discuss the distinctive profile of India in 2020.

## **Distinctive profile of the nation**

I visualize the following distinctive profile for India by the year 2020 will have to emerge.

1. A Nation where the rural and urban divide has reduced to a thin line.
2. A Nation where there is an equitable distribution and adequate access to energy and quality water.
3. A Nation where agriculture, industry and service sector work together in symphony.
4. A Nation where education with value system is not denied to any meritorious candidates because of societal or economic discrimination.
5. A Nation which is the best destination for the most talented scholars, scientists, and investors.
6. A Nation where the best of health care is available to all.
7. A Nation where the governance is responsive, transparent and corruption free.
8. A Nation where poverty has been totally eradicated, illiteracy removed and crimes against women and children are absent and none in the society feels alienated.
9. A Nation that is prosperous, healthy, secure, peaceful and happy and continues with a sustainable growth path.
10. A Nation that is one of the best places to live in and is proud of its leadership.

## **Integrated Action for developed India**

To achieve the distinctive profile of India, we have the mission of transforming India into a developed nation. We have identified five areas where India has a core competence for integrated action: (1) Agriculture and food processing (2) Reliable and Quality Electric power, Surface transport and Infrastructure for all parts of the country. (3) Education and Healthcare (4) Information and Communication Technology (5) Self reliance in critical technologies. These five areas are closely inter-related and progressed in a coordinated way, will lead to food, economic and national security. The major mission is the development of infrastructure for bringing rural prosperity are through Provision of Urban Amenities in Rural Areas (PURA) through creation of three connectivities namely physical, electronic, knowledge leading to economic connectivity. The number of PURA for the whole country is estimated to be 7000. Particularly when the banking is planning to reach the unreached, PURA is another vehicle, which can bring sustainable rural development.

## **PURA as a Sustainable Development tool and PURA Corporation**

Friends, this year India has turned 67 years old as the largest democracy in the world and we witness a defining period for the nation and its people. We stand less than ten years away from the goal of achieving the

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vision for a developed India by 2020, and there has been significant progress in all directions. Each step we take towards a developed nation also opens a fresh challenge to overcome. The need of the hour is the evolution of sustainable systems which act as “enablers” and bring inclusive growth and integrated development to the nation.

One such sustainable development system is the mission of Provision of Urban Amenities in Rural Areas (PURA). It means that:

1. The villages must be connected with in themselves and with main towns and metros through by good roads and wherever needed by railway lines. They must have other infrastructure like schools, colleges, hospitals and amenities for the local population and the visitors. This is **physical connectivity**.
2. In the emerging knowledge era, the native knowledge has to be preserved and enhanced with latest tools of technology, training and research. The villages have to have access to good education from best teachers wherever they are, must have the benefit of good medical treatment, and must have latest information on their pursuits like agriculture, fishery, horticulture and food processing. That means they have to have **electronic connectivity**.
3. Once the Physical and Electronic connectivity are enabled, the knowledge connectivity is enabled. That can facilitate the ability increase the productivity, the utilization of spare time, awareness of health welfare, ensuring a market for products, increasing quality conscience, interacting with partners, getting the best equipment, increasing transparency and so in general **knowledge connectivity**.
4. Once the three connectivities viz Physical, Electronic and knowledge connectivity are ensured, they facilitate earning capacity leading to economic connectivity. When we Provide Urban Amenities to Rural Areas (PURA), we can lead to upliftment of rural areas, we can attract investors, we can introduce effectively useful systems like Rural BPOs, Micro Finance.

The number of PURA for the whole country is estimated to be 7000 covering 600,000 villages where 700 million people live. There are a number operational PURA in our country initiated by many educational, healthcare institutions, industry and other institutions. Government of India is already moving ahead with the implementation of PURA on the national scale across several districts of India.

Government of India has created 10 PURA across the country with public private partnership with an outlay of 1000 crores with 30% of Gap funding from the government mainly aimed at creating physical connectivity in the beginning and making the PURA Enterprises to bring the other three connectivities as a business proposition. There are number of private PURA enterprises coming up with the pioneering spirit of

institutions, industry, NGO and Corporate. One of my student is working on creating PURA Corporation, whether the the entrepreneurs of PURA Corporation would work in close synchronization and integration with the help of local PURA champions – who may be institutions or organizations of repute. They will be partners with the government, local administration and Panchayati Raj (village governance institutions). The enterprise network of PURA corporation has to be evolved with the technical collaboration from a multi-dimensional array of technological and managerial institutions.

Similarly, enterprises from different parts of the world can be partners to the PURA corporation by acting as equity investors, exploring and facilitating market linkages and providing a technological platform the best practices and innovative solutions to production challenges can strengthen the socio-economic rural complexes. In this way, enterprises and business units from across the world can share their core-competencies to harness the resources of untapped rural regions and also lead to human development. Such collaborative platforms for 600,000 villages covering 700 million citizens, over 150 billion dollar market, can harness on aggregation an economy of scales leading to mutual benefits. The banking system of the nation has an important role to develop the key technologies needed for funding and creating local core competence and promote entrepreneurs at the rural and town levels. Thus in this model, economic empowerment is channeled into value based social transformation for establishing a culture of excellence with cooperative-competition based on mutual trust and harmony spread across the PURA region.

