VLFM
Visionary Leaders for Manufacturing

Creating
Visionary Leaders
in Indian Manufacturing

**Shoji Shiba
and
Kalpana Narain**

To The VLFM Community

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Prologue – The Beads of Chance

On that July 25 in 2004, it was a great feeling to be present in the Rashtrapati Bhawan, the House of the President of India, in New Delhi. I clearly remember Dr Kalam's private office – a simply decorated square room. We had a very memorable discussion. I did not know then, that over the next few years, a string of beads of chances would someday lead me to the Reception Hall of the Rashrapati Bhawan.
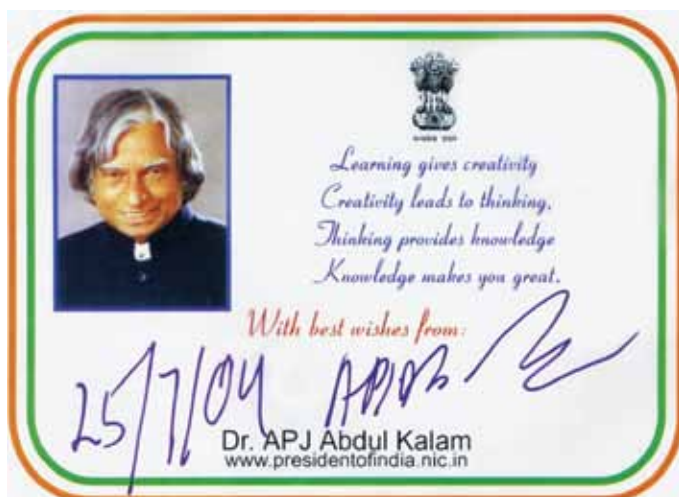
About eight years later, on March 22, 2012, I stood before Smt Pratibha Patil, the then President of India, in the huge reception hall with an ornate gold ceiling. With the Prime Minister of India and a number of dignitaries seated in the audience, I felt honoured and humbled as I received the Padma Shri. It was a once a lifetime opportunity. Surely, a string of chances had brought together a few thought leaders and real change leaders to traverse this unique journey called VLFM.

If I reflect back, there have been many beads of chances right from the first time that Dr Sarita Nagpal, CII came to meet me at MIT upto the time of writing this book.

The first bead in this string of chances was Sarita's persistence in persuading me to come to India– she visited MIT many times. She had been working very closely with Dr Surinder Kapur, Chairman, Sona Koyo, who also invited me to India, when we met during the Deming Prize ceremony in 2004.

After I came to India, the First Learning Community brought together four companies, led by people with a long term vision and openness to accept new learning – Dr Kapur, Mr Pranav Parekh, TechNova, Mr V Narasimhan, Brakes India and Dr V Krishnamurthy, UCAL Fuels.

The stringing together of beads of chances continued– Sarita, Dr Kapur and Dr V Krishnamurthy shared a common passion and the goal of pulling up the level of Indian manufacturing. They spent almost two decades working together towards this goal and therefore had an emotional tie. Having been the Chairman of Maruti, Udyog Ltd, a joint venture of Government of India

and Suzuki of Japan, Dr Krishnamurthy shared close ties with Japan. It was a matter of chance, that he had been appointed Chairman of National Manufacturing Competitiveness Council. He became the pivot for VLFM, bringing together government, academia and industry.

The Directors of Indian Institute of Technology, Kanpur (IIT K), Indian Institute of Technology, Madras (IIT M) and Indian Institute of Management, Calcutta (IIM C) were keen to get involved in a path breaking initiative. Moreover, the VLFM Chairmen appointed by the three Institutes i.e. Prof Ashok Mittal (IIT K), Prof M.N.Pal (IIM C) and Prof T T Narendran (IIT M) had worked together in various areas over thirty years. They had a common academic interest and close emotional tie.

In 2006, the Ambassador of Japan to India, H.E. Yasukuni Enoki, agreed to release my book Breakthrough Management in the Embassy of Japan. After this event VLFM was kicked off. JICA continued to support the initiative making many breakthroughs which are detailed in this book.

At about the same time, Mr Jamshyd N Godrej offered to set up the unique VLFM classroom in Mumbai. It is yet another bead of chance that the classroom was set up in the Godrej elementary school, creating a unique learning environment for VLFM.

These kinds of beads of chances do not get strung together on their own. Surely there is "something great" that offers the chances to build wonderful creations. It is for us to seize these chances. Andrew Grove, while talking about 10X change, defines a strategic inflection point as one that causes an organization to make a fundamental change in its business strategy. This is what makes the timing of actions important.

Our Learning Community activity started in 2004, a time when India was approaching its inflection point. VLFM was launched in 2006 ~2007, based on the intuition of a few thought leaders that India was heading towards its tipping point. Later in 2010, with the Commonwealth Games, the Indian society underwent another drastic change. The timing of the nationwide scale up of VLFM in 2006~07, was just right. If VLFM was initiated after the big inflection point of 2010, it may have been a little late as innovation and breakthrough concepts would be quite common place by then.

It was surely something beyond the ordinary that continued to string together these beads of chances, just when the time was right for each

activity, making VLFM a success and ensuring that a new system of capability building was developed. VLFM is now looking forward to new learnings by focusing on emerging needs of the society.

I believe that I was guided by the many beads of chances. I jumped into the Indian fishbowl as an outsider, at a time when it was undergoing 10X change. An outsider has three strong points that help in playing a key role in such a fishbowl:

1. To undergo breakthrough transformation an insider always needs to unlearn the past background, past experiences and current business. However as an outsider I had the benefit of being in an already "unlearnt" condition. I could therefore offer a fresh viewpoint as well as think about the future freely and flexibly.

2. Though an unlearnt condition is a strength, in some sense it is also a weakness. An outsider has no common sense and no wisdom that natives of a country have from their past experience of their country. Therefore, an outsider needs to follow some principles to guide his behaviour. This is the second strength of the outsider. I follow objective principles based on science as these can be applied in any place, to all the people and at any time. From the very beginning, I never said that I was going to introduce the Japanese management concepts and tools. I always emphasized that my efforts were directed towards introducing a scientific methodology regardless of its origin.

3. The third strength of an outsider is the fact that he must definitely go away some day. In the famous movie "Shane", a stranger rides into an isolated valley town in the sparsely settled territory of Wyoming. Given that he is a skilled gunslinger, suddenly the residents of the valley town start depending on him to help resolve a conflict. He does his best to help them and in the process develops affection for the place and its people. While he cherishes this relationship, he has to move on; one day he just rides away on his horse, fading far into the Western desert. This is the outsider's destiny. An outsider, while he/she is in a foreign country, makes the best effort for achieving a goal in the limited time available.

India's VLFM community had the acceptance, wisdom and capacity to utilize the benefit of an outsider. Such wisdom and capacity comes to Indians from the country's long history of 5000 years. If I think from this viewpoint, the words capability building, sometimes seem very arrogant. The effort of capability building through VLFM is one short scene, almost

like a moment, in this nation's long history and its many societal changes. I got the chance to live with people of India for a short time and as a human being I tried to give my best. I thank the beads of chances for creating the opportunity for me to live in India, at least for this short time.

This book reflects the efforts made by the human being under the VLFM flag. Many people whose name does not appear in this book, worked relentlessly for the common goal of VLFM.

The record in this book has three parts – Part I provides an overview of VLFM (Chapter 1) and the basic concept of capability building (Chapter 2). My activity was focused on creating the Indian way as an outside trigger. Chapter 3 explains the role of an outside trigger to accelerate the process of capability building. As they say "Rome was not built in a day". So also capability building is a process that matures over time. On the other hand, human being is an impatient being and wants to experience early success. The cycle for creating early symbolic success in a short time is explained in Chapter 4. The direction that the transformation process takes is defined by the unchanging elements of an organization. These unchanging elements are shared in Chapter 5.

Part II details the three types of locomotives and how these have developed through VLFM. These are locomotive companies that have expanded the BIG M perspective, that can be considered role models and that have created the Indian Way. Six success cases, in these three areas, have been discussed in Chapter 6,7 and 8.

Part III is titled "After efforts flowers bloom". Locomotives alone are not sufficient for sustaining the impact of success. For them to really pull up the level of those below, flowers must also bloom along the path. VLFM has created this impact in two ways - developing an innovative learning process (Chapter 9), and the process of unlocking the boundaries (Chapter 10).

The basic philosophy of VLFM is "Success is the first step to failure". This means that human beings need to continuous to make efforts to

transform. One cannot follow the same way forever, even if that way has been successful in the past. The only way to remain relevant to society is to evolve and keep moving forward. With this belief, VLFM continuously transforms itself. Efforts are now being made to develop "Champions of Societal Manufacturing". Societal manufacturing is a current challenge for India and VLFM's endeavour is to contribute to the efforts of meeting this challenge.

I, along with Kalpana Narain, dedicate this book to all the members of the VLFM Community, as well those who, directly or indirectly, contributed to the progress of VLFM.

Shoji Shiba
March 10, 2013
New Delhi

Acknowledgement of the Efforts of VLFM Community

This book is dedicated to all the members of the VLFM Community as well those who, directly or indirectly, contributed to the progress of VLFM.

In the last eight years' VLFM has progressed very much. But this progress is not the result of the effort of one or two people or even a group of people. An initiative that has far reaching impact on societies can surely not be the effort of a handful of people.

In a theatre only the actors appear on stage, but a play receives acclaim with the selfless dedication of many working behind the scenes. In this sense, VLFM is very similar. Countless people have worked behind the scenes to provide the ecosystem for VLFM, helping it to achieve the noble goal of transforming Indian manufacturing.

In fact, when we tried writing the acknowledgements for VLFM, we realized that there were thousands of people, numerous organizations and many agencies whose efforts had gone into the progress of VLFM. There are two levels at which these efforts have been made; at the macro level it is the efforts of the society, the government, academia, industry and the media and at the micro level it is the dedication of organizations, individuals and their families.

Various officers of the Government of India transformed their own mindset, ensuring the success of VLFM. From the Secretaries down to the Junior Officers, many demonstrated exemplary dedication to the initiative, becoming role models for others to follow. This dedication has been equally matched by the officers in the Government of Japan. They made breakthroughs in implementation of schemes, to support the VLFM initiative.

The Governments of the two countries collaborated giving VLFM the necessary foundation to build on. And, the Embassies of India and Japan played their role by providing the essential framework to achieve this objective.

The immense contribution of the Japanese experts in helping unlock the boundaries of participants cannot be undermined. These experts spent their valuable time in India, guiding the managers from Indian industry for no financial gain.

Experts from USA and Europe were also invited by the VLFM Community. They spent their valuable time sharing their insights with the VLFM participants and helping them to develop global leaders' mindset.

Japan Visit plays a key role in expanding the horizon of the Indian participants. This key element of VLFM requires much effort on the part of a number of Japanese agencies and individuals. The logistics of receiving more than 100 people in a year, arranging for their stay, organizing learning visits etc is the work of a highly skilled team. Various Japanese companies and museums receive Indian participants and many individuals contribute their time for delivering lectures, interacting with participants and supporting activities such as SIR. These are all critical aspects of the learning process during VLFM.

On the Indian side, many companies placed their faith in VLFM at the time it was being launched. They offered their resources as well as time and nominated participants to the Course. Year after year they have sent their senior managers as Module Demonstrators to support the VLFM Course for no financial return.

The noble mind of the Indian companies is demonstrated from their openness to offer themselves to pilot some of the courses and for writing case studies. Senior managers of these companies spent many weeks in documenting the success cases, with the objective of encouraging other companies to follow the path of transformation. Neither the companies nor the authors have ever claimed any royalty on these publications.

With a number of CEOs sharing their experiences, the classroom sessions became a source for participants to unlock their boundaries. Additionally, with the selfless efforts of many individuals, such as the Danseuse and the Wine Expert, night sessions provided them opportunity for holistic development. Over the years various expert shared their insights and expertise with participants till late in the night, come hail, rain or storm!

A just right environment was created for the Japanese experts as well as for implementation of VLFM.

The implementing agencies from both the academia and industry, not only opened themselves to new learning, they also provided the necessary resources in terms of people and infrastructure. Most importantly they made every effort to provide an innovative learning environment.

The accommodation for Japanese experts in Mumbai turned out to be a lifeline, especially during periods of long stay. Many persons worked to ensure that the accommodation was functional, comfortable and met the requirements of the Japanese experts. The availability of medical facilities at a stone's throw from the classroom was a big comfort factor.

The school, where the classroom for Senior Managers' Course is located, has been a source of constant inspiration and encouragement for the implementers and participants alike.

The Japanese and Indian companies received large VLFM delegations providing an opportunity for the Indian managers to learn. The noble mind of these companies is reflected in them agreeing to open their doors even to competitors, who were often present in the visiting group.

Media plays a significant role in the success of any initiative. Both the Japanese and the Indian media not only showed interest in VLFM, but made sincere efforts to diffuse valuable information about this initiative, creating high acceptability in the society.

Without such infrastructure and resources, VLFM couldn't have progressed beyond a point.

While various organizations, agencies and people worked relentlessly to deliver the VLFM courses, the dedication of the participants to learn has also been exemplary. In the last seven batches, there have been numerous instances of deaths of loved ones, extremely critical health conditions of either a participant or a close family member and other pressing family engagements. However, nothing has deterred the participants from learning. They have never foregone the once-a-lifetime opportunity to learn and contribute to transforming India's manufacturing. Their spirit to continue, in the most adverse of circumstances, has been an inspiration for the implementers to go on.

An eight year journey is quite long. During these eight years the VLFM community lost two of its guiding lights: Mr V Govindarajan and Prof M N Pal. Mr Govidarajan, then Member Secretary, NMCC, was a

very experienced man, with a keen understanding of the sensitivities of the relationship between Indian industry and academia. He played a vital role in keeping the various stakeholders together by continuously guiding them. Prof Pal, the 1st Chairman of the Middle Level Managers' Course, was a highly respected academician of India. He had the vision to understand the importance of an initiative such as VLFM and the astuteness to bind together the partners from the academia. He recognized the importance of Japan Visit and was one of the initiators of SIR, a key learning element during Japan Visit. The VLFM community misses the presence of these two guides and partners.

Major Sharma, who passed away a couple of years ago, enhanced the holistic development of the participants, by sharing his knowledge about wines, during the night sessions.

A special mention must be made of the families of all those people who were continuously working for VLFM. They sacrificed their precious time with their loved ones, enabling them to freely work for the society.

Let us together celebrate the progress of VLFM and commit to continue on the path of transformation through this initiative.

Part I: Capability Building to Enhance Manufacturing Industry in India

Chapter 1

What is VLFM

1-1 Why Was VLFM Necessary

India is amongst the few economies of the world that have recorded a GDP growth of 8~10% per annum since the year 2000. However, given a population of more than a billion, this high growth rate has not been considered sufficient for the Indian economy to achieve equitable and inclusive growth. The Indian Government has been keenly aware of the need for sustained GDP growth over long periods, as well as percolation of this growth to all sections of the society.

Sustained double digit growth is possible only with the manufacturing sector contributing a minimum of 25% to the GDP. India's manufacturing sector though contributes only about 17% of the GDP. In comparison the contribution of manufacturing sector to the GDPs in the East Asian economies is much higher, for example in China this figure is at 35% and in Thailand it stands at 34%.

Need for Indian manufacturing to grow also arises from its need to create employment opportunities for the millions of employable Indians living in rural and urban areas alike.

To achieve and sustain this economic growth, it is considered necessary for Indian manufacturing to transform through policy changes, infrastructure creation and development of visionary leaders. India currently faces a severe crunch of senior managers skilled to lead manufacturing companies in an environment of drastic change and to create many more new jobs.

A deep sense of urgency has therefore been felt, by the Indian industry as well as the Indian Government, to transform India's manufacturing sector. Government of India thus notified the setting up of National Manufacturing Competitiveness Council (NMCC) on 6th October, 2004 with a mandate to

provide a continuing forum for policy dialogue to energize and sustain the growth of manufacturing industry in India. NMCC is expected to suggest various ways and means for enhancing the competitiveness of the manufacturing sector and recommend national level industry/sector specific policy initiatives necessary for augmenting manufacturing sector growth. In 2011, the Government of India announced a National Manufacturing Policy with the objective of enhancing the share of manufacturing in GDP to 25% and for creating 100 million jobs within a decade[1].

In addition to the internal pressures for transforming Indian manufacturing, are the global drastic changes. These global changes, coupled with India's economic growth, have triggered various drastic changes within the country. Thought leaders from India's manufacturing sector as well as the Government clearly see the need for a new mindset in Indian industry. India faces a severe crunch of senior managers who have this new kind of mindset and those trained to lead their organizations through periods of drastic change. Additionally, over the years, Indian engineering graduates have consistently chosen jobs in the service sector as against the manufacturing sector.

Figure 1-1. India's thought leaders clearly saw the need for a new initiative.

Therefore the challenges that have faced the Indian Government, Industry and Academia are threefold

1 how to increase the contribution of manufacturing to India's GDP
2 how to create additional jobs for millions of employable Indians
3 how to overcome the severe manpower crunch in manufacturing at senior levels

The Indian thought leaders believed that it is critical to develop senior managers capable of breakthrough thinking and envisioning future concepts, trends and businesses, thereby transforming Indian manufacturing industry.

The Government of India thus initiated the Visionary Leaders for Manufacturing Program (VLFM). This initiative is aimed at building capabilities with the help of Japanese experts to create a few locomotive organizations. In the VLFM context, these capabilities relate to new management tools and concepts with a view to achieving breakthrough results. Though the initial plan was to train 500 senior managers through this initiative, over 800 have received the training between 2007 and 2013.

Over the years, through its contribution to India's development, VLFM has become a symbolic case of successfully building capability. In this book we share the process of building capability, the key success factors and some symbolic results.

To begin with we give an overview of VLFM .

1-2 Basic Strategies Behind VLFM Design

The objective of VLFM is to develop India's manufacturing industry. To work towards this objective, three basic strategies were following for designing VLFM.

Create Locomotive Companies

The first basic strategy was to create companies who would play the role of locomotives to pull up the level of the huge Indian manufacturing sector. India has a population of more than a billion, similarly the number of manufacturing companies in India's is also quite large. With the limited resources that VLFM had, it was not possible to push the level of the entire industry using a bottom up approach. It was however possible to create locomotives, that would shine as star companies becoming role models and pulling up the other manufacturing companies. Sony and Honda played such a key role in development of Japan's manufacturing in the 60s, 70s and 80s. If a few Indian companies could be developed to play a role similar to that of Sony and Honda in Japan, development of Indian manufacturing would get accelerated.

Emphasize on Leader's Mindset and Behavior Change

The leader's mindset has to change from focus on daily job to small m thinking and further to understanding the BIG M perspective.

In our experience, we have seen that engineers generally tend to see reality within the limited framework of their daily job. To become effective managers they need to expand their view at least to small m i.e. take into account at least the entire organization picture when taking a decision. They need to develop the ability to combine logic with intuition. Therefore, for the middle level managers, VLFM focuses on converting their mindset from a focus on daily job to understanding the small m picture.

Similarly, in our experience we have seen that most senior managers tend to think of manufacturing as being limited to production i.e. "small m" mentality. It is necessary for senior managers to break such small m mentality and understand the Big M picture. Big M (Figure 1) is not limited to production but encompasses design, R&D, sales, supply chain. In addition it includes societal and environment related changes.
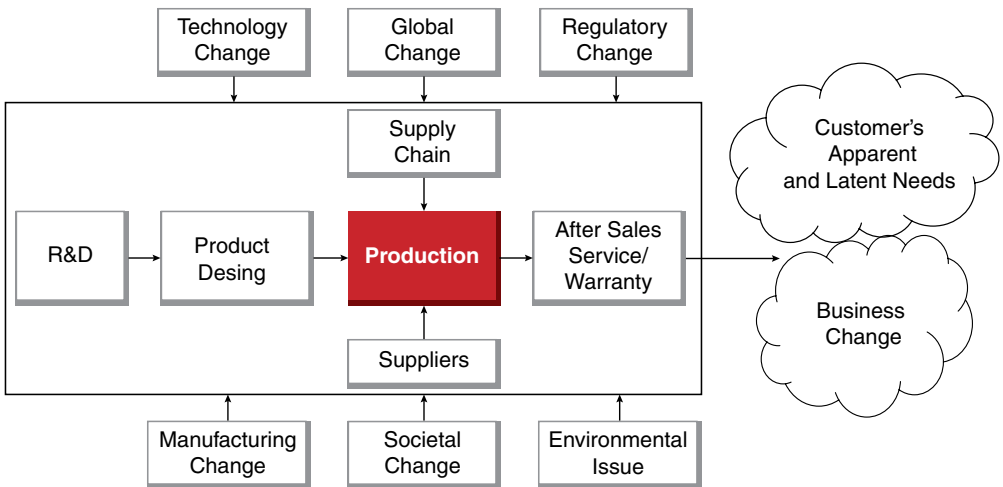
Figure 1-1. VLFM emphasizes on transforming the mindset of Indian leaders beyond production, from small m to BIG M.

