Managing Innovation Space-Role of Individual Innovator

Ravi Shankar Saripalle[1], Vijay Kumar, P.[2], and Rao Tatavarti[1]

[1]GVP Scientific and Industrial Research Centre, GVPCE Campus, Madhurawada, Visakhapatnam 530048, India
saripalle.ravi@gmail.com, rtatavarti@gmail.com

[2]School of Management Studies, JNTU Kakinada, Kakinada, India
padishalavk@yahoo.co.in

ABSTRACT

Innovation space can be envisaged in 3-dimentional view – passion instilled with innovative spirit (in this dimension actors are either individual or organization), problem/need (individual need or society / market need) and persistency/time factor. This view provides four different unique opportunities and each of these opportunities require special fostering. These opportunities need unique infrastructure, market, policy and capacity building. In this paper, we stressed various nuances of the opportunities arise out of this 3-dimensional innovation space with supporting case studies, merits, demerits and recommendations. We argue that managing innovation space is much customized process and less of establishing common building blocks between opportunities. We also argue that Individual role is key and critical in the entire innovation space. Every innovation opportunity is directly or indirectly supported by an innovative individual or group of innovative minds. Hence it is important to develop platform for individual either in terms of his/her education or eco-system development.

Keywords — Innovation, Individual Innovator, Grassroots innovation, Innovation space, blended innovation, Barriers of innovation, Innovation management

I. INTRODUCTION

The accomplishment of the innovation is the process of managing need, convert the same to opportunity and cull out soft and hard dollars. Van De Ven(1986) states that managing innovation process involves ideas, people, transactions and context executed over a period of time. Peter F. Drucker (HBR,1998) stresses, "innovation can be systematically managed if one knows where and how to manage". He highlights the seven sources of Innovation like unexpected occurrences, incongruities, process needs, industry and market needs exit within the organization and other three sources like demographic changes, changes in perception and new knowledge exit outside company in its social and intellectual environment. There is lot of research happening in the area of identifying types of Innovation. Tidd. J & Bessant.J (2009) highlights 4Ps approach in innovation arena -Product Innovation, Process Innovation, Position Innovation and Paradigm Innovation. Innovation can be viewed and expandable to service, management (business strategies, organization structures, systems etc), marketing, disruptive, application and platform innovation, social innovation, customer experience innovation, open (global collaboration and work with no boundaries), closed, etc.

Overall innovation opportunity space can be visualized in 3-dimentional view. The 3 dimensions are classified as **passion** instilled with innovative spirit (In this case actors are either individual or organization), **problem/need** (individual or society/market problem/need), **persistency** (time factor). This triplet manages all types of innovation and outcome of the innovation. The depth of innovation opportunity depends on these coordinates (actor, problem/need, time). Innovation eureka moment and corresponding execution capability depends on coordinate's position in this 3-dimensional space. This can be represented as (X_a, Y_p, Z_t).

In this paper, we discuss various factors influencing each of these innovation space coordinates, merits, demerits and appropriate recommendations with the help of real-time case studies. We argue innovation outcome whether it is in the individual space or organization space depends on ***individual's*** passion (working for individual capacity or organization capacity), type of problem or need (individual or organization) and persistency to purse the same. The key individuals (sometimes a group of people) who

support innovation cause, supply dynamism and enthusiasm for the benefit of organization system, are those associated with many famous innovations (Tidd. J & Bessant.J (2009). Tidd. J & Bessant.J (2009) highlights examples like development of Pilkington's float glass process, Edwin Land and Polaroid Photographic system. The fundamental motive is being a source of technical knowledge, Inspiration, motivation, commitment, and understanding of breadth and depth of problem knowledge. Chieh-Yu Lin et al., (2007) did research on Influences of individual, organizational and environmental factors on technological innovation. Chieh-Yu Lin et al., (2007) proved that "an employee with higher adaptability or positive attitude will have stronger innovation ability and Individual factors will influence the technological innovation for logistics service providers".

These visionary or strategic individual innovators are very important from organization's perspective. We stress that individual innovators should be provided flexibility and right eco-system to reap greater benefits. It is very important for organizations or countries to identify, assess, promote and protect the individual innovators for the benefit of organization's growth /sustainability and for nation's long term's development.