Now, let me talk how technology is crossing all borders in the 21<sup>st</sup> century.

### **Technology without Borders**

In the last century, most nations understood that science and technology was the best vehicle for economic upliftment. However, the problems that S&T was used to solve have been primarily local and customized to their needs. Today, the problems faced by nations are no longer, a concern of them alone. Humanity is devoting more and more attention to climate change, energy, water, disease, economic turbulence and terrorism etc., which are all of concern to the entire world and the solutions for which are beyond any individual nations or group of nations.

If S&T has to provide upliftment of our humanity, if the research and development are in areas with porous borders between them and if the problems of the world know not of geographical borders, the education

that becomes the foundation of all our science and technology, research and development also must of necessity become borderless.

When I was traveling in an Aircraft in the United States, I was told that much of its controls were software driven and most probably developed in India. When I presented my credit card, I was told that it was being processed in the backend server located in Mauritius. When I walked into IBM software development centre, Bangalore, I was fascinated to find that it truly presented a multicultural environment. A software developer from China working under a project leader from Korea working with a software engineer from India and a hardware architect from the US and the communication expert from Germany were all working together to solve the banking problem in Australia. When I see all of them working together like one family forgetting about the culture from which they came or the language that they speak, I feel that the only hope for such borderless interaction to continue is to inculcate the spirit of borderlessness in all our industry, education and research.

### **New millennium financial system**

I would like to share with you my visualization of the financial system of the new millennium. We have seen the success of inclusive banking in the form of Self-Help-Group against the earlier credit-cum-subsidy programmes of government, which could not finally achieve the desired outcome. Other strategic initiatives such as Rural Infrastructure Development Fund (RIDF) in NABARD, Small Industries Development Bank of India (SIDBI) and their focus will on inclusive banking and financing. But, to realize the desired inclusive social development as an outcome of economic growth of a nation, people have to be skill enabled and knowledge enabled and it is essential to elevate them with competitiveness by creative a level playing by creating an inclusive development ecosystem. When such as scenario emerges, I am visualizing, what is the role of Banking technology? Banking Technology can empower banking services with a mobile telephone, a personal digital assistant (PDA) and the capacity to mobilize rural savings and rural insurance. This combined promotion of Savings and Life Insurance will bring social security at the door step of the villagers. This will be vital for enhancing the GDP of the nation to double of the current level in the next 5 years.

### **Banking technology and the present economic crisis**

Since IDRBT is dealing with technology for banking sector, I would suggest that a research group be formed to study the economic crisis what was started in USA, followed in Europe, continued in Europe and spread throughout the world. The effect of sliding economy is now more visible in India. Is there any technological solution? Can you forecaste this kind of crises and suggest methods for its avoidance? Above all, how do we

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recover from the present economic crisis of 9% GDP growth falling to almost half? Can banking technology give a solution with India's of good environment base of agriculture and small scale industries and other sectors. In agricultural sector, our farmers produce 250 million tonnes of foodgrain. For economic recovery, one of the important strategies we have to follow is value addition to our agricultural produce that will generate export potential and internal economic growth. Similarly, for rural economic prosperity, based on the core competence, we should start establishing 7000 PURAs for the whole country. Another important aspect is the small-scale industries. Millions of SSIs are spread throughout the country. By providing latest technologies and proper credit facility/policy, small scale industries will be another pusher for economic recovery. As banking technology experts, you may have some new ideas and this is the time nation needs immediate positive solutions. I am sure, IDRBT will be instrumental.

### **Conclusion**

Dear friends, I have seen three dreams which have taken shape as vision, mission and realization. Space programme of 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 want to convey to you what I have learnt on leadership from these three programmes.

1. Leader must have a vision.
2. Leader must have a passion to transform the vision into action.
3. Leader must be able to travel into an unexplored path.
4. Leader must know how to manage a success and failure.
5. Leader must have courage to take decision.
6. Leader should have Nobility in management.
7. Every action of the leader should be transparent.
8. Leader must work with integrity and succeed with integrity.

For success in all the missions, it is essential to have creative leaders. Creative leadership means exercising the vision to change the traditional role from the commander to the coach, manager to mentor, from director to delegator and from one who demands respect to one who facilitates self-respect. For a vibrant inclusive finance sector, the important thrust will be on the generation of a number of creative leaders who will pioneer the promotion of financial inclusion both in rural and urban areas of the countries with imaginative use of technology and innovation.

With these words, I once again wish IDRBT success in their mission of developing innovative and fool-proof technology methods for the benefit of banks, customers and citizens.

May God bless you.