India is changing drastically, especially in areas related to society, environment and technology. Awareness of such factors is critical for senior managers to effectively lead their companies in periods of drastic change. Therefore VLFM is designed to focus on transforming the mindset of senior managers from small m to BIG M.

Develop Collaboration between Government-Academia-Industry

It is generally seen that a country progresses better when industry and academia collaborate. If industry invests resources and offers real cutting edge problems, new application based technologies can be developed. Similarly, when the academia gets insights into the real industry issues, they are able to improvise their academic research to create new knowledge.

India has a very high standard of academic institutions offering technical education – under the flag of Indian Institutes of Technology. While the quality of their education and research is very high, the collaboration with industry is rather weak compared to other research universities such as MIT of USA.

Additionally, many educational institutions in India, while being autonomous bodies, do have Government involvement. The IITs are autonomous public engineering institutes governed by the *Institutes of Technology Act, 1961.* The Indian industry also works within the framework of Government policies. The Government's understanding of the needs of both academia and industry is thus critical, as they play an umbrella role for both. With an understanding of such needs, the Government can also frame policies that encourage academia - industry collaboration.

Given the current landscape in India, collaboration between Government-Academia - Industry is considered critical. Without such collaboration long term development of Indian industry will be limited.

1-3 Four Courses in VLFM

VLFM has been designed under the basic strategies explained above. In addition, VLFM has one more very unique characteristic. "Given that the Indian industry has been facing a severe leadership crunch, VLFM addresses the leadership development challenge at every level within the organization. At the time VLFM was being designed a number of other initiatives such as Kaizens, TPM, Lean etc were already being successfully implemented in India's manufacturing industry. These were bringing the desired results and did not require new interventions. The challenge was to create a pool of leaders skilled to lead their organizations in a period of drastic change, which is what VLFM focuses on.

If we take the hierarchical view of an organization we find that most organizations are headed by a CEO, who symbolizes the organization. At the next level there are number of senior managers responsible for various business units. Then there are middle level managers who are responsible to execute the real business. In addition, every organization has relationships with suppliers, who are mostly small and medium enterprises (SMEs). India is currently developing very rapidly, making supplier quality a key issue.
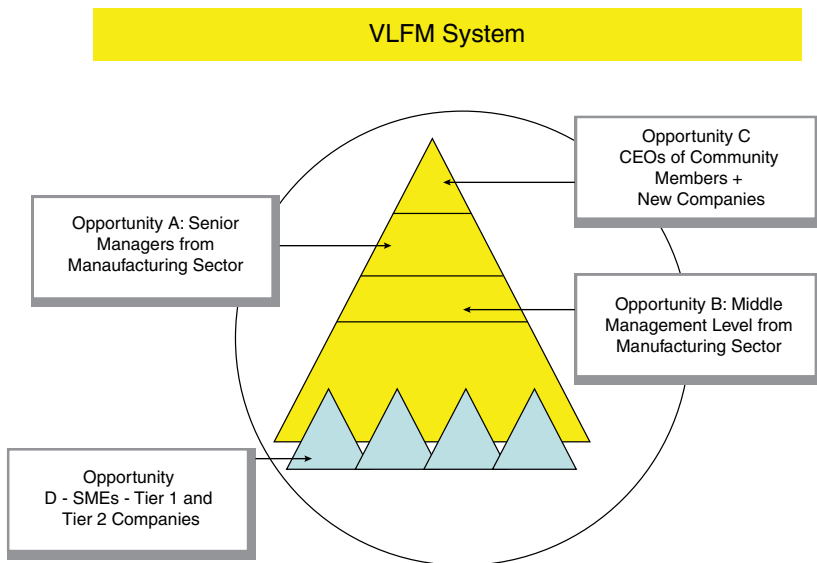
Figure 1-2. The VLFM System collectively addresses the country's requirement of developing leaders for future of Indian manufacturing.

Therefore, VLFM Program covers four key aspects of the manufacturing industry through the following four courses (Figure 2):

Opportunity A i.e. Senior Managers' Course
Opportunity B i.e. Middle Level Managers' Course (PGPEX-VLMP)
Opportunity C i.e. CEOs Course
Opportunity D i.e. Visionary Small Medium Enterprise Course (VSME Course)

Collectively these four courses address the nation's requirement of developing managers with a consistent and unique approach as well as the capability to lead Indian Manufacturing into the future.

As highlighted earlier, VLFM is a collaborative effort between government, industry and academia. The government is represented by NMCC and Ministry of Human Resource Development (MHRD), while the industry is represented by India's apex industry body, Confederation of Indian Industry (CII). From the academia, three leading technology and management institutions have collaborated – Indian Institute of Technology, Kanpur (IIT K), Indian Institute of Technology, Madras (IIT M) and Indian Institute of Management, Calcutta (IIM C).

Senior Managers' Course

Senior Managers' Course is a five module program conducted by CII. This course is focused on transforming the mindset of Senior Managers from small m to BIG M. The participants of this course are always sponsored by their company provided they fulfil the following criteria

1 They will remain with the company for a long time
2 They have a willingness to contribute to India's manufacturing sector
3 They will be given a breakthrough project after the course

Middle Level Managers' Course

Middle Level Managers' Course is a one year full time course jointly conducted by IIT K, IIT M and IIM C. It is focused on expanding the horizon of engineers from focus on daily job to understanding at least the small m perspective. This is done by creating a fusion of management and technology. This program recruits students through a two stage selection process

comprising an entrance examination followed by personal interviews. They usually quit their jobs and are not sponsored by any company. Clearing the examination process is only one pre-requisite to enter the portals of VLFM. Additionally, they must have the following qualities/qualifications:

1. A consistently good academic record with the last qualification being a first class degree in Engineering.
2. They must have at least 4-5 years' experience in a manufacturing job.
3. They must be committed to work for a manufacturing job

CEOs' Course

CEOs' course, conducted by CII, is a short need based workshop with the objective of enabling the companies to leverage their pool of VLFM resources.

VSME Course

VSME course, also conducted by CII, is a unique course with the objective of transforming the relationship between Tier 1 and Tier 2 companies, into a win-win relationship. Anand Group, one of the Founding Members of VLFM, offered to pilot this course. Mr C S Patel, Member, Supervisory Board, Anand, initiated VSME. Plants of five companies along with 22 SMEs joined the pilot. Later, in the true spirit of a community, Anand supported the other VLFM companies by sharing their learnings of the pilot project.

Name of Course	Total No of Graduates as on March 2013 is 810	Conducted by	Execution Detail
Senior Managers Course	335	CII	5 modules of one week each conducted over a year period
Middle Managers Course	187	IIMC-IITK and IITM (Collaborative execution by 3 Academic Institutions)	Full time one year residential course where participants learn the strong point of the three academic institutions
CEOs Course	62	CII	1-2 day course for leaders of VLFM as well as other manufacturing Companies
VSME Course	136 (T1) 90 (T2)	CII	Developing win-win relationship between T1 and T2 of automotive industry

Figure 1-3. Details of VLFM four courses[2].

1-4 Unique Aspects of Four Courses

The four courses under VLFM build capability at various crucial levels of the manufacturing industry. Each of these courses also has its own uniqueness. Let us briefly discuss these unique aspects.

Senior Managers' Course

There are three unique points about the Senior Managers' Course:

1. Senior managers who attend this course have a homogenous background. For example they all come from manufacturing companies
2. The learning style followed in this program is homogenous through out the duration. For instance it is focused on problem solving and FSDP (Five Step Discovery Process, see chapter 5) is the common tool used throughout
3. Almost all modules are held in one unique classroom which has been set up in Mumbai

This kind of learning process is necessary for Senior Managers because even though each person has a different leadership style, their role is that of aligning all the people to the organization goal. Therefore they have to become role models and develop the ability to integrate everyone for alignment to organization goals.

Senior Managers' course imparts skills to the participants to make such integration and that is why we create a homogenous environment and use an approach that helps in holistic learning during the course.

Homogenous Environment

As explained above senior managers need the ability to align their teams to organization goals. With teams often being made up of people from diverse backgrounds, a senior manager's job is to motivate the members to achieve common organization goals. VLFM prepares senior managers for such responsibility by providing a homogeneous environment in the classroom as well as many opportunities of group work.

This five module program requires participants to go back and forth between classroom sessions and their real business environment. This is an opportunity for them to immediately apply the learnings in their business.

Holistic Learning Approach

Senior Managers' Course aims to transform learners from effective managers to visionary leaders i.e. leaders with the ability to lead their companies during drastic change. An effective manager is considered effective because he has strong ability to execute, solve current problems and motivate people.

A visionary leader needs a different mindset i.e. a noble mind, ability to perceive and solve future invisible problems and three eyes of the Buddha. Three eyes refer to the eye of control, eye of incremental improvement and eye of breakthrough. This kind of ability and expansion of boundaries takes place by following a holistic learning approach.
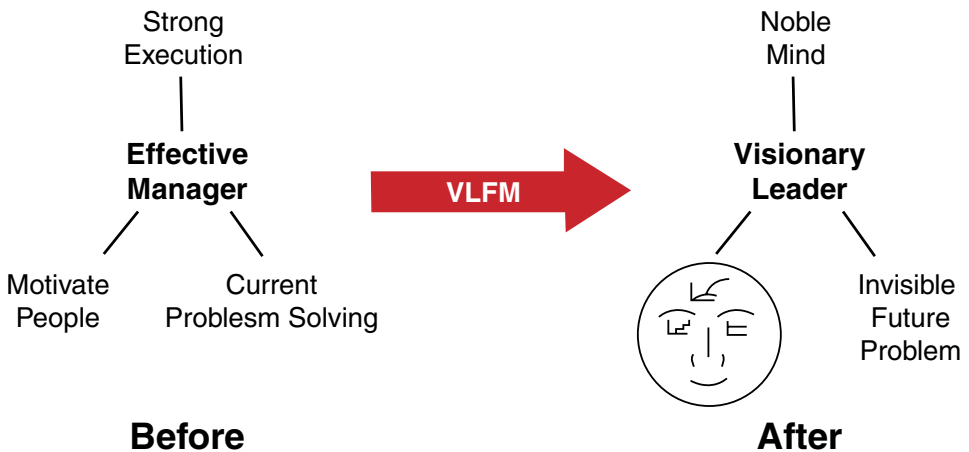
Figure 1-4. VLFM Program aims at transforming Effective Managers to Visionary Leaders.

The 30:70 Principle followed in the Senior Managers' course provides participants with such a holistic learning experience. This principle states that the lecture component of a training program should be limited to 30%, the rest 70% being learning by experience. This is especially true when the objective of learning is building skill which comes only by experience.

Apart from classroom lectures and practice sessions, the modules of Senior Managers' course include sessions on Indian classical dance, international dining etiquettes, art appreciation and dramatics. Senior business leaders share their experiences in areas beyond business such as spirituality in business, cricket and mountaineering.

Visits to manufacturing plants are common sense and the objective of learning about manufacturing best practices is easily met. But the BIG M perspective and expanded mental boundaries are difficult to develop with plant visits alone. VLFM organizes visits to places such as *"Dhobi Ghat"* (public place for washer men to wash clothes), shopping malls and homes of customers. During the Japan module participants visit a Japanese temple and experience a ride on the Shinkansen (the Japanese bullet train known for its efficiency and zero accident track record).

These interactions and visits help transform the mindset of participants from small m to BIG M. Traditionally, in India, people limit manufacturing to production i.e. they have the small m mindset. There are many other aspects to manufacturing – for example product design and R&D which take place before production and sales, warranty and supply chain, which are key post production elements. In addition, manufacturing is impacted by technology changes, societal changes, environmental changes, new competitors and globalization. All these elements together form the BIG M or the big picture of manufacturing. For a manager to be considered a visionary leader, he must have an understanding of the big picture of manufacturing. If he limits himself only to production it is not possible to get breakthrough results. This has been discussed in detail in Chapter 5.

Alongwith the BIG M mindset participants develop the ability to listen and become customer oriented. They undergo a complete mindset transformation which forms the foundation for becoming a visionary leader.

Middle Level Managers' Course

The Middle Level Managers' course has three unique aspects that arise from its diverse nature:

1. Participants of the course have a diversified background – they come from various types of industry
2. Contents and style of teaching are based on the strengths of each collaborating institute (IIT K, IIT M and IIM C) have their own area of expertise and strength such as automation, operations management etc
3. Ability to adapt to new environment due to diverse locations of each of the institutes.

A Unique Program with Fusion of Management and Technology

This program emerged from a pressing need to transform engineers into effective managers. Engineers generally have a "daily job" view i.e. they are focused only on their limited area of work without taking the larger picture into perspective. An effective manager has at least a "small m" view which expands beyond his own area of work to encompass some other parts of the organization.

In addition to a limited view, engineers mostly have a logic based view point but management requires something beyond logic – it requires a combination of logic and intuition. Managers require the ability to move up and down between the level of thought and level of fact (Please refer FSDP Process in Chapter 5). This is the fusion of management and technology.

For example Indian industry and academia both believe that engineers have a "two-value" approach to problem solving whereas real management requires a "multi-value" approach. Normally an engineer takes information on its face value and does not consider other peripheral information when making a decision. For example, if a sales executive tells an engineer that he expects to sell 260 units of a product in a certain month, the engineer would take this as the target figure. A manager, however, would also consider the general attitude of this sales executive i.e. does this person often under commit, if so the division can actually expect to sell more than 260 units. Whereas if this sales executive often over commits, then the division should plan for sales of less than 260 units. Such a holistic view is important for a manager and comes from fusion of management and technology.

Unique Diverse Learning Environment

The middle level managers' course gets its uniqueness from the fact that it is jointly conducted by three leading academic institutions of the country – Indian Institute of Management, Calcutta (IIM C), Indian Institute of Technology, Kanpur (IIT K) and Indian Institute of Technology, Madras (IIT M). This course follows a migration model that requires students about 50% of their time at IIM Calcutta and rest 25% each at the two IITs on a residential basis. They also undertake a six weeks' internship in industry and spend ten days in Japan.

Students of this program are mostly from middle management level. In their daily jobs as managers they often interact with people from diverse backgrounds. The structure of this course prepares them to deal with diversity of culture, language, religion, orientation towards work etc. and expands their boundaries.

Hailing from various parts of the country and various industries, these students have a diverse outlook. They learn together for one year becoming a unified group and part of a community. In the process each individual develops the ability to understand the other's viewpoint.

This course provides the students an opportunity to learn from three different academic institutes. Each institute has its area of specialization giving the students a diverse or heterogeneous learning environment.

The migration model exposes students to the diverse cultures of India as well as Japan. Kolkatta, Kanpur and Chennai are quite diverse in terms of their cultures. Six weeks in the industry and ten days in Japan also add to their learning in a diverse environment.

This kind of heterogeneous environment expands their canvas giving them the ability to deal with people from different walks of life.

CEOs' Course

The overall VLFM System focuses on creating a critical mass of managers with cohesive thinking. This makes the CEOs program an integral part of the initiative. This course has two unique aspects:

1 unique learning approach – it follows the no teacher/facilitator approach
2 reliance on physical learning environment – selection of location is critical because of its impact on the learning experience

Objectives of CEOs Course

With a dialog and experience based structure, the CEOs Program is generally a two day workshop at a unique location. The objectives of the workshop are:

1 for the CEO to understand how to utilize VLFM resources
2 diffuse information about VLFM
3 development of CEO

How to Utilize VLFM Resources

Companies sponsor participants to Senior Managers' Course. From the viewpoint of the company this is a huge investment in key human resources. The main objective of the CEOs' Course is to enable the CEO to understand how such resources can be utilized to the organizations' benefit. A good way to understand this is sharing experiences of success and failure.

Diffuse VLFM Information

The second objective of the CEOs Course is to diffuse information about VLFM into the manufacturing sector. The idea is to explain the benefits, contents and success of the various VLFM courses and encourage other companies to adopt the VLFM ways.

Development of CEOs

The CEOs course creates a learning opportunity for CEOs and offers the following unique aspects:

1 The CEOs Course does not have any facilitator or teacher. All those present in the classroom are teachers as well as participants
2 Since there are no teachers this course doesn't rely on the power of the teacher to transfer learning. The course relies on the influence of the physical learning environment, thus making selection of venue very critical. This is an important aspect of the learning process. For example the second CEOs Course was held in Mahabalipuram, Chennai which offered CEOs the unique experience of visiting the stone carvers' village and of meditating at the beach.

CEOs Course is organized only when the need for this program arises. Sixty Two CEOs have already attended this course and now they play a key role in promoting VLFM and its culture in the Indian manufacturing industry.

VSME Course

There are many areas for SME development; in VLFM we focus on development of locomotive companies in the auto industry. Being the leading industry in India it has the potential to be a locomotive to pull up rest of the manufacturing sector. Though VSME was launched in Pune in 2009,

it has since expanded to various manufacturing hubs of India – Chennai, Bangalore, Gurgaon, Parwanoo (a small town in Himachal Pradesh) and Mumbai.

This course has created three revolutions in the relationship between Tier 1 and Tier 2 companies:

1 Create a win-win relationship instead of win-lose between Tier 1 and Tier 2 companies
2 Destruction of hierarchical nature of relationship of Tier 1 and Tier 2
3 Application of snowball concept to create early success

Unique Approach to Transforming Tier 1 and Tier 2 Relationship

The first revolution of the VSME Course is a transformation of relationship between Tier 1 and Tier 2 companies. A focus on auto industry led to a breakthrough idea requiring a complete change in direction. The unique approach was to improve the relationship between the Tier 1 (T1 i.e. customer) and Tier 2 (T2 i.e. Supplier i.e. SME) rather than try to improve the effectiveness of material supplied by Tier 2 to Tier 1. The underlying belief was that if relationship between T1 and T2 becomes win-win, results will follow. This belief proved correct and has created a new model of SME development.

Destruction of Hierarchical Relationship

The second revolution of the VSME course is the destruction of hierarchical relationship. Traditionally auto industry has a hierarchical relationship between OEM, Tier 1 and Tier 2. Parts are supplied by T2 to T1 to OEM. Therefore traditionally the education of suppliers revolves around OEM teaching T1 or T1 teaching T2. In reality this kind of education system translates to instruct and check results. We have disrupted this kind of hierarchical relationship. Under VSME T1 follows 'do' and 'demonstrate'. The CEO of T1 personally gets involved in the transformation process and often makes visits to T2 plant. The T1 Engineer goes to the T2 plant and demonstrates how to make the a Visual Stream Map and also gets involved in the various Workplace Transformation activities.

In addition this course has tried to disrupt the hierarchy within the organizations as well. The CEO of T1 learns new concepts and tools and demonstrates to the Plant Head. The plant head demonstrates to the middle level managers and the engineers.

This new approach and strategy brought some good results in VSME by first transforming the T1 and T2 relationship. These results have been shared through the Sona Paragon case in Chapter 6.

This way the VSME course has disrupted the hierarchical relationship within the organizations as well as between T1 and T2.

Apply Snowball Principle

Snowball concept refers to starting the transformation project from a small symbolic area, expanding the coverage later. Since failure makes the wheels of transformation heavy, early visible success is critical for the continuation of a transformation project.

Moreover, as transformation projects are many times started during crisis and have limited resources it is best to invest the limited resources in one place and get early success. This will motivate everyone to apply the new concept.

In the VSME course the snowball concept is applied by identifying one model line in the T1 plant to kick off the transformation project. Transformation on the T2 model line is activated only after achieving early visible results on the T1 line. After visible success is achieved on these two lines, the coverage is expanded to other lines and other SMEs.

1-5 VLFM Created a New Wave to Promote Indian Manufacturing Industry

Figure 1-2 gives a comparative overview of the four courses and how they collectively address the national requirement of India's manufacturing sector.

Figure 1-5 clearly shows the different approaches for developing leaders according to their hierarchical position in the organization. Let us first focus on this need within the organization which is addressed by three courses – middle level managers' course, senior managers' course and CEOs course.

	Approach	Objective	Unique Process	Why
Senior Managers' Course	Holistic Learning focused on developing 1. Eye of Breakthrough 2. Human Quality 3. Leadership Ability	Transform from Effective Manager to Visionary Leader i.e. from small m to BIG M (Figure 1-1)	Homogeneous Learning Environment	The Senior Manager's responsibility is to become Role Model to Align Organization
Middle Level Managers' Course	Fusion of Management and Technology 1. Learn the best of the three institutes 2. Diversified environment	To transform middle level managers from engineers to effective manager i.e. from daily job to small m	Diversified Learning Environment	Need to expand their canvas and interact with different categories of people
VSME Course	Cascading style approach starting from top management Focus on Auto Industry	Transform relationship between T1 and T2 from Win–Lose to Win–Win	Do and Demonstrate onsite rather than order and instruct Community Learning Process	Apply Snowball – start from one model line and then expand to other
CEOs Course	Dialog style learning with focus on new experience	How to best utilize VLFM investment	No teacher or facilitator	Self realization

Figure 1-5. Comparative overview of the four courses under VLFM Program.

To execute their daily jobs effectively middle level managers not only need the engineers' viewpoint but also a manager's view point. This makes it important for them to expand their boundaries and develop the capability to visualize and understand a wider range of challenges. Such a capability is developed by experiencing a diverse learning environment; an environment that enables them to develop the ability to capture the new trends and societal change.