II. DIMENSIONS OF INNOVATION SPACE

The success of the innovation is not just dependent on eureka moment alone whether in case of individual or for the organizational requirement. It is mere one of the important events or milestones in the innovation space. The value chain of innovation process steps (ideation to commercialization or societal benefit) is dependent on problem/need, persistency to pursue the same and the efforts of passionate people behind the innovation. Julian Birkinshaw et al.,(2011) conducted survey on 123 companies and proved that companies are comparatively good at generating fresh new ideas but their implementation performance got trickled down in the successive steps. Research survey find that companies struggle in innovation accomplishment comparative to generating brand-new ideas. The critical challenge face by large organizations is dissemination of innovation spirit. Julian Birkinshaw et al., (2011) are in opinion that successful innovations need both bottom-up and top-down effort. There is no proven connection which direction works and strength of that connection. Gündüz Ulusoy et al., (2009) conducted research on 184 manufacturing companies in Turkey. They empirically tested the relationship model between innovativeness and determinants of innovation. They proved that firm culture, market, technology, IP, strategies, collaborations, monitoring for innovations outside the firm, innovation outlay, market dynamism, public incentives, and firm size have significant positive effects on the innovative capability of a firm. They also proved that centralization of decision making has negative effect on the innovative capability and firm age, firm ownership status does not reveal any significant effects on innovativeness. Erik Baark et al., (2011) conducted research on Hong Kong Firms to find out innovation sources, capabilities and competitiveness. They perceived that customers, internal department, suppliers are major source of innovation. Prof Anil Gupta (2005) opines that "democratization of innovations and reversing the value chain from consumer to producer are two key features of people-driven innovations". Prof Gupta has been working with grassroots innovators to provide institutional background and support, policy advocacy, mobilizing risk capital etc.

It is evident that innovation is multi-dimensional opportunity. We can trace multiple sources (direct / indirect), multiple outcomes (main / by-products) and multiple enablers (catalysts / promoters). Each innovation opportunity in the innovation space is unique and requires special nurturing. Each opportunity possesses unique conditions and adoptable on customized platforms. However, in broad sense, we can visualize innovation space as 3-dimensional form, holds 4 unique encounters and derives 4 different opportunities. These opportunities need to be fostered for reaping larger benefits.

Encounter	**Opportunity**
An Individual innovator solves his/her own problems or small group's problem or addresses the narrow need	Grassroots

An organization which is instilled with innovative spirit addresses customized needs of individual or small group or narrow need	Specialized
A Individual innovator solves large societal problem or addresses the larger need	Break thorough
An organization which is instilled with innovative spirit addresses large societal problem or addresses the larger need	Blended

Table 1: ***Innovation Space Opportunities***

The following picture depicts this 3-dimensional form covering these four opportunities. Each of this Innovation Space Blocks (ISB) is an opportunity. If they are fostered meticulously, opportunity size can be maximized.

