

## **Re-imagining Education and Development for Tiruvalla**

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"You can avoid reality, but you cannot avoid the consequences of avoiding reality," said Ayn Rand. The meaning of this quote seems relevant while setting the agenda for the discussion on future of education in general and masterminding higher education in Kerala, particularly, education, and development in Tiruvalla and the Central Travancore region. It is proposed that the Pamba Valley Green Techno City Project become the hub and model of development needed for the upcoming Knowledge Society and the fourth Industrial Revolution (Industry 4.0) in Tiruvalla.

Knowledge Society is the upcoming, post-communist and post-capitalist, globally transformative and trans-modern social, political, and economic system. It is powered by globalization and the ever-growing scope of information and communication technology. The boundaries of this society grow in accordance with the ever-expanding World Wide Web and the new media associated with it. Human cognition is fundamental to Knowledge Society as it relies on the fact that only the human brain can process information and data available from different sources and turn it into knowledge. Thus besides capital and labour, knowledge has become one of the primary means of production today. The 21st century will be recognized as the century of the Knowledge Society.

To understand Industry 4.0, we need to first look at the previous 3 industrial revolutions. The first industrial revolution mobilized the mechanization of production using steam power. The second industrial revolution introduced mass production with the help of electric power, conveyor belts on the factory production line speeding up manufacturing. The third revolution was digital, using computers to further automate production and drive considerable efficiencies. The fourth industrial revolution promises to harness the power of the Internet by connecting each part of the production chain through the World Wide Web with minimal human oversight or intervention. It will use sensors to enable personalized, just in time, resource efficient production using optimum capital and labour. Industry 4.0 is characterized by cyber-physical-production-system (CPPS). Artificial intelligence, machine learning, cloud computing, and networks seem to be the usual presuppositions behind this revolution which is going to altogether challenge the entire educational system.

The paradigm shift in technology has given Industry 4.0 its footing. Preparing the human resource for an era of Google cars, the Internet of Things or Internet of everything, mobile dependent lifestyles, personalized or gene-based health solutions, energy efficient systems and a world proactively seeking sustainability appears to be the core of any business and entrepreneurship in this era. Unlike the past three industrial revolutions, these sea changes in technology will demand phenomenal changes in how we educate and are being educated. A new education system will develop, geared towards a fully conscious and ecologically sustainable world.

Avoiding reality seems the usual psyche of a mediocre society. By doing this, such a society is not only shielding itself from reality, but also from the consequences of such avoidance. It finds reasons aplenty to avoid the challenges ahead with far reaching ramifications on the development of individuals in this society and ultimately the society. In this milieu, political, religious and social leaders, if they are less imaginative always narrate the dangers ahead and caution society. However, visionaries should think differently, acting as agents of change.

Kerala boasts of the highest literacy in the country but has relatively fewer achievements in the fields of advanced education and research. Political and ideological debates on the so-called "ills of privatization of education" devastated many opportunities for this State. Both the left and right political parties and their associates were unable to foresee the times ahead due to their myopic, uncritical, ideological stance, setting the State back by about five decades of growth. In contrast, the other Southern States like Tamil Nadu and Karnataka made substantial progress both in the quantity and quality of higher education. They allowed the private sector to invest and develop colleges, allowing autonomous status for these colleges and creating deemed universities.

Till 2001, Kerala had a few government and aided colleges offering professional courses. Since then, the number of professional institutions has increased phenomenally both in the government and private sectors. Some of the private and government institutions emerged as an 'image building exercise' while yet others were handled by less experienced, non-professional, and less socially quotient individuals. For some private companies and agencies, these institutions become representations of prestige, a means to create good will, and a channel to convert 'black money to white money'. To a certain extent, the rush to start medical colleges

evidences this situation. The government also started many institutions and universities without proper study, planning, funds, faculty, and facilities.

Judging the quality or approving genuine institutions is dependent on the 5 F formula. These 5 Fs are: founder/s, faculty, facilities, funds and fees, and finally facts (track record and intangible assets). It is high time that the government allow only those institutions which can be assessed and succeed on these criteria to continue. This does not mean that the institutions that don't meet these criteria should be stopped. Rather, some of these institutions can be regrouped or reorganized, using their facilities to run new courses or upgrading them to become efficient. In this regard, the government policy of private-public-partnership (PPP) can be well utilized. All institutions should be allowed to and encouraged to be socially responsible, accountable, and equitable. Those that do should be made autonomous to promote quality in education, research, and innovation, and encouraged to develop ingenious products.