On the contrary senior managers need to integrate various activities of the organization into a single strategic direction. Therefore the key skill they require is the ability to align people to the organization goal making integration an essential element. To acquire such a leadership skill a homogenous, convergent learning is necessary. Those who attend the Senior Managers' Course generally have similar beliefs, similar careers and similar professional backgrounds since most of them are engineers. They need to learn the same BIG M concept. Therefore their learning environment has to be homogenous, integrating and convergent.

For CEOs standardized training is not necessary. Each company has its unique history, character and strategy. Therefore the CEO must learn by himself. The only common area of learning for companies belonging to VLFM community is how to utilize their VLFM investment. Therefore CEOs Course is designed with such an objective.

Another important aspect of businesses is interrelationship between organizations. One of the most important relationships is that between customer (T1) and supplier (T2). This is not to say that the relationship of T1 with OEM is not important. Traditionally companies maintain a hierarchical relationship with suppliers.

In VLFM the belief was that there was that for self independent development of SMEs a breakthrough was necessary in this traditional mindset. Therefore, VLFM followed the principle that all organizations are equal. There has been an effort to create an industry community amongst T1 and T2 companies given their commonalities

1 even though one company's output is a component for the other's product both manufacture tangible products
2 both have a common objective i.e. to develop their own business

T1 and T2 are therefore sailing the same ship with the same destination, thus making win-win relationship important.

Leaders have an important role to play in developing the Indian manufacturing industry. Therefore the main objective of VLFM is to create visionary leaders. These four different courses are essential to develop leaders who can play the locomotive role for transforming Indian industry. Even if one of these courses was missing the development of Indian manufacturing industry would get limited. These four courses were designed under VLFM with this belief and background.

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Chapter 2

Building Capability for Self Learning

2-1 Five Levels of Capability Building

VLFM has been an experience of learning from Japanese experts. VLFM is focused on building capability in new manufacturing management tools and concepts that accelerate achievement of breakthrough results.

Through VLFM we realized that there are five visible levels in a capability building process. The relationship between these levels and elements is shown in Figure 2-1
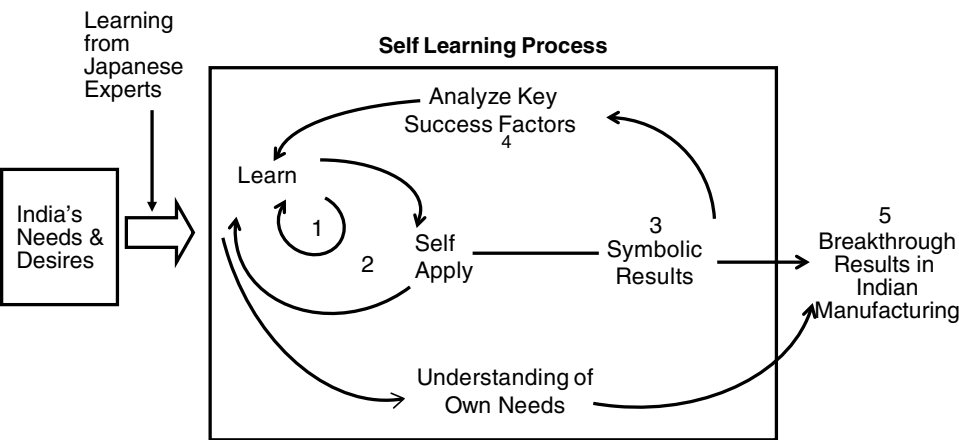
Figure 2-1. Relationship between five levels and elements of capability building (also see Figure 2-2).

In VLFM these inter-relationships were triggered by a strong desire of the Indian side, otherwise this capability building project would never have been successful. It was well understood by the Government, Industry and Academia in India that development of the manufacturing sector holds the key to India's development (as explained in Chapter 1). Therefore a strong desire and a need for new learning existed in India.

The next necessary element is an effective learning process. For building capability a learning process that is aligned to the recipient's needs is critical. In the VLFM case the need was to build capability to develop India's manufacturing sector.

The key aspect to understand here is that learning process is not a static concept. It is similar to development of human beings and evolves step by step. This is the key factor to consider in the process of building capability. As the learning process evolves the output also evolves.
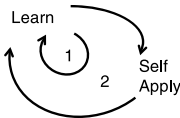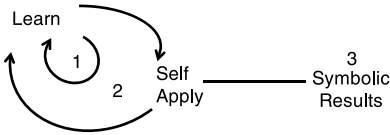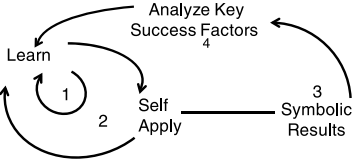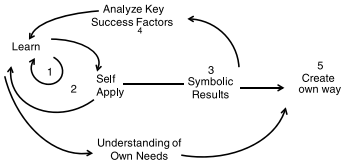
	Level	Process	Output
1	Learn (diagram: cycle 1)	Learning stage –when initiator's push creates action	Learning takes place only for knowledge
2	Learn (diagram: cycle 1, 2 Self Apply)	Motivation to apply new tools and concepts on one's own	Some preliminary results appear but these cannot transform the entire organization
3	Learn (diagram: cycle 1, 2 Self Apply, 3 Symbolic Results)	Many trials of self application by the learner	Significant results of transformation in own area of business
4	Learn (diagram: cycle 1, 2 Self Apply, 3 Symbolic Results, 4 Analyze Key Success Factors)	Analysis of key success factors	Generalization of method by documentation of success cases
5	Learn (diagram: cycle 1, 2 Self Apply, 3 Symbolic Results, 4 Analyze Key Success Factors, 5 Create own way, Understanding of Own Needs)	Diffusion of tools and concepts into the wider society will begin	Creation of own way

Figure 2-2. Evolution of Learning Process and Output.

Let us explain these five levels and their outcome.

Initiator's Push Creates Action

The first level in the learning process is where learners just digest the new learnings. At this stage there is often a big gap between what they have learnt and the real business situation. Then it seems like learning for the sake of gaining knowledge. At this level, the learner mostly applies the learning when the initiator's push is available. The initiator is often an outside factor who triggers the process of learning. But for the initiative to get catapulted to the next level it is important to continue to apply the learnings and make trials leading to some mixed results.

Self Application of Learning

Fortunately, there are times when a few learners get motivated to apply the learnings to their business even in the absence of the initiator's push. This motivation arises from their interest in new concepts and tools and willingness to improve their current job. These learners continue to learn even when the initiator is not present. This is when new technology and tools start getting internalized in an organization. The initial results achieved by applying the tools are often limited which may not be sufficient to transform an organization and its business. But they do prompt the user to move up to the next level in the learning process.

Significant Results Appear

After many trials of self application the learner is able to create symbolic transformation in their own area of business. The learners get convinced of the power of the new tools and concepts and get motivated to continuously apply when they see symbolic results. While in most cases this may be the ultimate objective, in VLFM it is only a key interim step. VLFM has made efforts to move up to Level 4 and Level 5 of capability building – these are levels related to creating the "own way".

Analyze Key Success Factors

Once a few significant results appear, learners should analyze key success factors, understand how to improvise on the method, realize its limitations and figure out a way to generalize it so that it fits a wider area of application. These are crucial aspects that need to be studied when the objective is to diffuse new tools and concepts to the entire society.

Generalization of the method and documentation of success cases is absolutely essential for diffusion of a new concept to the society. But it is only the first step towards societal diffusion of new learnings.

Towards Creating Own Way

Once generalization takes place based on the analysis of success cases, diffusion of tools and concepts into the wider society begins. This will lead to increased application of tools in varied places and a larger number of cases. This is when the key success factors and generalized rules start fitting a society's specific situation and may create a new way.

VLFM has helped to develop some Indian Way of management. From the very beginning VLFM did not focus on transferring only the Japanese way of management and tools to India. The ultimate objective of VLFM has always been to create the Indian Way. In VLFM Level 5 is the achievement of this goal.

2-2 Eight Years VLFM Journey – Rome Was Not Built in a Day

VLFM was initiated with the objective of building capability to transform India's manufacturing sector by learning from Japanese experts. We have already explained the five stages related to the softer aspects of capability building. However, since the process of capability building involves self learning and application of learnings by one's self it is generally a long process. As the saying goes *"Rome was not built in a day"*, so also it has taken eight years for VLFM learnings to be absorbed by the Indian side and for capability to be built to take place.

In this section we share some important milestones of VLFM during the process of stepping up from Level 1 to Level 5 over eight years. We also highlight how capability was built during these eight years and some sprouts of the Indian Way that have begun to emerge.

Initiator's Push Creates Action

Shiba Learning Community

The Shiba Learning Community (LC) was set up in 2004 after Confederation of Indian Industry (CII) invited him to help guide and mentor India's manufacturing sector to deal with the changing business environment. Shoji Shiba had firmly refused to work as a consultant with any single company and offered to guide a community of companies led by like-minded CEOs. This pre-condition became the true driver for setting up learning communities in India.

Figure 2-3. Dr Surinder Kapur got together four like minded companies for the first LC .

Dr Surinder Kapur, Chairman, Sona Koyo and Dr Sarita Nagpal, then Principal Counsellor, CII got together four like minded companies for the first LC As part of the LC activities, workshops were conducted first for CEOs and their number two people and later for Real Change Leaders (RCLs) from these companies. The LC companies were also guided on individual projects and process of transformation.

Figure 2-3. The Shiba Learning Community was set up in 2004 under the aegis of CII.

The success of the first LC encouraged CII to set up the 2nd Learning Community in 2005.

Some Results of LC

The Learning Community companies achieved breakthrough results on the shopfloor, in research & development processes and in creating new Business Strategies.

The LC companies achieve breakthrough results on the shopfloor such as reduction in cost of manufacturing, improvement in productivity and energy cost reduction. For example Sona Koyo was faced with the challenge of identifying a "hidden problem" on their shopfloor since improvements had stagnated. By applying the new tools and concepts learnt during the LC workshops they were able to identify this hidden problem as the frequent interventions in power steering assembly line. They achieved 30% productivity improvement and their rejections reduced from 1.98% to 0.09%.

Three LC companies achieved breakthroughs by reorganizing their R&D and launched new products. **Sona Koyo** applied the Breakthrough principles to prove a new concept even though the applicable technology lay outside their core competence. This product was further refined and developed into the EPAM – Electronic Power Assist Module – as Sona continued to learn and apply new concepts through VLFM. This product was launched in

the year 2012, after twelve years of starting the development. This case has been discussed later in Chapter 7. **Brakes India Foundry** could reduce their time to market from 60 to 21 days by designing a process for New Product Development. They expanded their customer base by starting to offer free prototypes at various stages of the product cycle, a capability that gave them an edge over their competitors. Brakes India also set an industry benchmark by providing castings in the shortest timeframe. **Ucal Fuel Systems** clocked in phenomenal growth between 1999 and 2004 but started stagnating in 2004~05. The emerging regulatory environment added to their business pressures. Based on LC learnings they developed and designed the concept for a new product. Ucal also learnt from the visit to FAVI, a unique French company and reorganized their plant using FAVI's Factory in Factory concept.

Breakthrough in Business Strategy was achieved by LC companies in setting up new businesses, taking decisions on collaboration and product mix strategy. For example **TechNova Imaging Systems**, applied the breakthrough process to develop Polyjet, a product they patented globally. They not only achieved a product breakthrough they also created a paradigm shift in their organization structure. They changed their business through customer, technology and supply chain breakthroughs.

Self Application of Learning

During the LC the capability building process was still at Level 1. LC companies applied the learnings under the guidance, mentoring and handholding by the initiator. The review meetings and visits to various companies provided the motivation and drive to apply the new tools to their business.

Learning Community Companies Trigger VLFM

The LC Companies were very excited with the early results they achieved by applying their learnings. During the 2nd Learning Community various CEOs expressed a need and interest in a follow-on program for senior managers. They knew they were still not ready to apply the learnings on their own, but were motivated to move towards self application of new tools and concepts.

This led to the preparation for the national VLFM initiative and a meeting was organized with Chairman of National Manufacturing Competitiveness Council (NMCC). Some LC companies such as Sona Koyo, Anand Automotive, TechNova and Godrej & Boyce became the founding members of VLFM.

Setting Up Infrastructure for National Movement

Since the VLFM initiative was meant to help companies move upto Level 2 of the capability building process, three actions were necessary to design and build it:

1. Set up teams to diffuse basic concept of VLFM – Core Team, National Task Force of Academia, CII's Team for VLFM
2. Understand customer need
3. Create physical infrastructure fit for capability building

Setup Team

On August 7, 2006, a Core Team was formed with support of Japan International Cooperation Agency (JICA), Government of Japan Decided for creation of a new program. This team comprising four members was led by Shoji Shiba (referred to as Core Team later). CII assigned a Research Assistant to the Core Team and also requested the industry to nominate two members.

Figure 2-4. The Core Team started an intense interaction process with the Indian academia.

At the first Design Workshop for VLFM held at IITK, the academia decided to set up a National Task Force for VLFM. It comprised of Directors of IITK, IITM and IIMC, three faculty members of these institutes and three leaders from the industry.

CII set up a team for VLFM which was continuously guided by Dr Surinder Kapur, then Chairman, CII Innovation Mission. This CII team worked on the design and development of VLFM. Dr Kapur, under the guidance of NMCC Chairman, Dr Krishnamurthy, played a key role in bringing together the various partner institutions of VLFM.

Understand Customer Needs

The kick off meeting for VLFM was held at the Delhi office of Japan International Cooperation Agency. The Core Team undertook an intense interaction process with faculty of three leading Indian academic institutions – IIT K, IIT M and IIMC. Interaction with some leading Indian manufacturing companies was organized by CII. The objectives of these interactions were to:

- arrive at a draft structure of the program
- gain insights on facilities and expertise available with India's engineering and management institutes
- sensitize the faculty to the need for them to become Real Change Leaders

A National Survey was also undertaken by CII under the aegis of NMCC to collate information on:

- changes in the business environment of various companies
- capabilities that companies require in senior managers
- training systems being used by companies

The results of the Design Workshops, the meetings with corporates and the National Survey, highlighted the fact that a single program could not meet the diverse needs of India's manufacturing industry. Therefore four different programs were proposed.

Create Physical Infrastructure Fit for Capability Building

The VLFM implementing partners are considered best-in-class, both in India and globally. The campuses of the academic institutes are huge townships

offering a unique blend of Indian culture and academia. But CII, being an industry body, did not have a classroom or an academic environment. This became an opportunity to create an innovative classroom and unique furniture that facilitated the new style of learning.

Figure 2-5. The specially designed classroom and furniture give make it a one of its kind classroom in the world.

Mr Jamshyd N Godrej, Chairman, Godrej & Boyce, a leading manufacturing company of India, offered 2000 sq ft space on the second floor of their elementary school in Mumbai.

Figure 2-6. Mr Jamshyd N Godrej offered 2000 sq ft of space in the Godrej Elementary School.

Shoji Shiba continued to play the initiator's role for VLFM activities during the defining years of Level 2. He personally guided the design of every module of Senior Managers' Course, delivered a large percentage of the modules and trained the facilitators. During the first three years of VLFM at least five people internalized the learnings, kicking off the process of capability building. They were trained and slowly given increasing responsibility for

delivery of the programs. Shoji Shiba debriefed the facilitators at the end of each day on what they did right and what they needed to improve.

Over the years many more VLFM alumni have been invited to play the role of facilitators. By 2012, VLFM has created a pool of facilitators who are together capable of conducting the VLFM program. The Government of India also has the confidence that the Indian side can conduct all four courses under the VLFM flag on their own.

Significant Results Appear

Initially JICA and NMCC singed a Joint Technical Cooperation Agreement for supporting VLFM for three years i.e. from 2007~2010. The stated objective of VLFM was to create a critical mass of 500 Visionary Leaders to lead India's manufacturing sector. This objective was achieved and early results started appearing by year 2010.

In 2010, when the first agreement was drawing to a close, a Joint Evaluation Team of the Japanese and Indian side was constituted. After the evaluation, the term of cooperation was extended by another 2 years and 7 months till March 2013. This time the objective was to focus on creating an Indian Way and to diffuse the VLFM movement beyond a small group of companies. This extension was significant for establishing the firm root of VLFM system and for achieving significant symbolic results.

During these years, some VLFM companies developed breakthrough products that have the potential to impact the society – for example Godrej Chotukool, Sona EPAM and Kirloskar Submersible Pumps. Chotukool recently received the Gold Edison Award in the Social Impact Category. Mr G Sunderaman, Vice President, Godrej & Boyce, who drove the Chotukool Project, was invited to Japan, Hungary and Ireland to share his experience. Shoji Shiba was also invited to Hungary and China to share the VLFM experience and learning.

Another significant result of VLFM is the VSME Course. This course is being developed since 2009 and has achieved remarkable results. Participating companies such as Tata and Anand have set up training rooms in line with the specifications of the VLFM classroom in Mumbai. The fact that companies are using a set up similar to VLFM for continuing the training is also symbolic of VLFM's success.

Another symbol of societal diffusion of VLFM is the increasing media interest. Though the Japanese and Indian media followed VLFM from its early years, the interest increased manifold over the last three years. NHK of Japan and CNBC in India televised programs covering VLFM, leading Indian newspapers such as Economic Times and The Times of India carried articles on VLFM and so did the Japanese newspaper NIKKEI.

The Indian Government recognized VLFM by conferring the coveted Padma Shri on Shoji Shiba. The Emperor of Japan also decorated Shoji Shiba with the Order of the Sacred Treasure, Gold Rays with Neck Ribbon, for his contributions towards fostering academic exchanges between Japan and India.

On 28th December 2011, Mr. Yoshihiko Noda, the then Prime Minister of Japan, during his visit to India, made a special mention of Shoji Shiba's contribution in strengthening India-Japan relationship and recognized Chotukool, a VLFM success story, as a symbolic success for transforming Indian society.

These are some instances of societal diffusion of VLFM. The VLFM journey now continues beyond 2013 with a proposal to make a deeper societal impact in areas considered important to India's growth.

Analyze Key Success Factors

The analysis of key success factors of the significant results is absolutely essential and a compulsory step for societal diffusion of technology. A total of twenty manuals, text books, success story publications and detailed case studies have been made in VLFM. These have been analyzed for key success factors and documented in five JICA publications totalling over 200 A4 size pages and one academic paper.

One factor related with this is the compulsory condition requiring companies to share their success stories openly with the public, since the program is aimed at contributing to the national development of manufacturing sector.

Another symbolic success of VLFM is the fusion of Management and Technology at the Academic Institutes. The key success factors for this fusion are analyzed and documented in the paper titled "Breakthrough in Higher Education for Transforming Indian Manufacturing: VLFM Program".

This paper appeared in "Daigaku-ronnshu" (research in higher education) published by University of Hiroshima), one of the most prestigious worldwide academic journals in the field of higher education.

After Chotukool received the Edison Award in the social impact category it became very popular with international media and researchers. Newspapers from US and Europe as well as university researchers continuously make requests to Mr G Sunderraman of Godrej.

These success cases are motivating other companies to apply VLFM learnings to their businesses. Such application will help generalize the method to fit to other areas of manufacturing as well.

Towards Creating Own Way

VLFM is slowly reaching level 5 of the capability building process. Over the last eight years the Indian Way has slowly begun to emerge.

New training processes such as the 6 Steps for Strategic Planning, 9 Steps of Business Realization, Self Initiated Research and New Product Development Process, have emerged from VLFM. These are developed solely by the Indian counterparts, reflecting their own societal contexts and outside environment and are indicators of the emergence of the Indian way.

Figure 2-7. VLFM created a BoP Product, Chotukool, with the potential to impact the society.

Additionally, VLFM helped create a BoP product (Chotukool) and a new form of community activity (Anand Case). Later in this book we have shared some VLFM results that symbolize the emerging Indian Way of Management.

**Figure 2-8. A new form of community activity in manufacturing
sector has emerged from VLFM.**

Another emerging Indian way is collaboration between Government,
Academia and Industry. While this kind of collaboration is common sense
in Japan and USA, it is not so in India. For the first time, through VLFM,
the Indian Government, Academia and Industry agreed to work together
for benefit of the nation. This was a breakthrough for India. Today three
academic institutions are together developing and implementing a new
generation manufacturing curriculum. They are also collaborating with the
industry to help deal with problems such as ergonomics, supply chain etc.

**Figure 2-9. VLFM Community Members from Government, Academia and Industry
came together at the dinner hosted by H.E. Akitaka Saiki, Ambassador of Japan to
India to celebrate the Padma Shri. This confirms their close ties to promote VLFM.**

This book describes the key processes necessary to build capability for self
learning.

Chapter 3

Drivers to Accelerate Capability Building

In this chapter, we share details of internal and external factors necessary to accelerate the process of transformation by building capability.

3-1 JICA's Support Plays Major Trigger Role

VLFM is being implemented under a Technical Cooperation (TC) scheme of Japan International Cooperation Agency, (JICA). Under this scheme JICA provided following inputs to the Indian side:

- Sending Experts
- Acceptance of Participants for Training in Japan
- Provision of Machinery and Equipment
- Provision of Local Cost

Figure 3-1. Signing of the Joint Technical Cooperation Agreement between Government of India and Government of Japan.