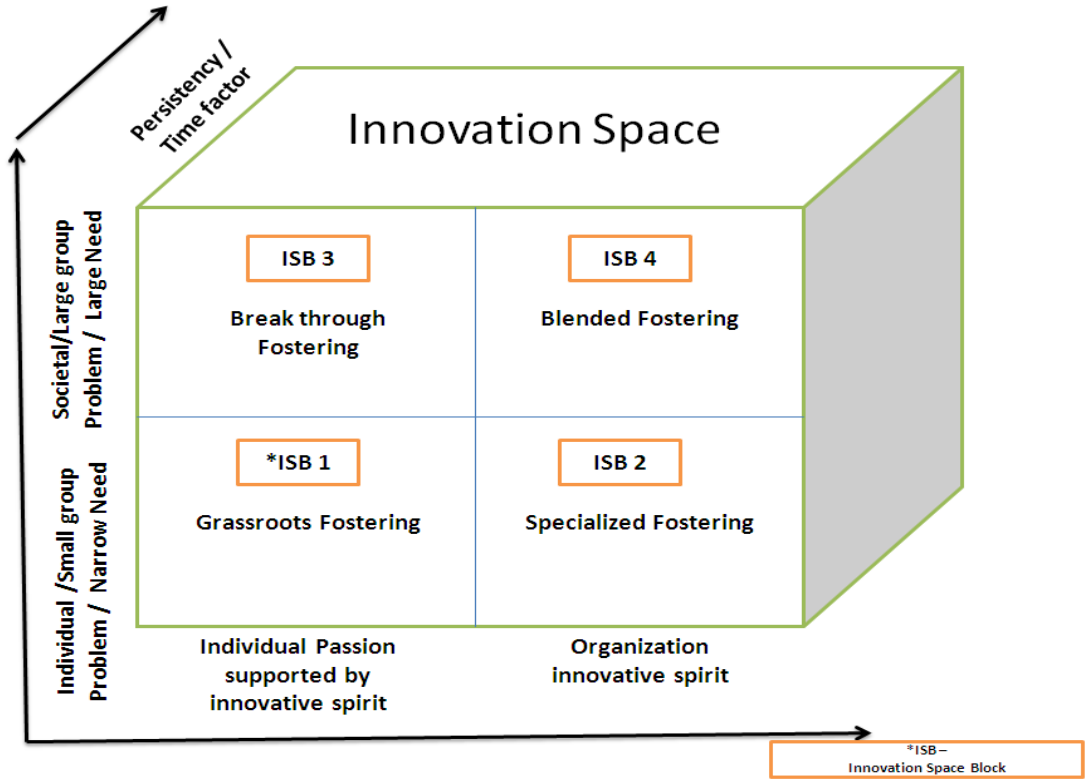

Figure 1: ***Innovation Space Dimensions***

The following section explains these unique encounters and features of these four innovation opportunities.

ISB1(Innovation Space Block 1): Grassroots Fostering

This opportunity arises when highly passionate individual innovator with beam of innovative spirit tries to solve specific local problem or narrow need; most often it is his/her own problem or need.

His/her success depends on understanding of the problem or need, passion to solve the problem innovatively, persistency towards developing the solution. However, eureka moment may or may not encounter at any space coordinate, called (X_a, Y_p, Z_t) where as X_p=individual passion level Y_p = Understanding of problem (depth) Z_t = Persistency towards achievement.

Example Case Study - Low cost windmill (NIF, 2012) - Innovator developed the low cost windmill under the following conditions.

Need – Grow the paddy during winter season and irrigation from the well

Problem(s)- Innovator experienced drudgery during continuous pumping by hand. It was consuming lot of effort. Innovator experienced diesel draining his resources during pumping out of water.

Solution – After contemplating many options, Innovator developed low cost windmill using bamboo, old vehicle tubes pieces of iron etc. Later some institutions and innovator networks felt that this innovation is applicable in the salt farming regions of Gujarat for pumping up underground brine. They installed these machines in this region for more than 2 years for demonstrations and trail basis. These demonstrations and long duration trials helped in developing real time product. It saved about Rs 50,000 worth of diesel in a season of six months. Now the salt workers do not have to rely on labor much and can make savings of an average Rs.28000/- season per person. (NIF, 2012)

Example Case Study- Portable stove with high efficiency (NIF, 2012) - Innovator developed portable stove under the following conditions

Need- Increase thermal efficiency and reduction of the pollution during household cooking

Problem(s)- Innovator faced personal and financial constraints during his education. He faced obstacles to go for higher studies. However, circumstances and curiosity made innovator developed portable stove. After lot of iterations, he could able to develop sustainable model. He worked for many months to get into shape, trying different passages for air movement. Finally persistency paid him.

Solution- The initial prototype developed helped in burning firewood with complete combustion and without smoke. His stove is made of bricks, cement, clay, cast iron. It can cook food up to 100 kg. The main features of this prototype are efficiency, low cost and portability. Its combustion efficiency is at range of 37.67% when wood is used as fuel and 29.48% when coconut shell is used. It takes Rs 30 worth of coconut shells to cook 40 kg of rice where as for the same quantity of rice to cook it requires Rs 400 worth of LPG. (NIF, 2012)

Grassroots Fostering Merits

Prof Anil Gupta (2010) says "When burden becomes responsibility and when concern triggers creativity, we encounter Gandhian spirit in action". Innovator focuses on specific problem or need. Persistent innovator not only yields results, but receives highest satisfaction, confidence and reduces government expenditure. Traditional and indigenous knowledge can be nurtured and culled out. It helps in developing inclusive and sustainable solutions. *In scarce resource field, innovator finds frugal solution*.

Demerits

Grassroots solutions face scaling challenges. Innovators face political and social constraints to prove their innovation as they lack institutional support. Often these solutions are ignored by elite community hence they lose confidence. Innovators lack ability to protect and commercialize their ideas/products. Anuja Utz and Carl Dahlman (2007), highlights following 5 challenges by grassroots innovators- "high transaction costs of scouting and documentation, need for value addition, need for commercialization, need for finance, and unclear intellectual property rights (IPR)".