Central Travancore and Tiruvalla have long demonstrated a passion for education. The education dividend allowed individuals from this region to migrate as clerks to plantations in Singapore and Malaysia before Independence. When Bombay and Delhi emerged as big cities, educated individuals from this region were able to migrate there for jobs. When the Arabian Gulf opened for human resources, the educated individuals of Tiruvalla immigrated and brought in millions of petro-dollars. These petro-dollars are still the mainstay of Kerala's economy. The Tiruvalla region boasts of the biggest NRI remittance India. However, neither the central or the state governments nor entrepreneurs were able to fruitfully and wisely utilize this remittance for the development of this region. Eminent economist M. A. Oommen says successive governments failed to tap into this money for productive purposes. According to him, the distorted investment pattern continuing in the State is doing more harm to Kerala. "There is an urgent need to develop a vibrant commodity sector." Airing a contrarian view, Jose Sebastian, Associate Professor in the Gulati institute of Finance and Taxation, says that it will be wishful thinking to expect all NRI deposits to be invested in Kerala. "The State has inherent limitations from the point of view of industrial investment like paucity of land which makes land very costly for manufacturing activities." According to him, there is no point in encouraging manufacturing activity, which will cause environmental pollution like air, groundwater and earth. Kerala is an environmentally fragile place. "We, therefore, have to attract investment in tourism, information technology,

biotechnology and education,” (The Hindu October 29, 2015, Oommen A. Ninan). The Kerala Government, the political parties, their non-professional unions, and the State educational agencies have been unable to creatively propose a plan for regional development.

After several studies it has been observed that an economy with ‘immigrant funds only’ cannot sustain. An example is the case of Kumbanadu, a small village close to Tiruvalla, which has the highest NRI remittance among the villages of India. This village has branches of all the leading banks but nobody dares to start an enterprise with the exception of bakeries. It is told that this place has the highest number of bakeries among the villages in Kerala. Another example, is the Tiruvalla region with its huge NRI remittance that did practically nothing to develop the region. After the opening of education in Kerala in 2001, MACFAST and the Pushpagiri Group of Medical Institutions drew investment solely from internal sources independent of NRI funds. Eventually, Tiruvalla attracted external private enterprises like Joy Alukkas, Kalyan, Josco, Malabar Gold etc., and now about 15-world renowned brand shops have their outlets. The business environment in Tiruvalla has now become vibrant and real estate prices here are equal to or even greater than many metro cities in Kerala. In short, NRI remittance only will not provide substantial impetus for regional development. In this context, it would be appropriate to address this issue proactively by proposing a new project proposal for regional development centering Tiruvalla.

### **Pamba Valley Green Techno City Project**

This project is envisioned as a smart city covering 50-100 acres of the Government-owned property. Former Pamba River Factory, Pulikizhu, Tiruvalla which is currently not in use, can be developed for this PPP project to ultimately develop the Central Travancore region. Pamba Valley Green Techno city is also conceptualized in accordance with guidelines given for Private Integrated IT & Hi-Tech Parks on the basis of Kerala’s IT Policy 2012 (G. O. (Ms.) No. 10/2013/ITD dated 03.04.2013), to make the State a highly preferred IT/ITES destination in India. This techno city will have an integrated IT/Hi-Tech/Biotech/Nanotech Park and an educational hub with a new philosophy encompassing five components - **Educate, Innovate, Work, Live and Leisure**. These five components are

usually not connected in working professionals' lifestyles, especially in the field of IT/ITES, and other engineering professions. 90% of these young professionals are far removed from their desire of staying and enjoying time with their families due to jobs in other cities. They have to stay away from their parents and loved ones, and there is a direct correlation to failing social structures, especially in married lives, caring for the elderly, life security, and the loss of community identities. This new city will address all these needs and can be replicated in other neighborhoods as well as it is obvious that we cannot create mega cities in Kerala. Thus, Pamba Valley Green Techno city will be modeled as a self - sustaining and self-actualizing project for people, communities and the State. To summarize, this city will focus on:

- Physical aspects of life - health, beauty
- Mental satisfaction - quality of life, community living, family life, and neighborhood
- Intellectual satisfaction - work and continued learning towards a Knowledge Society
- Technological acumen - Industry 4.0, innovation, and research
- Societal awareness- socializing, art, entertainment, sports, and networking
- Spiritual aspects - visionary thinking, ethical consciousness, and challenges of life
- Sustainable - ecological and environment world outlook

## **Educate**

The proposed Pamba Valley Green Techno city will be centered on the Interdisciplinary Institute of Industry 4.0 and Management (IIIM4.0). The 'Make in India', 'Skill India', 'Digital India' and the 'Smart City' Projects of India will bring about a paradigm shift in the industrial, scientific, technological, and entrepreneurial mindset of the country. Further, to adapt and be competitive in a knowledge-based society, India will have to generate innovative individuals for the forthcoming Industry 4.0. The introduction of IIIM 4.0, a new model Institute in India, provides inter disciplinary and techno-managerial education. It will be an institution that partners with industry to developing people, skills, and technology (Smart Factories). It will be a confluence of Smart Factories and an Autonomous Knowledge Institute under the same roof and

management, designed to create scientists, technologists, entrepreneurs, networkers, and CEOs of the future.