These components are ordinarily provided under most JICA TC Projects. But different from ordinary Projects, JICA was quite flexible in the way these components were provided to support the unique VLFM journey. JICA therefore played the key role of an external trigger for VLFM. Over and above the holistic support and efforts to create an environment for successful capability building, JICA made the following breakthroughs, helping to make VLFM successful:

1 Creating a "shuttle system" for sending experts
2 Acceptance of all participants and facilitators for counterpart personnel training in Japan
3 Creating opportunities for building the community of VLFM members through provision of equipment and local costs

Let us see details of the breakthroughs JICA achieved while working within the overall framework of their Technical Cooperation Project and its design.

Creating a "Shuttle System" for Experts

The key component of JICA support, which became the defining factor for VLFM success, is three types of Japanese experts:

- VLFM Chief Advisor
- Short Term Experts
- Appointment of Full Time Project Coordinator

VLFM Chief Advisor

Generally, the Chief Advisor for a JICA project is sent to the recipient country for a long term basis. However, the VLFM Chief Advisor travelled to India forty two times between 2006 and 2012 i.e. almost seven times every year. His travel and stay starting from the envisioning of VLFM i.e. from setting up of Core Team described in Chapter 2, were funded by JICA. This back and forth system was the breakthrough "Shuttle System" developed for VLFM project and it has brought three advantages:

1 It provides the opportunity for the Chief Advisor to continuously get outside inputs from the progress of outside world. He often travels to USA, Europe and China, apart from Japan continuously updating himself with fresh insights and feeds back into the program those that fit its requirement and progress.

Figure 3-2. JICA assigned first class, globally recognized experts, to this project (Left : Mr T Furuhashi; Right: Mr K Mori).

2 Since the Chief Advisor is not based in India, the timeline for his next arrival becomes a milestone. This provided the opportunity for the Indian side to take strong ownership and to prepare themselves.

3 Every time the Chief Advisor comes back to VLFM it is like jumping into the fishbowl and when he goes back it is like jumping out of the fishbowl. This gives all stakeholders the opportunity to regularly jump out of the daily job and reflect.

Short Term Experts

JICA assigned ten short term experts, who are all first class, globally recognized experts, to this project a total of forty seven times between 2007 and 2012. Some of these experts include Mr Keniichi Mori, Former Chief Technology Officer (CTO) of Toshiba Corporation, who is also awarded the Person of Cultural Merit and is credited with designing the Japanese word processor. Amongst other Japanese experts are Mr Takeyuki Furuhashi, a world renowned expert in Toyota Production System, Mr Yuji Akaba, Worldwide Expert and Consultant and Former Partner at McKinsey & Co, Mr Kenji Murakawa, renowned TQM Expert and a Deming Examiner and leading mentor of Japanese Small Quality Control Activity, Prof Nishi, leader of the unique energy saving activity in Japan and Mr Katsuaki Tsurushima, Former CTO of Sony Corporation.

The arrival of many short term experts with world class background offers three benefits to the recipient side:

1   These are once-in-a-life time opportunity to learn from the best experts. If these experts stay for one or two months continuously, then the opportunity is not exclusive and the focus of learners is likely to get diluted

2   Since these experts have varied backgrounds and expertise, it helps unlock the learners' horizon.

3   The VSME course especially benefitted from the shuttle system for short term experts. The VSME course is not as simple as the Senior Managers' Course. The complexities of the VSME course arise from the fact that it involves two organizations i.e. the T1 and T2. Further each organization needs cascading of learnings from top management to the bottom. Another complexity of VSME is that it not only requires giving inputs to one company but it needs facilitation to build the relationship between T1 and T2 companies. In addition to the lectures and exercises the learning process also requires onsite review and guidance. This shuttle system was useful for VSME as Mr Furuhashi could travel back and forth between Japan and India many times and could devote a large part of his time to VSME since 2010. Without this shuttle system and his effort, VSME course could not realized such impact.

Appointment of Full Time Project Coordinator

The shuttle system for Chief Advisor and Short Terms experts has meant a continuous movement of people between India and Japan. In addition there is movement of participants, facilitators and planners. The number of people moving between India and Japan for VLFM is far more than any other project of JICA. Every year experts arrive from Japan to India about twenty times and almost 100 participants visit Japan in two groups. The coordination for this movement requires great efforts on the part of the full time project coordinator and JICA India. Through close coordination and communication, they made efficient processes and systems for this movement to take place smoothly.

This enabled the implementation team of Indian side to perform operational activities of VLFM successfully.

Acceptance of All Participants and Facilitators for Counterpart Personnel Training in Japan

Training in Japan with full coverage of travel and stay allowance for a limited number of persons is normally covered under JICA's scheme. The VLFM planners and facilitators were invited to Japan for training under this scheme. But, in VLFM, in addition to the 61 facilitators and planners over 800 participants also visited Japan during the six years of cooperation. This is quite unusual for a JICA project. JICA made special consideration by adopting two types of visits for VLFM:

1. Visit of participants on a cost sharing basis
2. Visit of facilitators and planners under regular JICA scheme

Visit of Participants to Japan ("Japan Visit")

Participants of Senior Managers' Course and Middle Level Managers' Course visit Japan every year as a part of the training. All participants of the two courses are accepted for training in Japan under a cost sharing scheme. While participants bear the cost of air travel, boarding and lodging, JICA takes care of all expenses of local travel, organizing visits, lectures, and assigning field coordinators. In addition they provide learning opportunities and infrastructure such as meeting rooms for participants to work till late every night.

Figure 3-3. Japan Visit of participants is a key element in the process of expanding their boundaries.

Japan Visit is a key element in the process of expanding the horizon of participants, which includes experiencing the Japanese culture. The unique training contents help to change the mindset of participants.

Visit of Planners and Facilitators to Japan

Visit of Indian planners and facilitators to Japan under full cost reimbursement scheme is the key to enabling them to see the reality of Japanese tools. Therefore the planners and future facilitators of each course (i.e. Senior Managers' Course, Middle Level Managers' Course and SME Course) received training in Japan. In addition, one high level delegation visited Japan for planning the future sustainability of the initiative. The Japan Visits make it easier for the facilitators to design the courses and also play the key role of training the faculty.

Figure 3-4. Between 2006 and 2012, sixty one planners and facilitators were invited to Japan for various fully paid train the trainer programs. This photo shows Murakawa House, a traditional Japanese home.

More important than the program cost, is the whole hearted support from JICA and Japanese industry that enables Indian managers to learn from them.

This kind of breakthrough in creating a cost sharing scheme to accept all participants has three benefits

1 The basic concept behind accepting all participants and facilitators was to create the next teachers for VLFM. In VLFM the graduates are first invited to come back to the classroom as demonstrators. After they learn from the Japan Module they take up the role of Module Directors. If JICA scheme had accepted only selected number of people to learn in Japan, it may have been difficult to create such demonstrators and module directors.

2 Japan Visit helped to create a critical mass of community. Such a feeling comes from the experience of learning together and then creating the Indian way. Any hierarchical system for accepting participants for Japan Visit could have created a divide and hampered the feeling of community

3 Another invisible, but perhaps a big benefit of Japan Visit, is the emotional tie developed between the Japanese and Indian side. The two countries view each other as long term economic and industry partners in the years ahead. Emotional ties between the industry will enhance the acceptability of both sides.

Creating Opportunities for Building VLFM Community

Provision of Machinery and Equipment

In many cases Machinery and Equipment necessary for effective capability building are provided under the JICA TC project. For VLFM JICA additionally provided Video Conferencing equipmentat the sites of implementing agencies in Gurgaon, Mumbai, Kanpur, Chennai and Kolkata. These equipments helped to create a smooth communication process amongst all stakeholders of the program who are based in different locations.

Additionally, JICA provided office equipment such as tablet PCs, colour printers, photocopiers, video camera, wireless guide system and LCD projector. With Indian side supplementing such equipment, the implementation capability of the partners increased manifold.

Provision of Local Cost

Creation of Publications

JICA sponsored the research, writing and printing of twenty publications since 2007. These include five manuals, three text books, six success story publications and six symbolic case analyses. As detailed in Chapter 2, documentation is a key aspect of capability building process. Without this process it would not be possible to diffuse the tools and concepts into the society. Analysis of key success factors helps to understand the limitations of the tool and to generalize the methods to fit all areas of manufacturing. For societal diffusion of tools and concepts generalization is a compulsory step. This is possible only by making publications.

Figure 3-5. JICA sponsored the research, writing and printing of Publications which accelerate the progress of VLFM.

Promotion of Program

Diffusion of VLFM success stories amongst community members was considered important to create motivation to apply the learnings. Additionally, it was also considered important to diffuse these success stories in the Indian society for VLFM companies to play the locomotive role and pull up Indian manufacturing.

JICA supports the VLFM Annual Session and Annual Learning Convention, where companies share their learnings and results. JICA bears

the cost of the venue for the event, logistics requirements and the Kiosk set up for these events.

The provision of these equipment and other local costs was very beneficial for VLFM. For example:

Figure 3-6. JICA supported the promotion of VLFM through the Annual Learning Convention and Annual Session, etc.

1. JICA's objective to provide the video conferencing equipment was to create a communication network amongst stakeholders who are spread across India. With such equipment the academia and industry partners could meet often

2. The publications, especially success stories and detailed cases, are an opportunity for the members to give back to the community and to learn from each other, enhancing the feeling of belonging

3. The VLFM Annual Session and the Annual Learning Convention have become important community events where all members meet. Such opportunity to meet face to face increases the feeling of community.

Global External Triggers Play a Key Role

Experts from USA and Europe often provided an outside view, helping in the continuous evolution of VLFM. Mr David Walden, who worked closely with Shoji Shiba at MIT, spent about a week in India, observing the program and interacting with the facilitators. His monologue on the History of Learning Communities in India remains a valuable documentation of the early days of VLFM. Mr Bertrand Jouslin de Noray, Former Secretary General of

European Organizations for Quality, provided key insights and an outsider's view of VLFM. He also invited members of the VLFM implementing team to the Annual Summer Camp where change leaders from various countries learn together. These valuable insights provided by outside triggers helped to better align VLFM to meet the goal of developing global leaders.

Breakthroughs made by External Trigger Create Foundation for Success

If we summarize all JICA support over the years, three unique aspects become visible. These are explained below.

JICA Created a Framework for Holistic Inputs

Various components of JICA support together created a holistic framework for VLFM success. Even if one element of support was missing the capability building process may not have been as effective as it has been.

For example the coordinator's continuous efforts are important for smooth movement of experts to India, publications are a key step for generalization of tools and methods to fit to Indian society, if there was no visit of planners and facilitators to Japan then there would be a gap in apability building because the expert cannot handle capability building alone. If the Japan Visit of participants didn't exist then there would be no emotional tie amongst the participants as well as with the Japanese side. Thus holistic inputs and a framework to support holistic inputs are both very crucial.

JICA Helped Create a Critical Mass of Visionary Leaders

A critical mass of visionary leaders has been created through VLFM at two levels. Over 700 senior and middle management level people from Indian manufacturing have been trained. Additionally sixty facilitators and planners have been trained to conduct these various programs. Together they create a critical mass of visionary leaders for Indian manufacturing sector.

Flexibility in Project Design Matrix (PDM) alongwith practical progress status

PDM provides the overall picture of activities and logical consequences of input, output along with indicators which lead to achieving the Project Purpose during the cooperation term. Therefore the activities to be undertaken in the project are defined in the PDM. However, these activities need to be amended often to build capability that will be effective and relevant to the latest state of the society, manufacturing industry and world wide economy. VLFM management intended to incorporate such changes into the course contents as the program evolved, making the activities and the program a journey of discovery. Hence, in VLFM, PDM set overall directions to achieve the project purpose. It did not stipulate each and every field activity allowing the flexibility to reflect the most recent situation and environment.

The management steered the Project Activity towards achievement of the Project Purpose defined in PDM while making suitable amendments from their experience, knowledge and skills. The Apex Committee constituted by National Manufacturing Competitiveness Council was given some flexibility to take decisions on the direction of VLFM by studying progress from time to time. As mentioned earlier the scope of VLFM was quite unusual as compared to a regular JICA project. This is why the PDM was periodically fine tuned and in discussion with the Indian side.

What Motivated JICA to Make Breakthroughs

JICA's motivation to make these breakthroughs came from two main aspects of the project:

- Strong ownership and preparation of Indian side
- Strong support of Embassy of Japan

Strong Ownership and Preparation of Indian Side

There were two aspects of the Indian side which were encouraging and motivating for JICA and Embassy of Japan

- Strong ownership of project
- High level of preparedness through pilot project and planning

The level of ownership for VLFM from the recipient side was much higher than what JICA generally experiences in other technical cooperation projects. The VLFM partners, are placed at the highest levels in India:

- NMCC is a Government Organization and is Chaired by a person of the rank of a Cabinet Minster,
- IIT K, IIT M and IIM C are amongst the best academic institutions of India
- CII is the apex industry body of India.

One unique aspect about this partnership is that the key persons of these collaborating agencies were already closely connected to each other. Institutionalization of VLFM at various levels is a visible action symbolizing India's strong ownership of the project. Such institutionalization is explained later in this chapter.

The high level of preparedness of the Indian side came from the two year pilot project – Learning Community. Some early results had also been achieved by members of the Learning Community. It is after the Learning Community experience that the government, industry and academia collaborated to initiate the national VLFM level project. A core team undertook a needs survey and arrived at a basic structure and design of the project before the Technical Cooperation Agreement was signed.

This strong ownership and involvement from the recipient side made VLFM a unique project. The Embassy of Japan and JICA were therefore motivated to offer increased support and flexibility in implementation, under the overall PDM guidelines.

Strong Support of Embassy of Japan

Generally any JICA project falls under the purview of the Embassy of Japan (EoJ) in the recipient country. EoJ's support to a JICA therefore is quite normal. However, given VLFM's uniqueness, there was keen interest as well strong support from EoJ.

As an official kick off of VLFM, the then Ambassador of Japan to India, H.E. Yasukuni Enoki released Shoji Shiba's Breakthrough Management

book in a function in the Embassy. This function, held on August 8, 2006, was very encouraging for all stakeholders.

Later, when India's Prime Minister made an official visit to Japan from Dec 13 to 16, 2006, both Prime Ministers declared a Joint Statement. This statement, between the two countries, states as follows[1]

"Cooperation within the framework of Japan-assisted 'Visionary Leaders for Manufacturing' (VLFM) program, under which Japanese manufacturing management and skills will be transferred to senior managers of Indian manufacturing industry"

This agreement at the Prime Ministerial level became the driving force for various ministries in Japan as well as in India.

In addition, VLFM is aimed at impacting the manufacturing sector in India. The focus on manufacturing sector increased the importance of the VLFM initiative for Japan.

3-2 Internal Elements Necessary to Utilize External Trigger

Capability building is a collaborative activity between internal and external triggers. There is a Japanese proverb which states that "a person parachuting alone from outside into a new society cannot achieve significant results". It means that an external trigger cannot alone transform another society. Key internal support elements i.e. key persons and institutionalization of VLFM made it possible to develop and maintain the project.

Fortunately it had the key persons who played critical roles in making VLFM successful. It has been institutionalized by setting up of various organizations to support and deliver the breakthrough project.

Noble Minded Director and Connector

Malcom Gladwell has aptly defined the concept and types of key persons essential for capability building. Gladwell[2] says *"The success of any kind of social epidemic is heavily dependent on involvement of people with a particular and rare set of social gifts"*.

He calls these people the "Connectors" and "Sales Men" (we call the sales man the noble director) and defines them thus. *"The ability of Connectors to span many different worlds is a function of something intrinsic to their personality, some combination of curiosity, self-confidence, sociability and energy"*[2]. They are deeply trusted by many people and pursue the goal to connect people.

The Noble Director is a person with a charisma who *"tends to have an indefinable trait that goes beyond what he says, which makes others want to agree with him*[2]".

These definitions are meant to clarify the different roles necessary for successful capability building. In reality, however, both functions overlap in the same person – they are not necessarily different persons. The Noble Director also plays the role of the Connector and vice versa. This duplication of roles is what brings more effective results. Fortunately, in VLFM, people with such duplication of roles were present in three key areas – government, industry and academia. This became one of the key success factors for the initiative.

In the Government, Dr V Krishnamurhty, Chairman, NMCC played the key role of the Noble Director and Connector by committing government support and bringing together the key stakeholders – i.e. the industry, academia and key ministries of the Government of India. Without his guidance and support it would not have been possible to develop a close relationship between Industry-Academia-Government.

From the industry Mr Jamshyd N Godrej, Chairman, Godrej & Boyce, Dr Surinder Kapur, Chairman, Sona Koyo and Dr Sarita Nagpal, Deputy Director General CII performed these roles. Mr Jamshyd N Godrej, a well established industrialist of India, provided critical guidance to the VLFM initiative in CII and also encouraged various industry members to learn from VLFM. Dr Kapur not only convinced Shoji Shiba to come to India to guide the Indian industry, he brought together the first few companies to learn and apply new tools. Dr Sarita Nagpal is highly trusted by the industry and government and helped to bring them on board.

The Directors of the three Academic Institutes, Prof Shekhar Chaudhuri, Prof Sanjay Dhande and Prof M S Ananth constantly played the roles of the Connectors and Noble Directors. They worked together to ensure that the academic councils and the faculty of the three institutes support the initiative.

To make a significant impact the key people surely have to play the roles of both the Connectors and the Noble Directors. In addition, each person must somehow be connected to the others, share a common noble goal and be focused on a new direction for society. Only then can they synchronize the activity of the external trigger.

VLFM was very fortunate that the key people knew each other well and trusted each other. They shared a common passion and common goal i.e. the development of Indian industry.

The secret of the four VLFM courses being conducted smoothly for 6 years lies in the presence of the Connectors and Noble Directors in every implementing agency and the fact that each key person played both roles very effectively.

Institutionalization of VLFM

One key factor that helped VLFM become successful was its institutionalization. Following organizations, created at the strategic and implementation, symbolize such institutionalization:

1 VLFM Apex Committee
2 Steering Committee of CII VLFM Institute
3 Working Organization of Academia

VLFM Apex Committee

VLFM is a breakthrough project with many stakeholders and implementing agencies involved:

- three leading academic institutions of India (IIT K, IIT M and IIM C),
- one industry body (CII) as well as a few thought leaders from of Indian industry
- three Ministries from the Government of India (Ministry of Human Resource Development, Ministry of External Affairs and Ministry of Commerce & Industry).

NMCC set up a very effective organization structure at the strategic level encompassing all stakeholders. (Figure 3-8)

The Apex Committee is headed by Chairman, National Manufacturing Competitiveness Council who is of the rank of Union Cabinet Minister.

He continuously encouraged the implementing partners and also provided direction at critical times. Mr Govindarajan, then Member Secretary, was always available for VLFM. His successor Mr. Ajay Shankar, Member Secretary, NMCC has extended wholehearted support to VLFM and is committed to its future continuation NMCC also played a key role in obtaining support of Ministry of HRD and Ministry of External Affairs.

Figure 3-7. Dr V Krishnamurthy and Mr V Govindarajan, NMCC, played a key role in integrating the diverse stakeholders of VLFM.

After the Apex Committee was set up a Joint Coordination Committee (JCC) was also formed. The members of the latter include JICA as well as all Apex Committee members. Over the years the VLFM design evolved under the guidance of the JCC. This Committee ensured that the VLFM activities were being aligned to the new experiences while following the PDM framework.
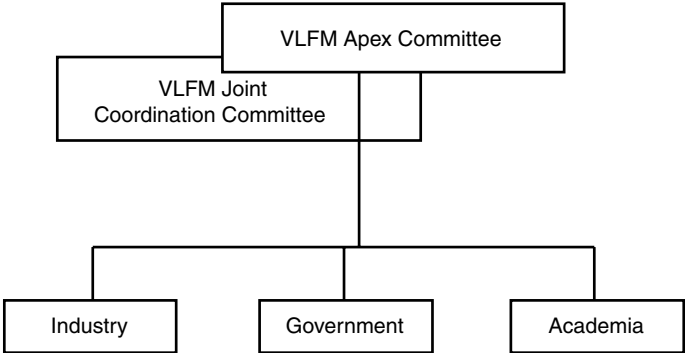

Figure 3-8. VLFM created an effective organization structure at the strategic level

JCC created the foundation for close interaction and coordination with the Japanese side which helped to develop a deep level of understanding. With all important stakeholders from government, industry and academia being members of the Apex Committee and JCC, strategic direction of VLFM was well aligned with the national objectives. The challenges of implementation were also easily addressed through the guidance and advice of the Apex Committee.