Recommendations

Grassroots innovators are to be nurtured and provided institutional support right from ideation phase to promotion phase. WIPO-UNEP (2004) stresses stronger IP regime to support the rights of local communities and individuals in the preservation of their knowledge, innovations and practices. Government of India Planning Commission (2011), points that expensive R&D results into expensive products. Hence for country like India, frugal innovations are very essential without compromising on efficiency, safety and utility. They suggest having models & policies like 'People–Public–Private' partnerships in which the people are the real beneficiaries. Strong incentive and funding mechanism should be enforced. Preserving traditional knowledge is our responsibility to sustain our culture and environment. The process of establishing Traditional Knowledge Digital Library should be strengthened. Anuja Utz et al., (2007) suggests to have radio and other media, institutionalizing village knowledge registers. We have to replicate NIF's shodh yatras, common fabrication laboratories and testing centers for faster validations and endorsements from large enterprises. We need to expand or simulate SRISTI's

(Society for Research and Initiatives for Sustainable Technologies and Institutions) think tank across nations so that innovators get institutional support in scouting, spawning, sustaining and scaling up grassroots.

ISB2: Specialized Fostering:
This opportunity arises when an organization supported by innovative team (motivated with innovative spirit) and executed by committed team, tries to solve specific problem or need; most often, these are customized solutions for specific individuals or for very small group. Typically, these are customized products or services. These innovations are championed by highly inspired innovators. The success of these innovations depends on how deep these organizations understand individual or specific requirements, develop customized solutions and persist till end user maximizes the benefit. Solution development goes in spiral model. The Eureka moments shift on every specific solution they develop.

Example Case Study- Super 30 (Rashmi Bansal, 2011)- A successful IIT-JEE tutoring program for poor & meritorious students, which turned as unique social experiment (**Organization – Super 30 and Founder being motive force for social innovation**).

Need- Train rural-poor students for India's prestigious national level engineering entrance examination (IIT-JEE) for free of cost

Problems- Founder hails from lower middle class family but highly intellectual. His family tragedy hindered him to purse higher studies. While executing his vision and when he received initial success, founder faced extreme attempts from his business competition but never deterred from his vision and goal.

Solution- Founder used to spend mostly on solving mathematical problems differently. This made him to think doing something in this line of thinking. After lot of experiments in teaching methodology, he along with his partner started an organization called "super 30". The very idea is to pick up 30 poor and talented students who couldn't able to make IIT-JEE coaching (India's top most elite engineering colleges' entrance exam) and provide them food and shelter. The way they selected the students is also innovative. They used "intuition and intellect" selection technique to select the student candidates. They decided to take any donation neither from individual nor from institution and stuck to their words. In the last seven years, Super 30 produced lot of IITians and in some occasions with 100% success ratio. Super 30 remained as a highly noble, goal oriented, ambitious and innovative educational program. (Rashmi Bansal, 2011)

Example Case Study- Parivar (Rashmi Bansal, 2011)- Parivaar Ashram, a symbol of humanity, gives residential facility for orphans, tribals and daughters of prostitutes. It was managed innovatively by an IIM Calcutta (one of the premium management institutes in India) graduate, leaving his comfortable corporate life. .(**Organization – *Parivar* and Founder being motive force for social innovation**)

Need- Provide a family atmosphere to destitute and deserted children and give them second hope in life

Problems- Founder had tough time convincing various organizations to join children of prostitutes. Initially he struggled a lot to raise funds to run full-fledged residential program. Parivaar team was taken hostage by anti social elements during their campaigns but they didn't put off from movement. There was a freaking accident in ashram, a boy died of his own fatal recklessness which triggered interrogation to the founder. But he never deterred from goal. His "life must go on" attitude helped him to move on in this 'humane family' journey.

Solution- Founder established "focused and needy" vision for a specific cause, executed meticulously & flawlessly for this special cause. He established family ashram for ignored community and gave them life

path. He raised funds innovatively by adopting focused campaigns. He observed the talent of these students and found that they are outperformed than privileged students. His HR innovation was he could able to convince to recruit employees for *24x7 life service*! He employed lot of HR innovations to keep them motivated. Founder got convinced of "sense of destiny, a mission to fulfill" and his mission inspired many idealistic people to join this cause. This humane change itself is mother of all innovations! (Rashmi Bansal, 2011)-

Merits
Organization instilled with innovative spirit solves specific problem and provides innovative and customizable solutions to the customers or people. They focus on solutions and meticulous execution. These organizations establish changes in swift manner as they are built on shared experience of innovators, customers and execution team. This leads to collective learning. This type of organizations exhibit greater flexibility and maximize effectiveness.