### **Innovate**

The proposed Pamba Valley Green Techno city will provide a platform for start-ups and innovators can create new knowledge and products. The following facilities will be set up:

- Centre for Innovation and Development of Affordable Technologies (CIDAT)
- Green Technology Research & Resource Centre
- Technology Business Incubator (TBI)
- Automation and Rapid Prototype Development Centre with Tool Room and Training Facility

### **Live**

The proposed Pamba Valley Green Techno city will have the following facilities:

- Residential facilities (Villas & Apartments)
- Nonconventional Energy generation
- Biodiversity Lake
- Solar energy
- Green Technology Transport
- Water, Waste, and Natural Resources Management

### **Labour (Smart Factory Cluster)**

The proposed Pamba Valley Green Techno city will be a haven for investors and investees with:

- 20,00,000 sq feet built up area for IT, BT, Nanotech, Alternative Energy Companies
- Administrative Block and Other Facilities

### **Leisure**

The proposed Pamba Valley Green Techno city will be a special zone promoting

- Star Hotel(s)
- Eateries
- Shopping / Business Mall and Convention Center
- Museum and Art Gallery
- Amusement Park
- Medicinal Plants Garden and Forest with walk ways

### **A Public Private Partnership Project (PPP) - The Promoters**

1. Government of Kerala Partnership: Pamba River Factory (Sugar Mills) at Pulikizhu, Tiruvalla has been liquidated for the past 25 years. Currently it is a blending and bottling center for certain brands of Indian made foreign liquors. These 100 acres are under the ownership of the Government of Kerala. The Government can offer this land for green techno city development, establishing a company in SPV (Special Purpose Vehicle), thus owning 51% equity. The proposed project minimally requires 50 to 100 acres of land and can be planned using the PPP model.

## 2. Central Travancore and Non Resident Keralites (NRK) Partnership

Central Travancore (Districts: Pathanamthitta, Kottayam, Alleppy, Parts of Quilon, Iddiki), particularly Tiruvalla is a hub for education, social integration, religious harmony, highest remittance of NRI money in India and a society that is highly exposed to developed countries. The proposed city can be a viable project once NRK investment is also ensured. For instance, among districts, Pathanamthitta District has the highest NRK remittance in the country.. The Times of India reports that the NRI deposit in Kerala crossed a record Rs. 1.1 lakh crore at the end of 2014-15. The village of Kumbanad itself parked in bank deposits about Rs. 17,000 Crore in 2012. NRK returnees are looking for safe investment projects in collaboration with Government.

## Conclusion

The speed of technology today has become unimaginable. We underestimate how quickly technology can transform everything. One can observe this evolution from the time the wheel was invented. The wheel, which was probably the first human technology that emerged, was invented organizing agriculture 50,000 years ago. Thereafter, it took 25,000 years to discover the art of painting and drawing. From writing and the wheel, we figured out how to organize our societies into cities and states, which took 2,500 years. After setting city-states we figured out only 1,900 years later how to make them operational through experimentation. From there we took only 325 years to industrialization and after industrialization we took 95 years to invent electricity, the telephone and the radio. The first vacuum tube computers came to be within 65 years of these inventions and the journey from primitive computers to the modern PC took 38 years. The Internet followed 15 years later and within 12 years we observe the rapid

transition from the Internet to smartphones, the Cloud and mobile computing. The future continuously approaches us at an ever-increasing pace.

Here, the quote of Ayn Rand from decades ago reminds us our political, social, and religious leaders should not turn their heads and disregard what is going on around them. Kerala for many years "avoided the reality and paid the consequences". Now, we should not miss the bus of an opportunity oriented towards more humanist, socially inclusive, and genuinely sustainable economy and society.

Knowledge Society addresses all areas and subjects comprehensively. The knowledge economy looks for a transparent, equitable, inclusive, and responsible society. Contrary to the industrial economy that is almost objects-centered, the Knowledge Society and intangible economy envisage qualitative growth and qualitative measurements (intangible assets). The industrial economy bases itself on win-lose logic: the object shared is lost forever. On the other hand, the logic of knowledge economy is win-win: when knowledge is shared, it never loses itself. In other words, Knowledge Society/economy promotes sharing rather than sheer proprietorship of knowledge and resources.

Relying on scientific and technological research for human progress, Knowledge Society inspires innovation and motivation among future scientists, technologists, entrepreneurs, networkers and CEOs for a sustainable development paradigm, by promoting the upcoming, disruptive Industry 4.0. The companies active in this new Knowledge Society need creative and humanistic individuals with a holistic approach, aligned and able to dominate technology in a playful manner. Thus, we need to develop right brain approaches alongside left-brain ones.

Pamba Valley Green Techno city should contain the above-mentioned components and should be designed addressing these areas. Once people identify with the philosophy of this city, a self-sustaining and self-actualizing inclusive society will emerge, which is the vision for the country towards creating a Knowledge Society. We can reiterate India's Vision 2020, "Our future depends not on what will happen to us, but on what we decide to become and on the will to create it".

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An Embodiment of the Indian Christian Identity

(2) E-Rupee To Reinvent India (Electronic Money to Curb Corruption)

(3) Puthiya Veenjum Puthiya Kuppiyum (Reflections on Life)

(4) Vijnana Samuha Nirmithi (Building Knowledge Society:

Dialogue on Life Issues)