Working Organization of Academia

The academia set up a Working Organization, called the Coordination Committee, for the management and implementation of the VLFM. The Coordination Committee comprises of coordinators from IIM C, IIT K and IIT M who are nominated by the respective Directors. While the overall delivery responsibility is with Director, IIM Calcutta and the different activities are shared by the three institutes, this Committee is responsible for normal operations of the program. The three institutes together appointed a manager for the daily administrative aspects of VLFM.
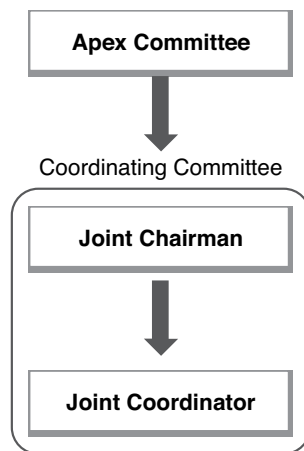

Figure 3-9. The academia set up a Working Organization called Coordination Committee for the management and implementation of the VLFM.

Steering Committee of CII VLFM Institute

At CII the industry members were invited to provide direction to VLFM initiative with the following objectives:

1. continuously bring new information about industry needs to provide strategic direction to the program
2. diffuse the VLFM concept to larger manufacturing society in India
3. get involved in the implementation and design of the program

To institutionalize VLFM within the industry, the Director General, CII, Mr Chandrajit Banerjee guided the setting up of the VLFM Institute. This provided a strong institutional framework for VLFM with in CII. This Institute is governed by a Steering Committee chaired by Mr Jamshyd N Godrej, Chairman, Godrej & Boyce. Since CII is responsible for three of the four courses under VLFM flag, a Program Committee was constituted for each program (Figure 3-9). The day to day operations of VLFM are managed by an Executive Director, who is assisted by a team of five persons.

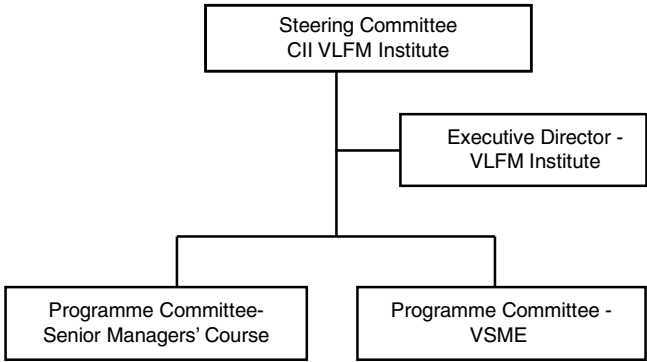Figure 3-10. CII set up the VLFM Institute to institutionalize the VLFM Program within CII.

3-3 Historical Ties Favor JICA's Support

When the key people i.e. the Connectors and the Noble Directors as well as the key organizations are making efforts to popularize the external trigger, the image of the expert plays an important role. A harmonious emotional emotional connect with the masses creates an initial respect and

acceptability. It is often not related to the respect that the external expert commands but other factors prevailing in the environment.

The two factors that substantially helped build a positive image of VLFM are related to the image of Japan and Japanese people. These are – historical ties between India and Japan and the Japanese manufacturing brand in India.

Figure 3-11. A positive image of Japan and Japanese in India helped build acceptance for VLFM in India.

Social Interaction and Historical Commonalities between India and Japan

India and Japan have shared cordial relations since times immemorial. The roots of this relationship can be traced back to the spread of Buddhism from India to Japan indirectly through China. This happened sometime in the 6th Century. Later Subhash Chandra Bose's Indian National Army and the Japanese Imperial Army fought the British Forces together.

Historical documents show friendship between Japanese thinker Tehshin Okakura and Indian writer Rabindranath Tagore, as well as between Tenshin Okakura and the Bengali poet Priyamvada Banerjee. Also in 1899 Tokyo Imperial University set up a chair in Sanskrit and Pali and in 1903 a chair in Comparative Religion.

Another commonality between the two countries is that India and Japan have both revitalized themselves after invasion by another country. Japan faced air bombing of its cities followed by the devastating atomic bombing of Hiroshima and Nagasaki in 1945. The British ruled over India for over a hundred years (1858~1947) and the country spent almost half a century rebuilding itself. Japan's emergence as a power in the early 20th century was viewed very positively in India. It symbolized the beginning of the

Asian resurgence. In India, there was great admiration for Japan's post-war economic reconstruction and subsequent rapid growth.

Japanese Products Trusted by Indians

Sanyo, Sony, Suzuki, Toyota, Honda, Fuji and Olympus are household names in India. Today some of these companies have manufacturing facilities in India. With a growing economy, India has become a big market for Japanese products.

The foundation for Japanese products being trusted by Indians was perhaps laid in 1958. This is the time when the focus of Japan's economic relations with India switched from import of cotton to import of iron ore and export of manufactured products. In the 1950s and 60s India's manufacturing was not so well developed, therefore Japanese products became household names. Because of Japan's focus on quality these products lasted long and over the years Indians came to trust Japanese products.

Learning from Japan in Manufacturing

In 1986 one of the first Japanese experts to work with Indian companies in Quality Management recommended the setting up of an institutional arrangement for rolling out the quality movement. On the Indian industry side, this drive was led by Maruti Suzuki under the Chairmanship of Dr V Krishnamurthy.

Japanese firms were some of the first to invest in India, most prominent amongst them being automobile giant Suzuki. They partnered with the Government of India to form Maruti Suzuki, which created the leading manufacturing sector of India.

Later other Japanese experts guided Indian manufacturing companies through the 1980s and 1990s. Learning from these gurus, Indian companies started implementing the quality concepts such as TPM, TQM, Cluster Concent etc. By 2006, India had the largest number of Deming Awarded companies outside of Japan. Almost 200 Indian manufacturing companies had received the TPM Award for Excellence.

The historical ties and positive relationship between the two countries built over centuries created a high level of trust amongst people. With this

background, the manufacturing sector was more open to receiving and accepting new learnings from a Japanese expert. The foundation for setting up a path breaking initiative was thus available for the Noble Director and the Connector of VLFM.

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Chapter 4

Nurturing Sprouts of Success

4-1 Process of Creating Sprouts – SCVD Cycle

As mentioned in Chapter 2, Rome was not built in a day. Similarly capability building is a slow process. However, human being, by its very nature, is an impatient being. People are often seen abandoning new initiatives very quickly if they do not see early results coming in. Therefore it is important to create first symbolic success in a short time.

The question is how to create such success in a short time? The SCVD (Setting Up - Cascading Down - Visiting Outside - Documentation) cycle, described below, is one process for achieving quick success.

Step 1: Setting up infrastructure and getting real change leaders to learn and apply

Step 2: Cascading down in the organization to create critical mass for change

Step 3: Visiting outside world, which symbolizes real example of the future direction

Step 4: Documentation of results after analyzing key success factors. There are three benefits of documentation:
- Confirmation of success
- Identifying key success factors
- Creating trigger for the next SCVD Cycle

VLFM Program effectively used this cycle of creating early success. In the beginning success can not be achieved without a strategic trial. The Learning

Community activity, which started in 2004, was such a strategic trial which
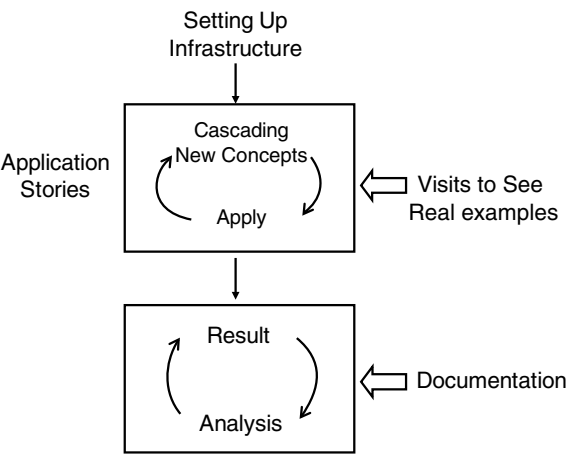created the trigger for the next round of SCVD cycle i.e. the VLFM initiative.

**Figure 4-1. The SCVD cycle requires four steps to be repeated often
for capability to be built**

During the VLFM journey there were three repetitions of the SCVD cycle,
each time creating sprouts of success and locomotive organizations that
pulled forth to the next cycle. These three instances are:

- Learning Community Activity
- Initiation of VLFM
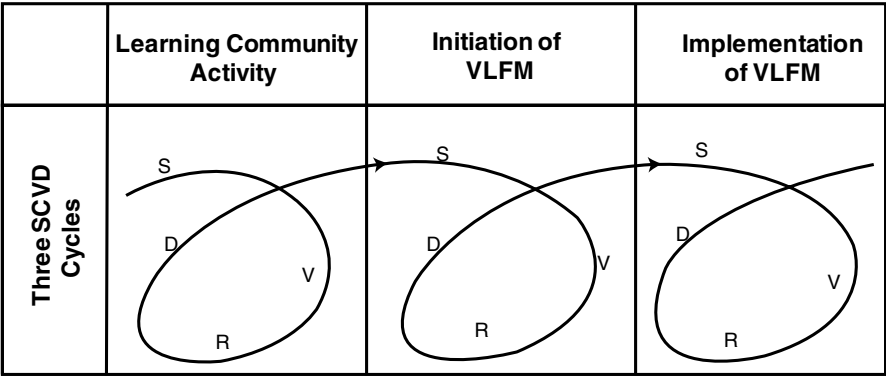- Implementation of VLFM

**Figure 4-2. During the VLFM journey there were three repetitions of the SCVD cycle,
each time creating sprouts of success and locomotive organizations.**

4-2 SCVD Cycle 1: Learning Community Activity

Setting Up Infrastructure

In the year 2004 Shoji Shiba was invited to India by Dr Kapur under the aegis of CII. Dr Sarita Nagpal of CII had also made several visits to MIT to invite Shoji Shiba to guide the Indian industry. After he came to India she continued her efforts for the transformation of India's manufacturing sector first through the learning community and later through VLFM. The First Learning Community was set up with the objective of implementing breakthrough concepts and tools. The process for setting up infrastructure for this new activity was as follows:

1. Start with people who have a noble mind and are focused on a common goal
   - Dr Surinder Kapur and Dr Sarita Nagpal shared a common larger goal of lifting up the level of India's manufacturing sector
2. Start from Top Management especially owners. The owners stay long and have the authority to launch new initiatives
   - It was the owner of most companies who participated in the LC Activities – Mr Pranav Parikh, TechNova, Dr Surinder Kapur, Sona, Dr V Krishnamurthy, UCAL
3. Keep the community small
   - There were less than 7 members in the Learning Community.

Figure 4-3. Dr Sarita Nagpal, CII continued her efforts for the transformation of India's manufacturing sector by working actively for the First Learning Community.

4. Try to have members who share an emotional tie with each other. It works well if one person plays the pivot role. If people know each other before joining the community there is a level of trust amongst them
   - In the LC, the key persons Dr Kapur invited Mr Pranav Parikh, Chairman TechNova Imaging Systems, Dr V Krishnamurthy, Chairman, UCAL Fuel and Mr V Narasimhan, Brakes India. They already knew each other bringing cohesiveness to the community.

Cascading Down New Concepts and Tools

The owners plus the very next senior person of the organization joined the Learning Community. For example the Managing Director and the CEO of a company together joined the community.

After going through the LC workshops, they cascaded the tools and concepts to the next level in the organization. The LC participants received knowledge in various formats: a top management seminar, a CEOs workshop, a real change leaders (RCLs) workshop, mutual visits to member companies where participants were given inputs on how to see. For example, over the two LCs, Mr Kiran Deshmukh, Sona Koyo, Mr Saideep Rathnam, Anand, Mr G Sunderaman, Godrej and Mr Dinesh Sharma, Sona Koyo learnt the new concepts and tools during these workshops and effectively played the role of RCLs.

The basic concept followed in the Learning Community was not teaching but thinking together, sharing ideas, building skills to see the future and charting out a breakthrough strategy. The participating companies were encouraged to chart out their strategies which they shared during the LC sessions. Feedback from other LC companies provided an outside view and companies could create breakthrough products, expand or capture new markets and develop new business models.

Visits to See Real Examples

Every workshop of the Learning Community was followed by a one day visit to one of the member companies (mutual visits). Going to factories of LC members and sometimes outside the country helped the members to expand their view. Throughout the duration of the Learning Community

mutual visits were made to plants of the member companies.

In May 2005, about 20 people from the LC companies together visited France, an attractive country for everyone. During the eight days in France, the group visited two typical companies – one which is symbolic of the unique French culture (FAVI) and another which is symbolic of the Japanese culture (Sanden).

Figure 4-3. In May 2005, about 20 persons from the LC companies visited France.

Sanden, amongst the first global companies from Japan, is a unique and excellent symbolic case. Its size is nearly the same as the Learning Community companies; it is not very big like Toyota or Panasonic. An owner driven company, Sanden is a Deming Prize winner. They focus on manufacturing heating and cooling products, giving the company a clear business direction.

FAVI, a medium sized company, is amongst the highly respected companies of France. They have three unique features in the way they manage themselves: Firstly, they have maintained their factory in the same small village where they started their business; Secondly they say "Amor with customer" i.e. maintain a one on one relation with customer; Thirdly they have a unique Factory within Factory concept i.e. being fit to each customer's needs while being under one big umbrella.

FAVI and Sanden offered the opportunity to learn from companies with different cultures and businesses. The idea was for LC companies to understand the meaning of breakthrough and develop action plans for their own companies based on outside experience.

Documentation

After learning a common language and Breakthrough Management tools as well as gaining experience from outside visits, the companies practiced and implemented these tools. Then they got breakthrough results. In February 2005, an individual company diagnosis was undertaken where feedback was given to them. This triggered additional strategic actions on their projects.

The LC helped to create 17 Real Change Leaders. Each company achieved breakthrough results which have been briefly shared in Chapter 2. After one year of learning experience, the LC members documented and shared their learnings with companies outside the community.

One symbolic output was a "Five Step Discovery Process" (FSDP) manual including real examples of LC companies. This manual later became the key text book for VLFM. Importance of FSDP is explained in Chapter 5 section 2-1.
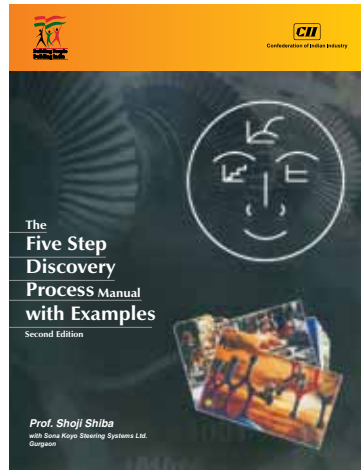

Figure 4-4. One output was a manual of "Five Step Discovery Process" including real examples of LC companies.

4-3 SCVD Cycle 2: Initiation of VLFM

After the success of yet another LC, which was started in 2005, the foundation for the next round of SCVD Cycle was laid. It was time to scale up the LC concept to the national level.

Setting Up Infrastructure

NMCC Chairman, Dr V Krishnamurthy was approached by Dr Kapur with a request to initiate the scaling up of the Learning Community to the national level. Since this initiative clearly had to be a collaborative effort of government, industry and academia, the NMCC Chairman invited the academia to get involved. The Directors of the three academic institutes knew Dr Krishnamurthy for a long time; likewise Dr Kapur and CII knew the NMCC Chairman for over a decade. Dr Krishnamurthy thus became the pivot of this initiative.

He offered support of the Government of India for VLFM by setting up an Apex Committee. The committee deliberated on the national need and relevant design of VLFM and guided the core team over the years.

Figure 4-5. NMCC Chairman, Dr Krishnamurthy was approached by Dr Kapur to initiate the national scale up of the Learning Community.

Cascading Down New Concepts and Tools

The VLFM activity was cascaded down to the core team. This team underwent training in common tools, such as Five Step Discovery Process. The faculty from the institutes were also trained in the common tools.

Visits to See Real Examples

The core team visited the academic institutes as well as some Indian manufacturing companies. A national survey to identify the needs of the manufacturing sector was also undertaken by the core team and CII under the aegis of NMCC. The visits provided the core team an opportunity to understand industry requirements and the thought process of the academia.

Documentation

As a result of the survey and the visits, four different courses emerged under VLFM, which were later conducted by the academic institutions and CII. The entire process and results of the survey were documented in a report. Without this kind of document no final decision could have been taken by the Apex Committee. In June 2006, the Apex Committee decided on four courses under the VLFM umbrella and a Joint Technical Cooperation Agreement was signed between Government of India and Government of Japan.

4-4 SCVD Cycle 3: Implementation of VLFM

Once the initiation process was complete the third round of SCVD cycle started rolling. This round had the potential to create many more sprouts of success.

Setting Up Infrastructure

A program committee was set up for designing and implementing the Senior Managers' Course. The Learning Community companies were invited to join the committee and to send participants to the first batch of the Senior Managers' Course. These companies volunteered to support the initiative by providing resources. Senior managers who had undergone the Real Change Leaders training became members of the program committee. Almost 80% participants in Batch 1 and 2 were nominated by these companies.

The setting up stage of the three rounds of SCVD cycle highlights the fact that a new initiative has higher chances of success if past resources are utilized.

Cascading Down New Concepts and Tools

Real Change Leaders can make a better impact if a larger number of people within the organization understand the new tools and concepts they are applying. With this objective the LC companies started the process of cascading the VLFM tools and concepts one level down. Promising managers, one level below the RCLs were nominated to the program.

Visits to See Real Examples

Visiting plants of manufacturing companies to observe best practices is common sense for any training program focused on manufacturing. VLFM participants learn to observe beyond manufacturing best practices. During every module, visits are organized not only to plants of manufacturing companies but also to shopping malls and other locations such as a "Dhobi Ghat" (a common place in some Indian cities for washermen to wash clothes).

Figure 4-6. During the Japan Visit participants visit a Japanese temple.

Participants also visit Japan for a week during which they not only see manufacturing plants but also visit a Japanese temple, experience a journey on the Shinkansen (Japanese fast train) and undertake Self Initiated Research.

Documentation

Documentation of Success Stories

Participants practice their learnings from VLFM and achieve results. They share these results at the VLFM Learning Convention through Kiosk Style presentations. This new style of presentation is an enforcement on participants to learn, implement and share. In this style, each participant is given an exhibition kiosk where they display their success story. During a time set aside for the exhibition, visitors go around listening to the presentations at their own pace. There are three benefits of this style of presentation

1 Many more stories can be shared in the short time available. In the traditional sequential style presentation only four or five stories can be shared
2 Questions and answers flow freely because of the opportunity to interact face to face
3 All members get an opportunity to participate creating a sense of community

This style of presenting and sharing results is common practice of VLFM.

Figure 4-7. Kiosk style of presenting and sharing results is a common practice of VLFM.

Documentation of Symbolic Case Studies

The success stories shared through Kiosk Style presentations are also documented in a publication which is released at the Annual Learning

Convention. Since 2008, five such publications have been made and include about 140 success stories

Additionally, six symbolic cases of success have been analyzed for key success factors and documented. These are distributed to all members of the VLFM community as well as to the industry. Such documentation of symbolic cases helps in the generalization of the key success factors which can then become fit to all manufacturing companies.

By continuously applying the four steps of the SCVD cycle to an increasingly larger area, VLFM was able to diffuse the concepts and tools to the society. The visible successes of the VLFM companies are encouraging many more companies to implement the learnings, slowly leading to the emergence of the Indian Way.

Figure 4-8. Six symbolic cases of success have been analyzed for key success factors and documented.

Chapter 5

Unchanging Elements Through the Journey

Ten Key Unchanging Elements of VLFM

The ten key unchanging elements of VLFM described in this chapter are

1 To Teach is a Word of Arrogance
2 Jump into the Fishbowl
3 Unlearn Past Success
4 Transform from small m to BIG M mindset
5 Use of Scientific Tools such as Five Step Discovery Process
6 Focus on Skill not Knowledge and Understanding
7 Develop Three Eyes of Buddha
8 Do and Demonstrate – Role Model
9 Apply the Snowball Concept
10 Develop Partnership between Government, Academia and Industry

5-1 Basics of Unchanging Elements

Every activity has two facets – one that is changing and the other unchanging. This has been found especially true of companies that have survived over centuries as well as those that can be categorized as excellent companies. While such companies have evolved over the years they have always retained few unchanging elements, which define their core.

These changing and unchanging facets of an organization symbolize the fact that a society is not constant, it is always changing. For an organization to survive it is a must to remain in step with the society i.e. it must evolve along with the society.

Does this imply that an organization must change everything about itself – No! If an organization changes itself completely it will not survive, its core

must remain unchanged. This unchanging element could be an organization's uniqueness or strength or a symbolic behavioural pattern accumulated over the years, perhaps as a result of its activities. It is necessary to understand that these unchanging elements are the key assets of an organization for it to evolve successfully.

An organization will always find infinite opportunities to change, but it surely cannot succeed in all of them. It is necessary for the organization to focus on few of those that utilize its strengths, past heritage and its uniqueness. These unchanging elements suggest the direction for future action which may have a high possibility of success. An organization surely needs to identify these elements to be able to change successfully over the years. The effort for drastic change should be made in the direction defined by such aspects.

In VLFM too, we have identified the ten unchanging elements that define its core(Figure 5-1). These elements have formed its foundations from the very beginning – the Learning Community days – a period of almost a decade, though VLFM kept changing its form and shape.

Unchanging Element 1: To Teach is the Word of Arrogance

The basic principle of VLFM, that defines its unchanging elements, states as follows:

"To teach is the word of arrogance we can only create an innovative learning environment".