Demerits
These organizations face scaling challenges. They face challenges in establishing standards and specific process. Hence they will have limitations to replicate work quickly. Largely they depend on collaborators during scaling stage. As they are established in specific area of specialization, they cannot scale up quickly in non-specialized areas. They face challenges in establishing central leadership and administrative establishment.

Recommendations
These types of organizations need help in terms of tax sops and exemptions as they are providing custom solutions. Generally, their margins are very low as their prime goal is customer satisfaction. Investors and donors need to be patient enough as break-even usually takes long time and profit is "beyond money". These organizations usually have high loyalty value and if they are attached to some type of patents or copy rights, their royalty value will also increase dramatically.

ISB3: Break through Fostering
This opportunity arises when highly passionate "individual innovator "tries to solve larger societal problem or break through technological invention / innovation which creates tremendous impact on society. Typically, these opportunities are encountered when passionate individual (occasionally backed by an organization), tries to solve a persistent and deep-rooted problem. He/she fights against system or develops break-through process, or product or system which makes good impact. Vijay Mahajan (2009) says social innovations are work of "passionate individuals who establish or use diverse platforms for addressing issues that bother them". However, this impact may not be necessarily long term. Typically, they execute on "project basis" where there is specific goal, scope and time in mind. Sometimes this innovation lives long term but it is unusual.

Example Case Study- Bhoodan Movement by Acharya Vinoba Bhave (Will Travers, 2008) -Vinoba Bhave's land-gift movement as part of Gandhiji's economic vision

Need- Reduce gap between haves and have-nots by voluntary land-gifts, building cooperation and maintain respect between the rich and poor

Problem- The major hurdle was convincing the land lards and building peace & harmony in this movement process. Founder of the movement followed very tedious process to collect the land but did it very sensitively. He walked about 36,500 miles, virtually more than the circumference of the earth as part of movement campign.

Solution- Founder of the movement adopted non-violent way to collect land. At the end of seven weeks of his movement, founder had collected over 12,000 acres. After founder left the movement, his followers and other movement workers continued to collect land in his name and received another 100,000 acres.

Overall founder set a target of 50 million acres of land as gifts, and in the end collected a total of 4.4 million acres. The process followed to inspire people for donation was quite interesting. He used to raise early, hold prayers, walk along with young & idealistic volunteers, meet all villagers throughout the day, distribute literature, late afternoon again prayers and at the close of the meeting take more pledges. He balanced his movement with emotional, social and spiritual rhythms and could able to convince people for land donations. Will Travers (2008) says, the principle of innovation in this movement is "all the people may combine and equally share in the responsibility of carrying their own administration"

Example Case Study- Foundation for Surgery (S. Saraf, 2007) -A surgeon showed direction to world of plastic surgery and to allied fields.

Solution – Sustrutha, an ancient Indian surgeon talked not only about plastic surgery but also mentioned about composite teachings of the surgery and all the allied branches. He also talked about minimum training period in medical field (should be 6 years), taking solemn oath etc. His training was on various vegetables like gourds, watermelons, cucumbers etc shows his depth of experience in this field. His compilation consists of 184 chapters, 1,120 conditions, including injuries and illnesses relating to ageing and mental illness. He described over 120 surgical instruments, 300 surgical procedures and classified human surgery in 8 categories. His teachings place major role on the process- "planning, precision, homeostasis and perfection". One of the greatest highlights of Sushruta's surgery was the operation of Rhinoplasty- the making of a new nose. His numerous contributions to the science and art of surgery gave him the title "Father of Surgery."

Merits

Innovator exhibits extraordinary leadership skills. He/she possess grand vision and mission. He/she is always on toes to execute the mission. His/her vision, planning and execution stands at height. His/her commitment & dedication wakes up people and system. He/she is considered as one of the best successful project managers. He/she initially experiments and based on initial success, they manage to scale the project.

Demerits

Predominantly most of the innovators in this category take up the mission on voluntary mode. This model may not last long because it is hard to set legacy and percolate down their passion and vision. This model has to move from the voluntary state and market institutional state. During the scale up, there are chances that Innovator may use same ideology, philosophy and execution model which might become seed for failure (every situation is different).

Recommendations

State and market institutions should quickly recognize innovator's potential and build institution driven innovation, which is based on best practices and lessons learnt. Institutions should adopt proper risk mitigation mechanisms to minimize scaling risks. These projects require multi-skilled people. Hence capacity building has to be perfectly planned. The diffusion of innovation potential pulls on a variety of historical, cultural and time clauses. This has to be considered when we are simulating similar innovations elsewhere. Collaboration is critical in these cases. Hence special attention required on collaboration front.

ISB4: Blended Fostering

This opportunity arises when an organization backed by visionary founder(s) or group of innovators, tries to solve larger problem or develops break through products which impacts large part of society or brings wide implications on economics or process or system. These organizations are matured in terms of developing solutions and managing the process. They focus on quality and efficiency. If they are product or services organizations, they not only depend on R&D department but there will be special focus innovation division (formal or informal) which monitors these efforts. They look for customer experience and their goals go beyond revenue generation.

Example Case Study- SELCO- Affordable Lighting for bottom of the pyramid (*Rashmi Bansal, 2011)*
A rural energy services social enterprise, providing reliable energy services to the poor in a sustainable manner (**Organization – *SELCO* and Founder being technological & social innovator)**

Need- Provide energy to poor, uplift lives and income through affordable energy

Problem- Founder lived in rural villages to understand the grassroots problem and to plan customizable solutions. During early stages of innovation, founder lived with tiny budgets. He is the single man who ran the organization during initial pilot days. Founder took 2 years to convince bankers to extend loan facility to the customers in the solar space. SELCO deals with poor people. This is the major risk on which company is working on.

Solution- Organization is working on very basic principle - poor can afford and they can maintain technology. Their major innovation was developing customizable product, matching to customer usage needs and finance repay capability, repay terms based on customer's business revenue cycle (e.g. dialy vendor can pay on daily basis but small amount where as farmer can repay only on yearly basis as he sells harvest on seasonal cycles). – "Right size of technology and right size of finance". They have customer centric customized solutions like door step service, door step financing etc. Founder believed that business model should be based on "EMI" but removed 'M', so that technology can reach poor. SELCO brought solar lighting to 120,000 homes in 15 years of itself establishment. SELCO has 170 employees working across 21 branches. SELCO doesn't have cubicle structure. This is major HR innovation. SELCO works with SEWA bank which created innovative financial products for the poor. In 2009-10, SELCO earned 14.5 crores of rupees and made surplus of 40 lakh rupees. They partnered with another innovator and started incubation laboratory to examine other problems and solutions. This is the forward looking direction of this organization. Currently they are in process of scaling up this model to other states of India using partnership model. SELCO believes process but not technology. They believe people not their academic degrees. Finally, SELCO believes mission not personal agenda. **(**Rashmi Bansal, 2011)

Example Case Study- Akshay Patra- Mid-day meal program (Rashmi Bansal, 2011)- Akshaya Patra, world's largest NGO, run mid-day meal program, feeding 1 million children

(**Organization – Akshay Patra and feed the poor student's mission)**

Need- Feed hungry children by preserving principals of mission

Problem- There is no major government subsidy when the program got started. Initially organization was completely depending on individual donations. There was no corpus and having huge monthly recurring costs.

Solution- Akshay Patra solution is marriage of science and spirituality. It has demonstrated innovations in kitchen management, accounting and marketing but with spiritual base. It has application of spiritual knowledge and powered with devotional action and devotional service. Funds are raised through various innovative models including "sudama seva", one rupee per day which can be affordable by poor too. There are other programs like sponser a child campaign, door to door campaign, partnered with many NGOs and trusts which helped them in fund raising. It harnessed energies of both corporate and missionary. Akshay Patra's established kitchens can cook for 10000 children at a time and currently it has 18 centralized modern kitchens. One special kitchen in Hubli, Karnataka alone can cook 180,000 meals a day. As they expanded the program, they started decentralizing the kitchens. Today Akshay Patra has 2500 employees and 50 missionaries overseeing this project. Government survey states that due to this program, 99.61% students could pay attention to studies. Other studies revealed that attendance and learning abilities had increased. Now Akshay Patra Mid-Day Meal program has a partnership the governments of seven states across India. It has adopted technology-driven processes to provide high quality cooked meals at a low cost to over a million children.