Here is why we believe that this is the most basic principle of VLFM's unchanging element.

The objective of VLFM is to create visionary leaders who can play the role of locomotives for Indian manufacturing. These Visionary Leaders will face a drastically changing business environment, especially so in India. Today's India is not the same as it was two years back. In 2012, the VLFM Participants detailed out the societal changes observed in India. These include the following:

1 *Changing style of leisure* – people want to spend their weekend in the malls and watch movies in the multiplex theatre
2 *Changing style of vacation* – middle income urban families take annual week long holidays to adventurous places both in India and abroad

3 *Appearance of new facilities* such as clean and hygienic eating places and a number of shops under one roof

4 *Fading away of joint family tradition* with young couples buying their own apartments

5 *Diffusion of consumer durables* to low income people for example college going students using two-wheelers

6 *Increasing concern for social justice* – people in age group of 18~35, including college going students, have started participating in and supporting anti-corruption movements / rallies

7 *Drastic increase in traffic* – the number of cars in a small town called Mithapur has increased from 50 in 2010 to more than 500 in 2012.

8 *Popular use of internet* – Indian railways send the ticket through SMS instead of sending a paper ticket.

9 *Migration from village to city* with people moving from their home towns to any where in India

10 *Increasing consciousness towards own health* – the number of health gyms in Mumbai has gone up from 5 to more than 20

11 *Sending children overseas for education* – many more children are going to US and Singapore for higher studies

When such drastic changes are taking place in the society, life of half the knowledge decreases i.e. half of the knowledge becomes obsolete very quickly. While generally life of half the business knowledge may be 3 to 4 years, in certain business conditions it gets limited to 1 to 2 years.

In such an environment if business leaders follow a reactive approach to change they cannot be considered visionaries. A visionary leader stays at least half step ahead of changes and perceives them before they are recognized by others. Thus a visionary leader needs to perceive the changes himself rather than wait for someone to give him the information. It is not possible to teach this kind of skill. All we can do is to create an innovative environment for people to learn to perceive changes and develop an understanding of what might be necessary in future.

If would be very arrogant of a person to claim that they know the future direction and thus are qualified to teach what may be needed in the future. VLFM tries to be humble and does not make any such arrogant claims. "To teach is the word of arrogance" thus forms the foundation of all other unchanging elements of VLFM.
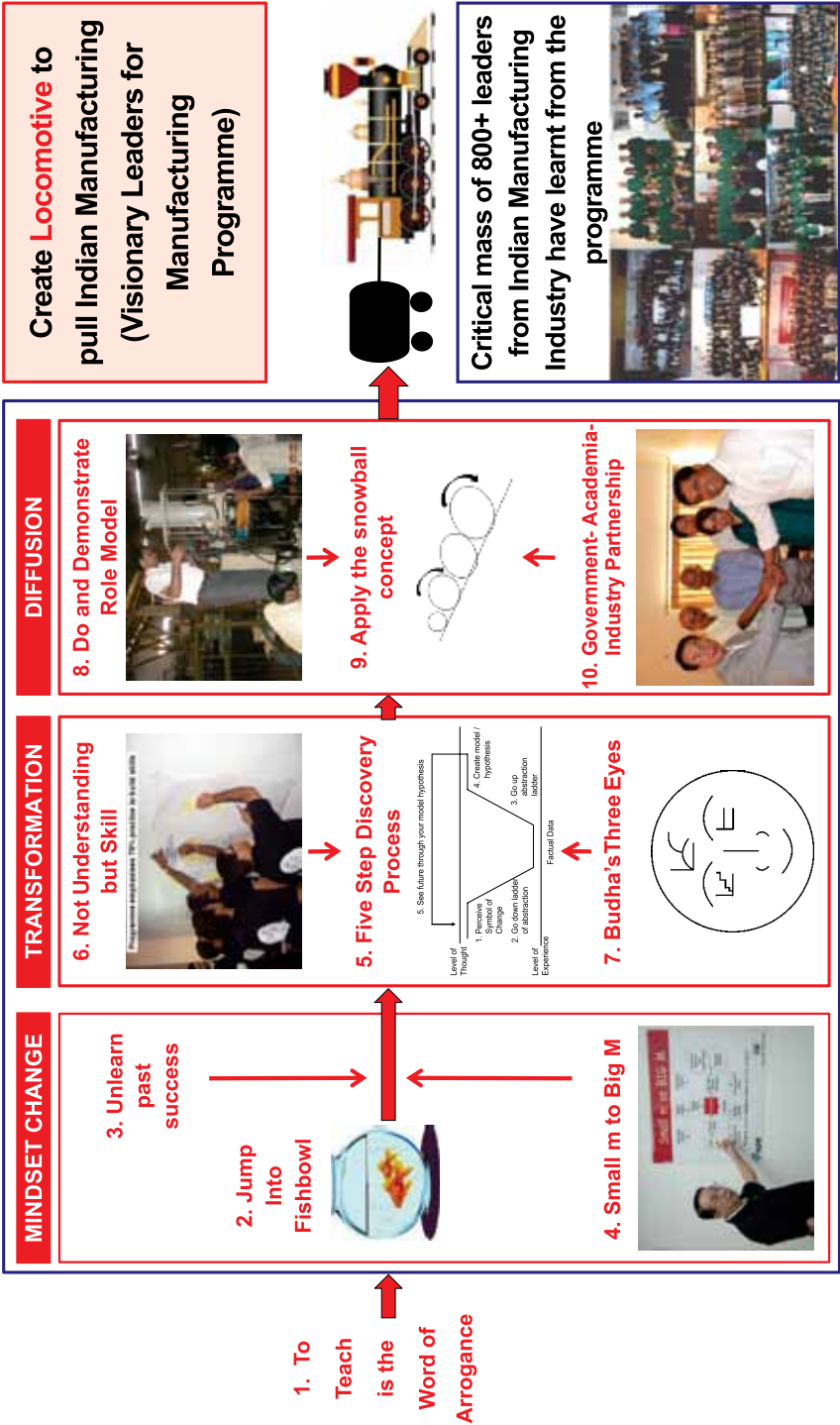
Figure 5-1. In VLFM we have identified the ten unchanging elements that define its core[1].

The role of the visionary leaders is not only to perceive the necessity of change but also to realize breakthroughs in future direction. Three processes are necessary for achieving this goal:

1. mindset change of visionary leader
2. transformation of current organization and business
3. diffusion of transformation to entire organization and society

There are three unchanging elements within each of these processes, which help in making them successful. In the next few pages we will explain these unchanging elements that were so identified during the 8 year VLFM journey.

5-2 Mindset Change of Visionary Leader

Breakthrough transformation starts with the individual's mindset change. There are three key elements of mindset change:

1. *Jump into the fishbowl*: a fishbowl symbolizes the site where characteristics of invisible future can be perceived
2. *Unlearn the past:* forget the past successes
3. *Transform from small m to BIG M:* understand narrow perspective by expanding the mental boundary

Figure 5-2. Process of mindset change of visionary leader has three key elements: jump into the fishbowl, forget past success and small m to BIG M [1].

If one considers the logical sequence for mindset transformation it would seem to start from unlearning the past, expanding mental boundaries and then going towards the future. However, such a logical sequence does not make mindset change possible.

Successful mindset change always starts from jumping into a new fishbowl. While swimming the learner tries to forget the past experiences and expands his mental boundaries. This is what helps in mindset change.

The process of mindset change mostly begins from personal experience achieved by jumping into fishbowl i.e. when a person goes onsite where the symbolic drastic change is taking place. Efforts towards mindset change are usually not successful if one starts from one's thoughts, tries to forget the past experiences and then tries to expand the boundaries. Given that all these actions are related to the brain, this kind of process is usually not successful. For changing the mindset, one has to first change one's behaviour.

Unchanging Element 2: Jump into the Fishbowl

The fishbowl principle emerged from Shoji Shiba's experience at MIT during his first lecture towards the end of 1989. After a TQM presentation an elderly professor asked him what was unique about his methodology to approach future problems. To answer the question he drew an illustration. In the illustration a person was standing outside the fishbowl trying to understand the fish within the bowl, first by applying the objective scale followed by logic. This approach is good only for those who already have a hypothesis. If one does not have a hypothesis the only way to discover something new is to jump into the fishbowl based on intuition and swim with the fish. Such an excellent question of the professor at MIT made Shoji Shiba realize his uniqueness and strength. From then on he started talking about the fishbowl principle.

It is not possible to forecast the kind of drastic 10X change that Andrew Grove talks about[2]. We can only perceive a few subtle symptoms of change. One possible way to create a hypothesis and a perception of change is to jump into the fishbowl by oneself. Of course this requires courage. There is always the possibility that the fish within the bowl, while seemingly gold fish, might turn out to be piranha or shark. But to create something new it is absolutely

necessary to jump into the fishbowl. After jumping into the fishbowl the person should utilize the five senses, try to capture and conceptualize the future changes. This is the first step towards mindset change.

Unchanging Element 3: Unlearn Past Success

Why is unlearning necessary? Because, what was common sense in the past may not necessarily be common sense in the current scenario. In India, for example, the common sense of joint family is disappearing. Young people, after 2 to 3 years of marriage, generally move out of the family home and buy their own apartment. The structure has moved from being a joint family to a nuclear family. Another example is the complete change in the way people shop – every major city in India now has malls with fancy comfortable facilities.

These examples are reflections of drastic change in the mindsets and lifestyles of people. If in such a changing environment one is trapped by the common sense of the past it may not lead to a breakthrough solution. For a manager therefore, unlearning is necessary in three areas:

- Unlearn cultural and functional background
- Unlearn past experiences
- Unlearn current business

Unlearn Cultural and Functional Background

Participants of Senior Managers' Course are mostly engineers and are often heard saying "I have an engineering background, so I am not good at finance". Such a person is trapped by his past functional background and may not be able to perceive something new unless he comes out this mentality.

Unlearn Past Experiences

Sometimes past experiences can be dangerous because people have a natural tendency to believe that what worked in the past will work again in future. Past success starts influencing the person. In VLFM the motto is "success is the first step towards failure". This encourages learners to unlearn their past and consider fresh viewpoints.

Unlearn Current Business

Current business is a source of daily life therefore at the sub-conscious level current business influences the behavior and thinking of managers. For getting breakthrough results it is important to unlearn the current business.

Unchanging Element 4: Transform from Small m to BIG M

It is important to understand the narrow boundaries of people's current mindsets and intentionally expand these boundaries. This expansion is called transformation from small m (where m refers to manufacturing) to BIG M (*Please refer Chapter 1, page 6*). Traditionally in India people's understanding of manufacturing was limited to production. This is what the small m mindset refers to. But there are other aspects of manufacturing for example design, R&D, sales, warranty, supply chain etc. In addition, manufacturing is impacted by factors such as technology change, societal change, environmental change, new competitors and globalization.

When these wider elements exist in the business environment it becomes important to look beyond the narrow production process. Though this is a reality, some Indian engineers, without realizing, focus only on the production process. For example during the Japan Visit of the Middle Level Managers' Course there are few participants who only want to see Japanese factories. Their interest in observing the Japanese society and culture is either very limited or often missing. This is a symbolic example of the small m mindset.

Since focus on BIG M becomes critical when the environment is changing drastically, managers from India's manufacturing sector have to make a conscious effort to become aware of this concept.

5-3 Transformation of Current Business

Once a visionary leader's mindset is transformed, he can transform the current organization and business. There are three unchanging elements to realize the transformation of an organization:

1. Use scientific approach such as FSDP
2. Focus on skill not knowledge or understanding
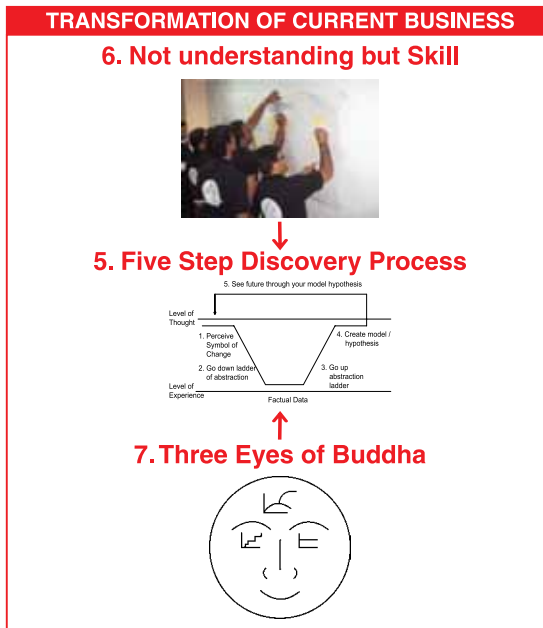*3. Develop three eyes of Buddha*

Figure 5-3. There are three unchanging elements to realize organization transformation: Using Scientific Approach, Developing Skill and Developing Buddha's Three Eyes[1].

Unchanging Element 5: Use Scientific Approach such as FSDP

For transforming the current business and organization following a scientific approach is important. Such an approach ensures that same results can be achieved in different places at different times and with involvement of different people. In addition, a scientific approach also helps to improve the methodology in a systematic manner. Therefore VLFM uses a scientific

approach – the Five Step Discovery Process (FSDP), a key tool to create a hypothesis for problem solving.

FSDP requires the user to move up and down between the "level of thought" (i.e. intuition/hypothesis) and the "level of experience" (i.e. facts). A scientific process is based on facts not only on what is in the mind. All activities of a visionary leader need to be based on facts not opinions.
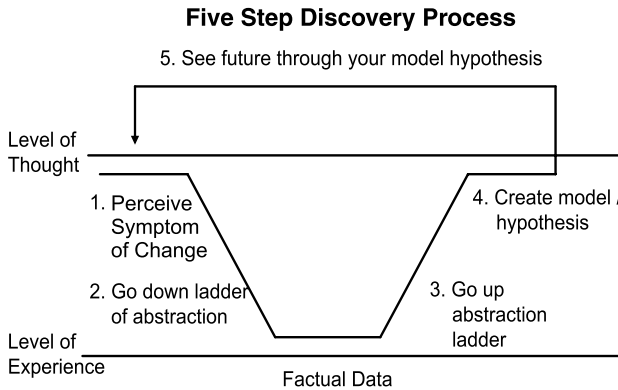
Five Step Discovery Process

5. See future through your model hypothesis

Level of Thought

1. Perceive Symptom of Change

4. Create model / hypothesis

2. Go down ladder of abstraction

3. Go up abstraction ladder

Level of Experience

Factual Data

Figure 5-4. FSDP is a scientific approach that requires the user to move up and down between the level of thought and the level of experience.

FSDP focuses on one of the biggest challenges faced by a visionary leader during problem solving. This challenge is not "how to solve a problem", "when to solve a problem" and "where to solve it". It is related to the problem definition i.e. what aspect of the problem to solve. For example what is the biggest change in the business environment, what kind of action does one need to take, what is the key challenge facing my business etc.

FSDP helps to formulate a sense of the "what" under a chaotic business environment. It enables users to identify elements of focus. Therefore VLFM uses FSDP as a symbolic tool of a scientific approach for visionary leaders.

Unchanging Element 6: Focus on Skill not Knowledge and Understanding

"The hand is wiser than the head" – this is the essence of an old proverb. It means that nothing gets realized in the real world by only thinking, however if one moves their hand something can be created. Additionally when a

person is using the hands and creating real, visible results new thoughts and ideas may get generated. The hand stimulates the brain and the person may get a better solution.

VLFM is focused on developing Indian manufacturing making it essential to get tangible, visible results. Knowledge and understanding are not enough to get results, they require skill. There are three levels of learning that differentiate skill from understanding and knowledge. These are described here briefly:

First Level of Learning – Knowledge

Knowledge is the first level of learning which is derived from new information and commentary. For example, when one knows that "the exchange rate between USD and Indian Rupee stands at Rs 53 to a Dollar" one has mere *information*, which is one step before knowledge. Additionally, if the person also knows that the dollar was Rs 48 a year ago and moved to Rs 53 within 12 months and the implications of this movement on the future of the dollar–rupee exchange as well as the Indian economy, it can be called a *commentary*. Fact and commentary together make up *knowledge*.

Second Level of Learning – Understanding

The second level of learning is *understanding*, which is developed when *knowledge* is applied to one's own special case. While a body of knowledge is general, a person's own case is specific. When a general theory is applied to a specific case, a gap is likely to arise between theory and practice prompting the learner to ask questions.

Third Level of Learning – Skill

The third level of learning is when *understanding* becomes *skill* which gets developed from repeated application of the new learning. When a person practices the new learning every moment of every day, understanding gets ingrained into behaviour. If a person wants to create tangible, visible results such daily practice and application are necessary.

While skill development is seemingly an easy process, it actually takes much more effort than either imparting knowledge or helping to create understanding. It is also more expensive and requires more resources. While knowledge can be transferred by a single teacher, skill building requires a number of facilitators who have the skill, can demonstrate it and provide feedback after observing the learners. This loop must be repeated continuously for skill building. In the Senior Managers' Course one such skilful demonstrator is assigned to every group of 6 to 12 people in the classroom.

Unchanging Element 7: Develop Three Eyes of Buddha

Three eyes of Buddha symbolize the three possible directions of problem solving, each using a scientific approach.

The first eye is the *eye of control*. This eye refers to maintaining the set standards and the current situation.

The second eye is that of *incremental improvement*. This refers to the approach of making improvements day by day, step by step helping one to achieve a higher status. This approach is like Kaizens, a globally known approach to incremental improvement, which was born and developed in Japan.
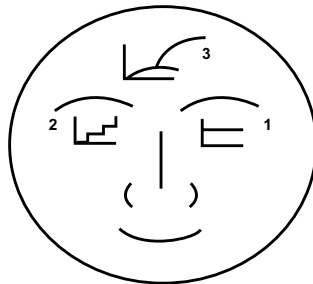

Figure 5-5. The three eyes of Buddha are (1) eye of control, (2) eye of incremental improvement and (3) eye of breakthrough.

The third eye is the *eye of breakthrough*. Globally the business environment often undergoes 10X change. Some companies are unable to maintain their business levels when such drastic change occurs. For example, Sharp, a popular TV company, was unable to maintain its TV business after the rapid

development of the Taiwanese manufacturers. The September 11 attacks are yet another example of an event that changed the world forever. Corporates realized that terrorist attacks are a reality and started paying attention to this new situation. Consider Apple's iPad and iPhone – these products made a strong impact on the mobile and PC businesses. This kind of 10X change often occurs in business environment.

Control and incremental improvement styles of management are not sufficient in such a situation; something dramatic has to be done to counteract the decline of the existing business in the face of 10X change. Even if the current business appears to be losing ground very slowly, as shown by curve A in the figure, most likely it will eventually disappear. To counteract the decline of the existing business, the company needs to bring a fundamental change to its business – to switch from path A to path B[3]. This is the third eye of the Buddha which creates a breakthrough in business.
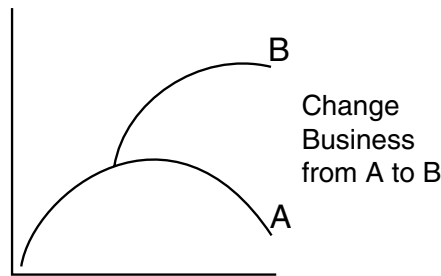

Figure 5-6. When a business reaches its inflection point to counteract its decline, the company must switch path from Business A to B[3].

All three eyes are important, but…

An important aspect to recognize is that real businesses can not be managed based on selection of one of the three eyes. Different business situations require different types of management styles. In general, it is a good idea to determine which point of the S Curve the company is at and what it symbolizes[3]. For example, if the company's growth is just proportional to the past year, then the eye of incremental improvement will be useful.

When a business is faced with its inflection point, symptoms of decline start becoming visible. This is definitely the time to think about breakthroughs and new businesses. Often it may be too late to react when the decline becomes visible. To stay ahead of the curve it is necessary to be proactive before the decline becomes visible.
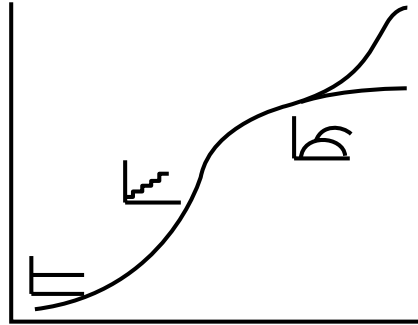
Figure 5-7. Three eyes of Buddha correspond to the three phases of S Curve[3].

Once a new business is launched, the eye of control becomes important for the business to progress because various new processes need to be standardized.

The clock speed of business environment in India has been continuously increasing. In such an environment the S curve cycle becomes continuously shorter. For example, in the early years new models of PCs and mobile phones would be launched once in four to five years, but now they are launched every few months. This fast clock speed is a unique feature of the current Indian business environment shortening the time available for continuous improvement. In such situations, eye of breakthrough is an important tool for business survival. While VLFM emphasizes the importance of all three eyes it places more emphasis on breakthrough. These three eyes of the Buddha are the unchanging element to obtain a view of one's business at any time and place.