Merits

These organizations hold the capacity to invest into further R&D. These types of organizations employ lot of creative people and support their ideas. They provide lot of freedom to leaders and give them necessary support and infrastructure. Innovative leaders in the organization share their passion, live by example and exhibit the growth attitude. They hold conglomerate of various innovations under one roof. They set bar for themselves. They take market leadership position in respective area of expertise and build strategy to piggyback of their success. Their ability to repeat success is high as they bank of experience powered by process.

Demerits

Sometimes these organizations might get trapped by over confidence. Sometimes they might get mislead by market. They need to be cognizant of the fact and level check their position. Too many innovators and creative people under the same roof might derail execution. The fighting alone attitude may not yield good results and miss the opportunity in the market. They should open up collaboration channel keeping their core expertise intact. Innovation in large organization means innovation in every sense, whether it could be customer experience, process and technology or business model. However, if organization focuses on one particular innovation, again it might not be innovative in true sense. Hence organizations need to go for balanced innovation approach.

Recommendations

Organizations should consider open policy in forming innovative networks. Large funding and strategic investments are crucial for these organizations to scale. Hence fund agencies or VCs or investors should provide necessary support without pressuring for quick results. Firms should keep checking their organization size and their mission goals. As organization grows, a chance of loosing innovative spirit is high. Innovation team and visionary leadership is critical for these organizations. They need to be supported in every stage.

III. MODEL FOR INNOVATION ECOSYSTEM

All four different opportunities under innovation space act differently and yield differently. These opportunities are independent except under special circumstances. Unlike popular misconception, there are few interaction points. For e.g. innovation at grassroots level is different from innovation at matured organization. They cannot be treated same. Both cannot hold same policy and infrastructure. The people behind these types of innovations are different. Their attitude, behavior and support required are different. Hence in order to help organizations and countries to grow, these opportunities have to be managed differently.

Government and Industry should consider each opportunity as a separate requirement. They need to be incubated separately to improve service line or product line, efficiency, quality, customer experience, marketing experience etc. Each opportunity has its own merits and demits. Government or society has certain role to maximize opportunities and provide support to reduce the demerits. If entire “Innovation Ecosystem” works under this philosophy and work on mutual cooperation model, it yields higher benefits to individual, organization and to overall society. The following picture depicts the ecosystem model

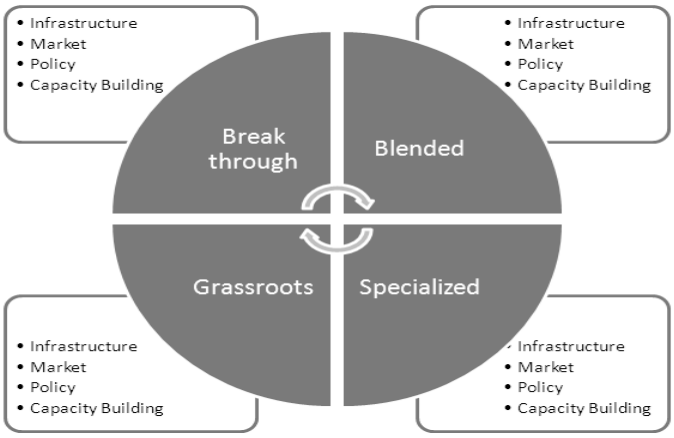

Figure 2: ***Model for Innovation Eco System***

Each of these four opportunities under Innovation Ecosystem is made of following components- 1. Infrastructure 2. Market 3. Policy 4. Capacity building. These four components are developed separately while developing common building blocks. For e.g. grassroots IP policy should be completely different from enterprise policy as affordability, time, market is different. Among 4 components, there should be utmost importance given to capacity building. Innovation is linked to people. They make or break it. Hence there should be special focus on hiring, motivation, skill assessment and training, retention, financial support etc. Infrastructure can have common building blocks for better utilization. Market collaboration opportunities can be created between all players so that there is win-win situation among all opportunities space. High degrees of trust and cooperation are mooted between all players for level playing field. For e.g. grassroots innovations can be endorsed by blended players. Specialized innovations can be given special support by government to scale up the operations.

IV. CONCLUSION

Capabilities and Meta structure of all different innovative space components are large and different hence their fostering has to be different and natural. Managing innovation space is highly path-dependent. Role of individual is critical in this space. It has to be strategic and less depends on patterns. Innovation is managed with the help of few game changers, innovators and intrapreneurs in case of organizations. Hence these key individuals are very critical in this space. They play major role building organization or sustainable society. Government, Investors, Customers must appreciate their shared vision and leadership and give them necessary support. In certain cases, we need to understand that even if there is high failure rate but it helps in fast learning, leading to learning society or learning organization. In order to build innovative society, we need an eco-system to these innovative players where we allow and accept mistakes and encourage them for risk taking. A successful management practice establishes effective linkages between innovator's community, society or customers and available limited resources.

V. REFERENCES

Prof Anil Gupta (2005), "Rural India creates more than just poverty. A wealth of ideas awaits", Outlook Special Issue on Science & Technology, July 18, 2005, p 55

Anuja Utz and Carl Dahlman (2007), Unleashing India's Innovation: Toward Sustainable and Inclusive Growth edited by Mark A. Dutz, World Bank, 2007, Chapter 4, p 115

Prof Anil Gupta (2010), "Empathetic innovations: Connections across boundaries, to be published in a book entitled, "Timeless Legend of India, Gandhi" [Ed.] Dr. R. A. Mashelkar in commemoration of 30

years of Gandhi National Memorial Society, Pune, 2010, IIMA WP No.2010-09-02, September 2010" http://www.iimahd.ernet.in/~anilg/selectedpub.php

Chieh-Yu Lin and Chang Jung (2007), "Adoption of Green Supply Chain Practices in Taiwan's Logistics
Industry", Journal of International Management Studies 90 * August 2007, p 90-98

Erik Baark ac, Antonio, K.W. Lau a, William Lob, Naubahar Sharif (2011) "Innovation Sources, Capabilities and Competitiveness: Evidence from Hong Kong Firms", Paper presented at the DIME Final Conference, 6-8 April 2011, Maastricht

Gndüz Ulusoy, Gürhan Günday, Kemal Kılıçand Lütfihak Alpkan (2009), "An Empirical Study into the Determinants of Innovativeness in Manufacturing Firms", TED: Technology and Economic Development3rdInternational Conference on Innovation, Technology and Knowledge Economics Ankara, 24th-26thJune

John Bessant and Joe Tidd (2009) , "Managing Innovation: Integrating Technological, Market and Organizational Change" , 4th Edition, John Wiley & Sons Ltd

Julian Birkinshaw, Cyril Bouquet and J.-L. Barsoux (2011), "The 5 Myths of Innovation", MIT SLOAN Management Review, p 41

NIF (2012), 6th National Biennial Award Function to Honour Grassroots Innovators and Outstanding Traditional Knowledge Holders being organised by National Innovation Foundation (An initiative of department of Science and Technology (DST) India), on 9th March 2012 at Sports Ground, President House, New Delhi

Peter F.Drucker, "The Discipline of Innovation", Harvard Business Review , Nov-Dec 1998 : p 3-8

Planning Commission (2011), "MID-TERM APPRAISAL, Eleventh Five Year Plan", Planning Commission, Government of India ISBN-13: 978-0-19-807205-8

Rashmi Bansal (2011), "I have a dream", westland ltd 2011, ISBN 978-93-80658-38-4, p 141

S Saraf , R.S. Parihar: Sushruta: The first Plastic Surgeon in 600 B.C.. The Internet Journal of Plastic Surgery. 2007 Volume 4 Number 2

Van De Ven (1986), "Central Problems in the management of Innovation", Management Science, Vol 32, No. 5, May 1986, P 604

Vijay Mahajan (2009), "Scaling up social innovation" http://www.india-seminar.com/2009/593/593_vijay_mahajan.htm

Will Travers (2008), "Land Rights and Nonviolence, The Land-Gift Movement in India", NASCO Institute 2008, Nov. 8th (https://we.riseup.net/assets/4464/Land%20Rights%20and%20Nonviolence-Part1.pdf)

WIPO-UNEP (2004), "WIPO-UNEP study on the role of intellectual property rights in the sharing of benefits arising from the use of biological resources and associated traditional knowledge", Jointly produced by the World Intellectual Property Organization (WIPO) and the United Nations Environment Programme (UNEP), (http://www.wipo.int/tk/en/publications/769e_unep_tk.pdf)