5-4 Diffusion to Manufacturing Society

Once a part of an organization is transformed, then the transformation can be diffused to the rest of the organization. There are three unchanging elements for such diffusion:

1. *Do and demonstrate*
2. *Apply snowball concept*
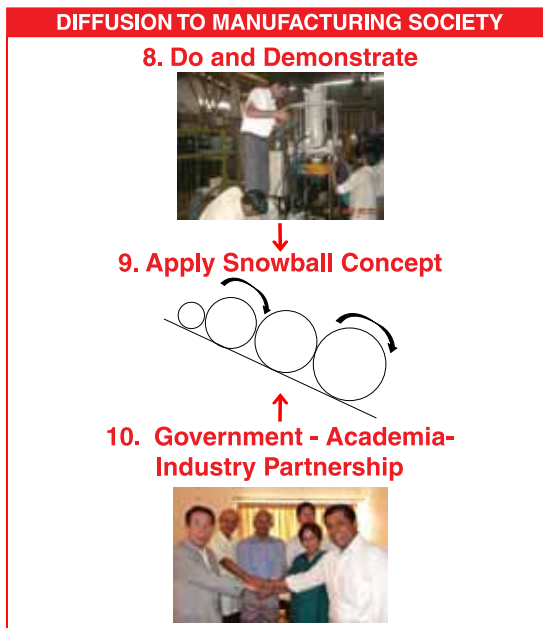3. *Develop partnership between Government-Academia-Industry*

Figure 5-8. There are three unchanging elements for diffusion – do and demonstrate, apply snowball concept and develop partnership between Government-Academia-Industry[1].

Unchanging Element 8: Do and Demonstrate

Let us explain the importance of Do and Demonstrate with the story of the famous Admiral of the Japanese Navy, Mr I. Yamamoto. Unfortunately Admiral Yamamoto died during the 2nd World War but his name remains as a great Admiral in the memory of almost every Japanese.

The famous words of Admiral Yamamoto are as follows:

"People can not be mobilized without following a step by step approach:
Firstly, do and demonstrate by yourself
Secondly, explain the details and reasons
Thirdly, let them do by themselves
Fourthly, praise the person"

If the above four are not followed in the sequence mentioned, people will never be willing to do anything. These four steps are summarized as the "do and demonstrate" Principle. The philosophy behind these four steps is that when you let an individual perform some task on his or her own, the motivation or initiative will continue and the enthusiasm will increase. Though it is possible to mobilize people by strong enforcement but such mobilization does not continue for long.

These four steps are not unique characteristics of the Japanese – they define basic human nature and are applicable to people of all countries. In India managers at higher levels of hierarchy often believe that their job is limited to taking decisions, execution is not a part of their responsibility. With this thinking they pass the buck to the people at the next level.

Even if some higher level managers believe that execution is their responsibility, they instruct verbally and go back to check for results. Surely they cannot get any significant results by following an instruct–check process as it does not create any ownership and motivation for the job. Therefore do and demonstrate, practiced in VLFM, is an essential part of the process.

In Senior Managers' Course companies are requested to nominate some graduates to play the role of demonstrators for the next batch. They are called demonstrators not facilitators or faculty so as to remind them that their job is not to instruct and check but to show by demonstration.

In the VSME course, the plant head of T1 demonstrates to his colleagues how to make the Value Stream Mapping (VMAP). Sometimes the plant head and at other times the engineer of T1 Company also visits T2 Companies and works with them to make the VMAP. He does not instruct the T2 managers but demonstrates the actions necessary for transformation. This kind of "do and demonstrate" process has a powerful influence for diffusion of tools and methods.

Unchanging Element 9: Apply Snowball Concept

The basic concept for successful diffusion is snowball which has three essential elements:

1. Create an early first success
2. Focus on one critical point
3. Select focus area of initial success with symbolic meaning

Create an Early First Success

An early failure makes the wheels of transformation continuously heavier making it difficult to diffuse the new tools and concepts. Therefore it is absolutely necessary to achieve visible success at the beginning of a transformation project, even if it is a small success. The possibility of success becomes zero without careful planning to achieve initial results. Moreover, if 100% success is not assured at the beginning there is little possibility of future success.

Focus on One Critical Point

The second essential element is to make a detailed plan and the secret to success of this plan is to focus on one critical point. When one tries something new one has no resources such as past experience, manpower, time, money. These are all big constraints making it impossible to get simultaneous success in various areas. When the project activity is simultaneously launched in many areas it is difficult to get results in all the areas.

Select a Focus Area for Initial Success Based on its Symbolic Meaning

Given that resources for a new project are limited it makes sense to invest all of these on one single critical area. This translates into focusing on an issue which has highest probability of success, not necessarily an issue which is most complex. In fact if the problem is complex it is advisable to decompose it into smaller parts and focus on one part of the problem.

The critical factor to consider while selecting the issue at the beginning is the human issue. People engaged in finding a solution must have strong desire for change and must welcome it. As the saying goes, it is not possible to force a horse to drink water if the horse is not willing to. The highest possibility of success will be in an area where people really desire change and are willing to accept it.

In addition the focus area should reflect a symbolic meaning. Then it becomes useful for diffusion. For example in the Godrej Shirwal case (Chapter 6) organization transformation started from the scrap yard. Though this area was only the periphery and nobody paid much attention to it, once it was highlighted it became a symbol of a clean plant and of recycling. This success became a great trigger for transformation of the entire plant.

In the Sona and Paragon case (Chapter 6) the immediate results cycle and the pregnant results cycle have been explained. Initially the company focused on an area where they could get immediate results by applying workplace transformation. During this process a number of unnecessary equipments were identified and sold to resolve Paragon's cash flow problem, at least temporarily. In addition, they were able to free visible open space and stop construction of additional sheds. This kind of first success makes it easier to get the next success in the pregnant results cycle.

Unchanging Element 10: Develop Government-Academia-Industry Partnership

Partnership between Government-Academia-Industry is essential to support long term development of a project. The industry and academia in USA, especially industry and research universities such as MIT, have the closest relationship. It is a successful win-win relationship.

During his years at Leaders for Manufacturing (LFM), MIT, Shoji Shiba learnt the mechanism to reproduce knowledge in the long term. Figure 5-9 shows the relationship between industry and academia. The key point of this diagram is that it shows the existence of two cycles – consumption and diffusion of current effective knowledge and production of new knowledge.

The LFM program has always worked on closing the gap between university and industry by involving partner companies. These companies influence the direction of the LFM curriculum and directly benefit from

their participation in the program. LFM graduate Earl Jones suggested some of the ways LFM partner companies benefit[3]:

- Companies are in a special position for recruiting LFM graduates.
- Companies have access to professors and research.
- More generally, a certain vitality of ideas comes from staying close to academia.
- In many cases companies receive considerable return from the internship work itself.
- The partner companies that benefit most look at LFM as a strategic human leadership pipeline, and the LFM networks within partner companies can be transformational.
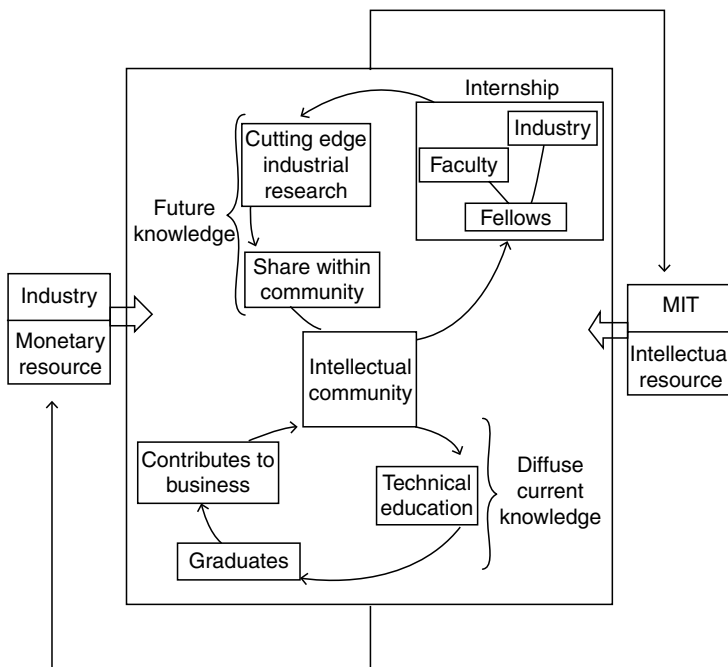

Figure 5-9. The Leaders for Manufacturing Program (MIT) involved companies to close the gap between university and industry[3].

Generally a person learns from intensive education within an institute and later applies the learning in real business. In such a case current knowledge contributes to the development of business. However knowledge has a limited life and after 4 to 5 years half of it becomes obsolete (*Refer Unchanging Element 1*). Therefore to keep the activity alive, it is necessary to produce new knowledge which will produce a new society.

How does one create new knowledge? LFM at MIT utilizes the internship process of participants for creating new knowledge. The faculty, the industry as well as the fellows are actively involved in the process of internship. The company that offers internship gets involved by appointing a capable person to guide the participant, called the "fellow". Collaboration between the fellow, the faculty and the industry is set up by such a process. During the internship the company lays out the most cutting edge problem they are facing. The fellow tries to work out a solution and open a new field of knowledge under the guidance and support of the faculty. This activity becomes a source of creating new knowledge.

In short, academia provides the intellectual resources and industry provides a cutting edge problem as well as other resources such as monetary resources. This consumption and reproduction of knowledge is necessary not only in the US but in all countries. But some countries are lacking in the reproduction of new knowledge. In such a case new knowledge needs to be imported from outside leaving little room for the country's own way, for example the Indian Way of management to be created.

In India most leading academic institutions are controlled by the State. Many aspects that govern the industry, for example environment laws, taxes, regulations, labour laws etc., are also decided by the Government. Therefore, in India it is critical not only for academia and industry to collaborate but also for the government to join hands with them. This is the final unchanging element of VLFM.

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3. Shiba, Shoji and Walden, David. Breakthrough Management, CII, 2006

Part II: Emergence of Symbolic Locomotives

VLFM is focused on developing a critical mass of visionary leaders and locomotives to pull up the level of Indian manufacturing industry.

Did VLFM create such locomotives over the last six years?

In Part 2, we talk about three different types of locomotives that emerged from VLFM.

The first type of locomotive is related to transformation of organizations from small m to Big M. In Chapter 6 two symbolic cases of transformation towards BIG M are shared. The case discussed in section 6-1 highlights that first step of organization transformation is personal transformation towards BIG M. This mindset first cascades down in the organization and later beyond the organization's boundaries. This process enabled the company to achieve many business results.

The case discussed in Section 6-2 is the application of Big M concept to tier relationship. This application created a new win-win relationship between Tier 1 and Tier 2. The belief that a win-win relationship between T1 and T2 would enable both to achieve business results is what laid the foundation for this case.

The second and third types of locomotives are contributing to the creation of Indian way. Let us explain what Indian Way refers to. We believe there are two aspects of Indian Way: one is focused on the business environment and the other on the society. Given these two aspects, the second type of locomotive is related to transforming India's business environment. These include overcoming the weaknesses of India's business environment or utilizing its strengths. The third type of locomotive is related to impact on India's social structure and culture.

In Chapter 7 cases that challenged the weaknesses of India's business environment are discussed. One case challenges Indian industry's weakness in research and development. The other case challenges the gap that exists between management and technology in India's education system.

The effort in the second case has been to develop a new way called Management of Technology (MOT) by the fusion of management and technology.

In Chapter 8 details of two success cases related to India's social structure and social culture are discussed. The first case created a new business model that improves the daily life of people in the village. This is a crucial challenge posed by India's social structure that the country needs to overcome. The other case discussed in Chapter 8 is about the creation of a community and a mutual learning system amongst SMEs. This has been done by utilizing the wisdom of traditional Indian communities.

We believe that these six cases have the potential to play the locomotive role for future development of Indian manufacturing. They will not only pull up the level of Indian manufacturing but also provide future direction for VLFM.

Of course there are numerous success stories in VLFM. What is shared in this Part of the book is only the tip of the iceberg. It is a pity that we cannot cover all the success stories given that the space in this book is limited. The full context of these six cases also cannot be carried in this book. We have therefore summarized the six cases to less than half of their original, under permission of the authors. The summary has been made in context to the Chapters of this book. The detailed cases are JICA publications and can be obtained from CII.

Chapter 6

Locomotives of Organization Transformation

Transformation of Organization Vitalizes Business

Traditionally Indian manufacturing has has had the small m mindset i.e. the meaning of manufacturing was limited to production. The key mindset transformation that was necessary to break out of this limitation is the realization of the presence and impact of BIG M factors. There are many aspects to manufacturing before and after production for example product design, R&D, sales, warranty and supply chain. In addition, manufacturing is impacted by technology change, societal change, environmental change, new competitors and globalization. When these wider elements exist in the environment an expanded view of manufacturing beyond production process is essential. This is the essence of mindset change from small m to BIG M.

Here are two cases of transformation from small m to BIG M –

The first case, i.e. the Godrej Shirwal case, is the transformation of mindset of the real change leader to BIG M. This helped him start the transformation of part of the Shirwal plant, later expanding to the entire plant and then including the society in the process. In this case, the mindset of the plant head was such that the transformation initiative expanded beyond the factory to encompass neighbours, suppliers, village etc. This case is representative of mindset change cascading horizontally.

The second case i.e. the case of Sona Koyo and Paragon is about changing mindset from production and delivery to transforming the relationship between Tier 1 and Tier 2. Usually the customer does not focus on the relationship with the supplier. If the supplier is not able to supply quality components then the product that it feeds into will have a problem. This

aspect is especially critical to the auto component industry, an industry characterized by the tier structure. Sona and Paragon realized that this problem cannot be solved by following the traditional T1 and T2 relationship which is a hierarchical boss-subordinate kind of relationship. Rather the two are supposed to have a common goal while playing different roles. It would work better if they followed a flat organization structure creating a win-win relationship. This mindset is an evolution beyond the BIG M transformation.

VLFM endeavours to create such deep transformation of organizations.

6-1 Organization Transformation Starts from Small and Fundamental Initiatives
– Godrej Shirwal Case

Transforming an Organization: The Godrej Shirwal Case

**Authors: Hussain Shariyarr (Godrej & Boyce Mfg. Co. Ltd),
Kalpana Narain (Full Spectrum)**

Publishers: JICA and CII, January 2012.

This section is a summary digest of the above detailed case study summarized by the authors of this book under permission of the original authors. The comments of the authors of this book are shown in italics in this section. The rest is text from the original case. Full text of this case can be obtained from CII.

1. Introduction

The Shirwal factory of Appliances Division of Godrej & Boyce Mfg Co. was set up in 1996 to manufacture washing machines. Located about 40 km from Pune and 200 km from Mumbai, this was then the 4th factory of Godrej Appliances and the first one outside Mumbai. The factory is built on a 54 acre plot.

In 2005, two lines of refrigerator manufacturing were shifted from Vikhroli, Mumbai to the Godrej Shirwal plant. Over the years this plant has grown and assumed increasing significance for the Godrej Appliances Division.

The Godrej Shirwal plant faced a pressing need to expand capacity and build flexibility. The appliances market in India has been growing at 20% Compounded Annual Growth Rate (CAGR) in volume and 23% CAGR in value terms. Market surveys conducted in 2005-06 placed the number of white goods sold at 5.7 Mn which grew three fold to 14.3 Mn by 2010-11. Refrigerators constitute 40% of this market. Further, the variants of refrigerators on offer are increasing – from 99 models in 2005 the number of models increased to 228 in 2010. In such a market the Godrej Shirwal plant was facing capacity and flexibility bottlenecks. Refrigerators were slowly assuming the highest volume making transformation an imperative.
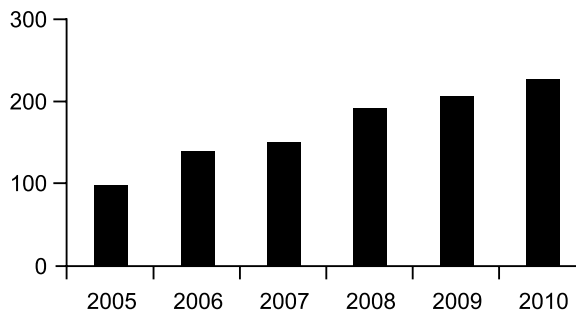

Figure 6-1. Increase in number of refrigerator models in Indian market (Source ORG GFK Survey).
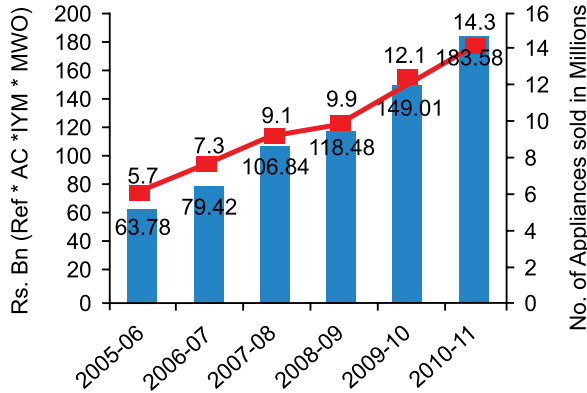
Figure 6-2. CAGR of white goods market in India (Source ORG GFK Survey).

The Godrej Shirwal case highlights that a successful organization transformation goes through the following steps:

Step 1: *Mindset Transformation of Real Change Leader is key*
Step 2: *When diffusing the transformation observe the following:*
          i. Start from symbolic periphery
          ii. Start from basics
          iii. Involve people and get their commitment
Step 3: *After early success move to transformation of core part of the plant*
Step 4: *Once core of the plant is transformed successfully expand beyond boundaries to include society*

2. Mindset Transformation of Real Change Leader is Key

Head of the Shirwal Plant, Hussain Shariyarr, underwent VLFM training in 2009, which is what brought a paradigm shift in his thinking. The most important learning for him was how to transform himself from an effective manager to a real change leader.

A visionary leader needs a noble mind because only when a person thinks beyond himself can he *achieve a breakthrough*. Focus on breakthrough is the second attribute of a real change leader. A breakthrough can never be achieved only by worrying about benefits to one's own self and to their business. Such an approach will only result in incremental improvements. The third attribute of a visionary leader is to not limit to current problems but *look for future invisible problems.*

The Five Step Discovery (FSDP) Process was a very important tool learnt during VLFM. Since the plant was facing numerous challenges in day to day operations the Shirwal transformation team developed a strategy by applying FSDP. The model that evolved brought to light core operational challenges such as capacity expansion, making cost truly variable etc, and also focused on softer aspects such as employee involvement, supplier engagement and building bonds with community. This was the beginning of Big M at Shirwal.
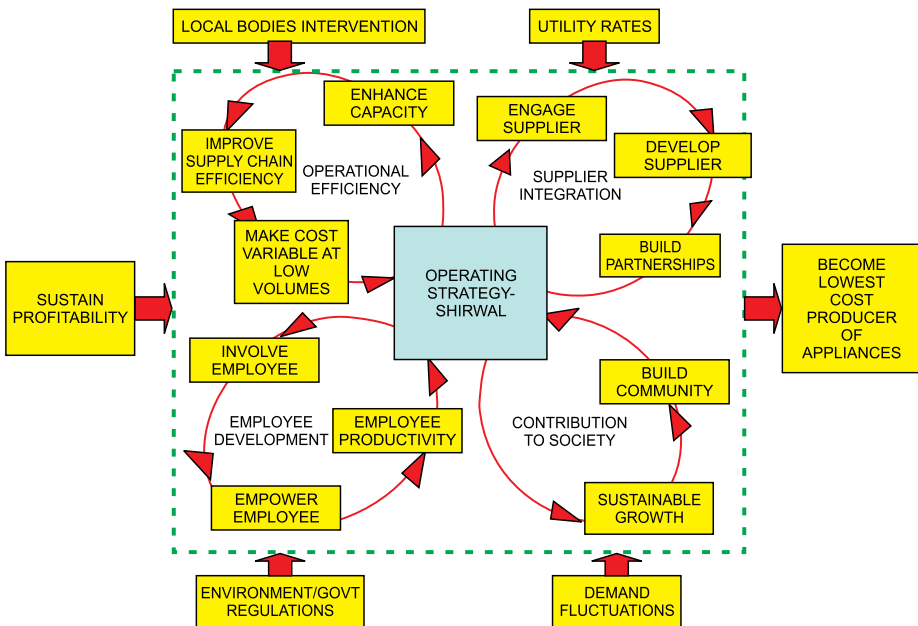

Figure 6-3. Since the plant was facing numerous challenges in day to day operations, the Shirwal transformation team developed a strategy by applying FSDP.

3. Organization Transformation Starts from Symbolic Periphery and Basics and Requires People Involvement

The process of transformation generally starts from an individual but finally the entire organization has to be involved in this process of change. An individual cannot alone transform the organization successfully. The strategy for mindset change has three main elements – start from symbolic periphery, start from the basics and involve people.

Transformation Starts from Symbolic Periphery

The direction of transformation is demonstrated by symbolic visible images[1]. The transformation journey at Shirwal began with small steps to create symbolic visible images in periphery of the factory such as creating a plants' nursery, hoisting the national flag near the factory entrance and converting the scrap yard into a department.

Figure 6-4. The Scrapyard, generally considered a dumping ground in most factories, was rechristened the "Waste Management and Control Department".

The scrap yard, generally considered a dumping ground in most factories, was rechristened the "Waste Management and Control Department". The belief was that the scrap yard's condition symbolizes the factory's health. Making it a department gave it single ownership. The scrap yard is now open for only 1.5 hours a day and unused material can not be dumped when it is closed.

Transformation Starts from Basics

The job of the real change leader is to transform the mindset within the company from a culture based on control to one based on full trust of people resulting in freedom for people. The Godrej Shirwal team thus rolled out activities to build trust between workers and management, accountability amongst employees and unity irrespective of hierarchies.

The trust building exercise was initiated by giving personal safety paramount importance and making it a key management result area. A shift was made from a bureaucratic safety culture to an integrated safety culture. As a result the Shirwal plant clocked in 1035 accident free days.

"Department Safety Score" (DSS) is an innovative tool that helped achieve a no accident culture at Shirwal. The idea for creating such a measure germinated during a weekly safety review meeting with the COO. DSS measures the safety quotient for each department and the plant as a whole. The in-built mechanism of self audit promotes participation of all workmen and supervisors. This increased focus on personal safety demonstrated that the management cares for its people thus building a culture of trust.

Another example of starting from basics is the culture of inclusiveness or unity at the Shirwal plant. The Shirwal plant introduced the concept of uniforms for all employees, creating a sense of community and belonging. A common canteen for the management and operators was also set up.

Figure 6-5. Uniform for all employees and a common canteen for management and staff helped create a sense of community.

Transformation Starts from People and Comes Back to People

Commitment of people and their participation is the key to success of a transformation initiative. People involvement at Shirwal started in three different ways i.e. daily improvement activities, events and activities and participation in external activities

Employee involvement in continual improvement activities was given prime attention. Kaizens, Quality Circles, Safety Audits and TPM activities were initiated by forming task teams comprising of management and operators. As a result overall Kaizens increased from 776 to 2672 and the Kaizens per employee per year increased from 1.67 to 5.32.

Various promotional activities were initiated at Shirwal to give a boost to the transformation journey. The plant participated in the inter division Godrej 5S Competition, winning the first place for two consecutive years. To gain new perspectives, visits to factories outside the Appliance industry were organized. A team of forty members, comprising operators and staff, visited two auto component manufacturers. This helped the team to see their plant with an outside view.

4. After Early Success Move to Transforming the Core of the Plant

Key Elements for Transformation

The three key elements for transformation in the Shirwal refrigerator manufacturing operations were:
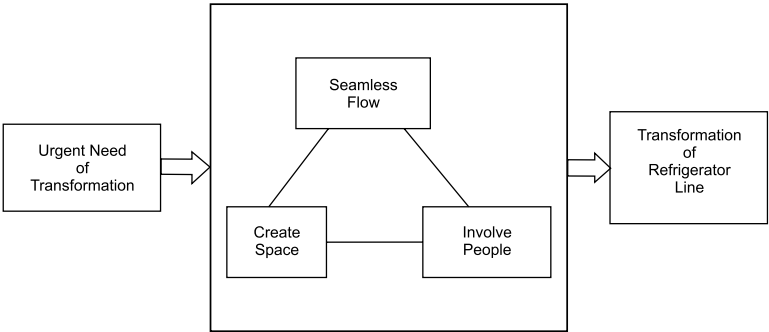

Figure 6-6. Key elements of transformation at Godrej Shirwal.

1 Create seamless flow to enhance capacity – the factory had 2 lines for refrigerator manufacturing and it was necessary to add 2 more lines to double capacity. This would also help increase flexibility as 4 different models/colours could be manufactured at any given time.
2 Create space for accommodating 2 additional lines – the challenge was to accommodate two new lines within the same building infrastructure. Hence space had to be created within the same plant.
3 Involve people – transformation is normally initiated by a real change leader but to drive and implement it, the involvement of all the people is necessary. At the Shirwal factory too the transformation was successful because all the people associated with refrigerator manufacturing got involved in this journey.

Creating Seamless Flow

At Shirwal the press shop and the paint shop were capable of making only one model at a time in one batch respectively. From the paint shop the refrigerator moves to vacuum forming to PU Foaming and then Final Assembly. There were two separate lines for final assembly and hence two models/colours could be manufactured at a time.

Reducing Changeover Time

The main bottleneck for gaining flexibility in the manufacturing process was the paint shop. The changeover time from one color to another in the paint shop was 65 minutes. While the company planned to add two more Refrigerator lines to expand capacity, they also worked to reduce changeover time in powder coating. In the first phase it was brought down from 65 min to 30 min by carrying out a series of kaizens. No investments were made in the set up. In the 2nd phase the powder coating booth was changed, further reducing the changeover time to 12 min. Quick changeover in powder coating was achieved by applying SMED principles:

1 The step by step process was captured through a detailed video
2 After analyzing the process the steps were divided into two parts – IN Activities and OUT Activities
   a. IN Activities are the process steps that can only be performed sequentially
   b. OUT Activities are the process steps that can be accomplished parallel to IN Activities

3 1st level of changeover time reduction was achieved by performing the OUT Activities parallel to IN Activities

4 A series of Kaizens were identified to reduce time of both activities

Before	After
Cleaning the sieve machine during colour change.	Purchased a spare sieve machine and started cleaning the machine offline
Total area of the booth was really large and a lot of time was consumed in cleaning the powder.	Fabricated false ceiling in the booth area to reduce the internal area, so lesser and faster cleaning
Booth and cyclones were cleaned one after the other	Additional compressed air connections were provided to clean booth and cyclones simultaneously
Removing the powder from the steel surface takes more time due to static current	Cover the inside of the booth by spreading plastic sheets so that they can be removed & cleaned offline.
During the colour change process system used to be switched off	Fine recovery motors kept operational during cyclone cleaning to remove residue powder faster.

Figure 6-7. Kaizens that helped achieve quick changeover in powder coating.

Improve Process Capacity

After implementing Kaizens and initiatives to optimize capacity, the company invested in new equipment. As it was not possible to meet the entire market demand with the existing lines it was essential to add new equipment. While selecting the new equipment thought was also given to how these can add value to the product as well as bring societal gains. For example the vacuum forming equipment helped improve the process capability and reduce the thickness of the plastic sheet.
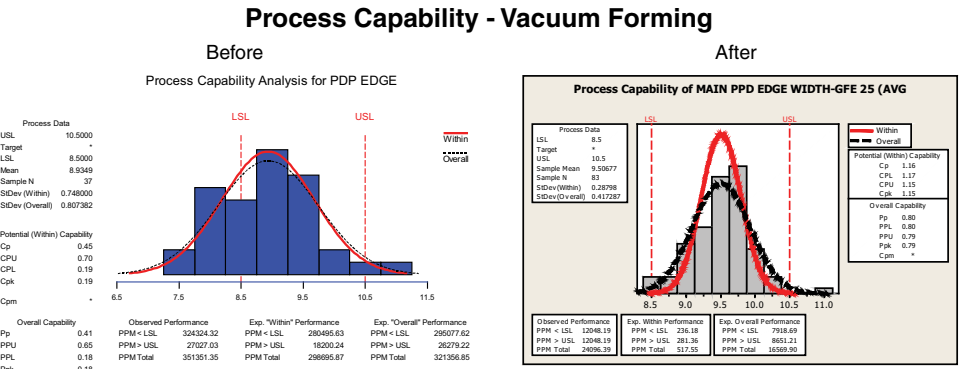

Figure 6-8. Process Capability improvement in Vacuum Forming.

The reduction in plastic sheet helped conserve natural resources making the process environment friendly. It also helped Godrej Shirwal save on the bill of material.

The foaming provided better insulation thereby making the product energy efficient and reducing the operational cost for the customer. Since power is a scarce resource in India this change benefits the society as well.

With these initiatives the capacity could be expanded from 2 to 4 lines and process flexibility could be improved to handle four instead two colours. The plant is now better equipped to meet the customer demand with a quick response time.

Creating More Space for New Lines

It is very important for any manufacturing plant to continuously improve its asset turnover. This happens only when capacity utilization is increased and new product lines are added within the same physical infrastructure with minimum investment. One tool to measure the asset turnover ratio is space productivity.

The challenge for the Shirwal plant was to add two lines without creating any new physical infrastructure. It was necessary to create 52000 square feet of space in the existing premises to meet the expansion plans. Three very specific initiatives helped create the required space:

1. ***Inventory Reduction through Supplier Co-Location:*** *Raw material inventories were reduced by Just in Time deliveries and co-locating supplier. This helped to release the maximum area – 30,000 square feet.*
2. ***WIP Reduction through SMED Implementation:*** *Work in process was reduced through SMED or Single Minute Exchange Dye process. This helped to release 5000 square feet.*
3. ***Layout Changes and 5S Implementation:*** *these initiatives helped to release 17000 square feet*

Co Location of Suppliers

Inventory reduction was achieved by initially co-locating ten suppliers of plastic and sheet metal components. In the first phase these suppliers were given temporary sheds within the factory premises where they stocked one day inventory and fed the manufacturing line every two hours. This is an

intermediate step in implementing JIT. The next step will be for these vendors to supply the manufacturing line every two hours directly from their set up.

VLFM emphasizes on creating a win-win relationship between the customer and the vendor. This is what can help develop locomotive manufacturing organizations in the country.

As a result of this initiative the "Days on Hand" inventory reduced from 16 days in April 2010 to 6 days in October 2011.
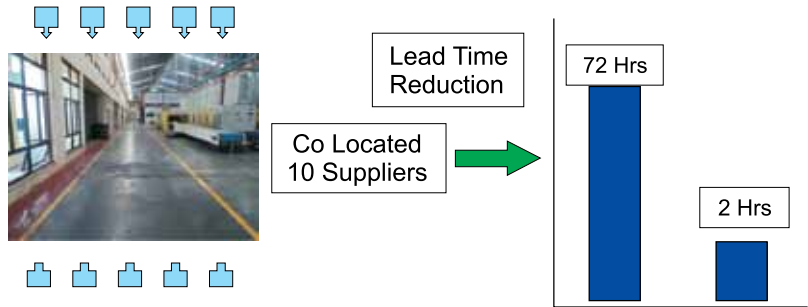

Figure 6-9. Ten suppliers were co located which helped reduce the Lead Time.

WIP Reduction

SMED implementation was critical for Shirwal to keep up with the need to produce more SKUs in a shorter response time. SMED helped reduce the changeover time to less than 10 minutes in vacuum forming, injection moulding and press shop. The production lot for each model could be reduced from 500 units to 200 units and WIP levels reduced considerably from an average of 4 hours to 2 hours. This exercise helped release 5000 square feet of space at the plant.
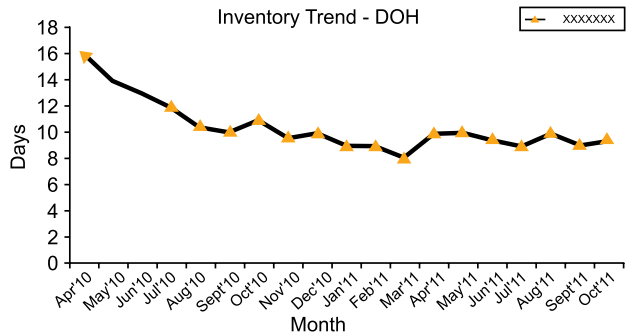

Figure 6.10. The Days on Hand reduced from 16 days in April 2010 to 6 days in October 2011.

Implementation of 5S

Layout changes were carried out in the press shop, vacuum forming, foaming and the final assembly to move towards single piece flow. This helped create space for additional product lines, reduce non-value added travel/ transshipments and implement Lean.

Figure 6-11. With implementation of layout changes 17000 sq ft of space was released in the plant.

These three initiatives together helped to create space for two additional refrigerator lines as well as for an additional AC line and a Chotukool line.

People Involvement

Seven infrastructure tools for a new initiative[2] were applied to diffuse the BIG M concept to the entire organization. The uniqueness of Shirwal's transformation does not lie in training but the application of the seven infrastructure tools. Transformation starts from a real change leader, but success depends on the involvement of all. Throughout the transformation process at Godrej Shirwal, i.e. for all new initiatives implemented, the seven infrastructure tools became the common guiding force. These are described as follows:

1 Goals must be set for change implementation and company's business
2 An organization setting must be provided; people in corporate management and operating divisions must help plan and implement change activities
3 Training and education must be provided
4 The change program must be promoted throughout the company

5   Success stories of how well the organization change program is working and effectiveness of improvement methods must be diffused throughout the company

6   There must be appropriate awards and incentives to mobilize use of change methods

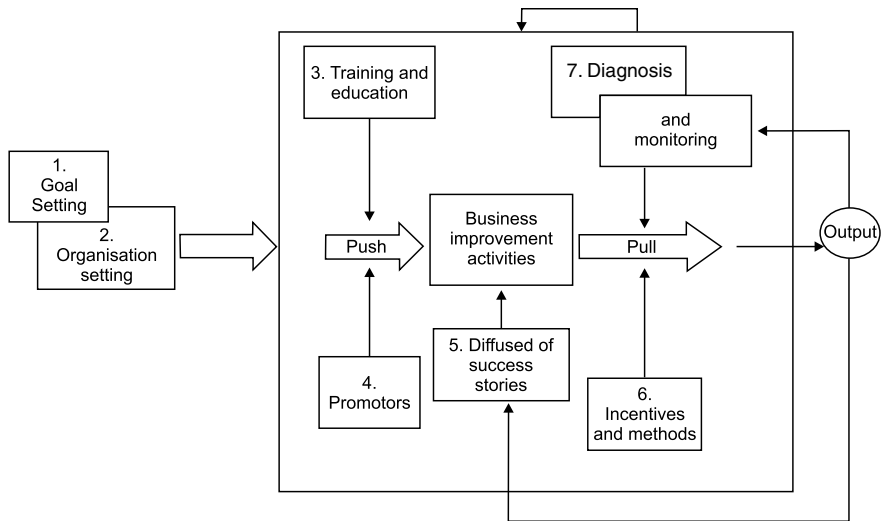7   The implementation efforts must be monitored and diagnosed by top management

Figure 6-12. The 7 Infrastructure Tools are key for Driving Transformation[2].

5. Once transformation of core part of the plant is successful expand the boundaries to include the society

Once internal transformation was achieved at the Shirwal Plant they expanded their horizon to the society and the supplier. They worked with the village as well as mobilized the suppliers. The BIG M Concept emphasizes integrating the entire manufacturing value chain and suppliers are the starting point of this value chain.

Suppliers being important business partners are considered the lifeline of an organization. As these are normally SMEs, some large organizations such as Godrej consider it their responsibility to enable them to join the transformation process. They also believe that an organization exists in the society like any other individual and should discharge its responsibilities towards the society in a similar manner. Thus Godrej Shirwal did not

want to move ahead in its transformation without taking the suppliers and the society along. Therefore they also focused on Supplier Relationship Management (SRM) and on building bonds with the Community
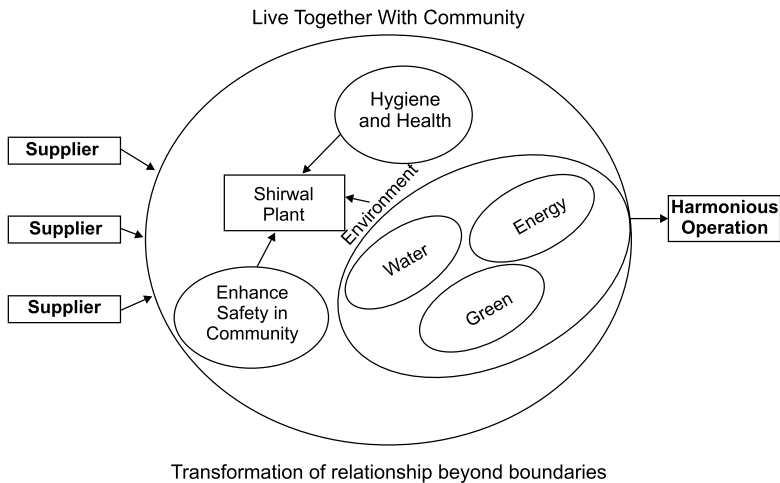

Figure 6-13. Once a internal transformation was achieved at the Shirwal Plant, they expanded their horizon to the society and the supplier.

Supplier Relationship Management

Godrej Shirwal designed and created a structured supplier engagement program to develop good supplier relations and facilitate a partnership culture. The uniqueness of this program was that suppliers were classified based on various criteria such as product technology, manufacturing process criticality, production capacity and competitive advantage. The classification is as follows:

1 Single Source Suppliers
2 Basic Raw Material Supplier
3 Proprietary Suppliers
4 Multi Industry Suppliers

The approach, engagement and inputs for development are unique and specific to each category. A 4X4 matrix was designed on strategic importance and component criticality to Godrej. The developmental inputs to each category of suppliers will be provided through various initiatives such as cluster activities, dedicated supplier improvement team, supplier audits and review (existing process) and VSME.
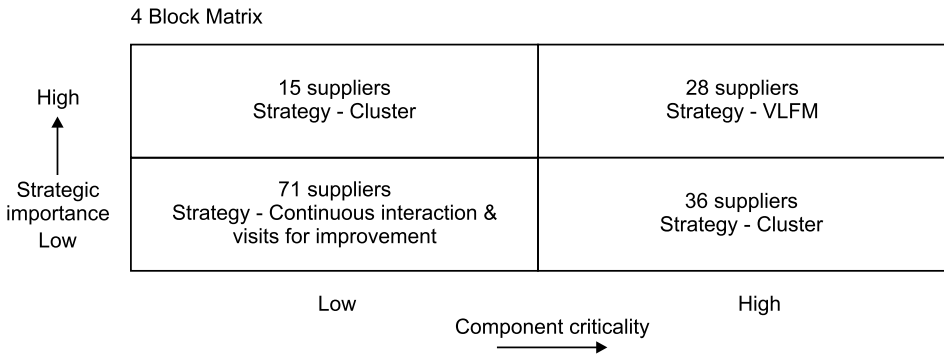
4 Block Matrix

High	15 suppliers Strategy - Cluster	28 suppliers Strategy - VLFM
Strategic importance Low	71 suppliers Strategy - Continuous interaction & visits for improvement	36 suppliers Strategy - Cluster

Low   Component criticality   High

Figure 6-14. Various approaches for supplier development being followed at Godrej Shirwal.

This extensive Supplier Engagement Program initiated at the Shirwal plant has translated into both tangible and intangible benefits. For example the supply chain efficiency index has improved from 70% in 2009-10 to 85% in 2010-11.

Building Bonds with the Community

Godrej Shirwal factory is surrounded by small villages and SMEs. People within this community heavily depend on each other for help and support. Godrej Shirwal factory extended support to these communities in three key areas of health, safety and environment. In a needs identification survey these three areas had surfaced as the most crucial and relevant for the betterment of the surrounding community. A combined task force of staff and operators was trained by experts from various fields. These included HIV, fire safety, road safety, household safety and environment protection. Many promotional activities were carried out in the villages around the plant.

Conclusion

In Godrej Shirwal case the organization transformation began from mindset change of the plant head. He started by making subtle yet impactful changes in the periphery and by involving people. Once the organization was vitalized people were charged to transform the core of the plant, the manufacturing process. Later they expanded their initiatives to include the society as well.

6-2 Mindset Change of Leader Revitalizes Organization – Sona and Paragon Case

Transformation by VSME Initiative : Sona and Paragon Case

Authors: R B Singh,(Sona Koyo Steering System Ltd),
Rahul Jain (Paragon Autotech Products Pvt Ltd),
Kalpana Narain (Full Spectrum)

Publishers: JICA and CII, June 2012

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1. Introduction

Paragon is a Tier 2 company manufacturing Rubber and Plastic Components for Auto and Auto Component manufacturers. Given its industry and product the Tier supply structure has been enforced. Paragon's most important customer is Sona Koyo Steering Systems Ltd, accounting for about 85% of their total rubber business.

Established in 1985, Sona Koyo Steering Systems Ltd. is Sona group's flagship company, and is amongst the largest manufacturers of steering systems in India. They cater to passenger cars, utility vehicles and light commercial vehicles

Paragon, a supplier to Sona, had slipped to being one of their worst suppliers. Sona was being forced to consider stopping business to Paragon, but what stopped them was the non-availability of an alternate supplier.

Paragon had reached the point of closure. They were unable to deliver quality product to the customer. Their suppliers were refusing to deliver material due to non-payment. Since 2008 no new orders had been accepted by Paragon either from Sona or from other T1 customers.

This is when Sona proposed to Paragon to join along with them the VSME Course of VLFM Program. Since the Paragon MD wanted to give himself the last chance before giving up, he agreed to join. Sona and Paragon together started their journey of transformation.

This is the story of how Paragon was able to quickly transformation their relationship with Sona and consequently Paragon's business is much better than before.

Figure 6-15. Mindset change of Paragon MD helped him to quickly transform their relationship with Sona and revitalize their business.

The process of transformation that Paragon went through clearly brings out the following four stages of transformation:

Stage 1 : Mindset Change Cycle
Stage 2 : Immediate Results Cycle
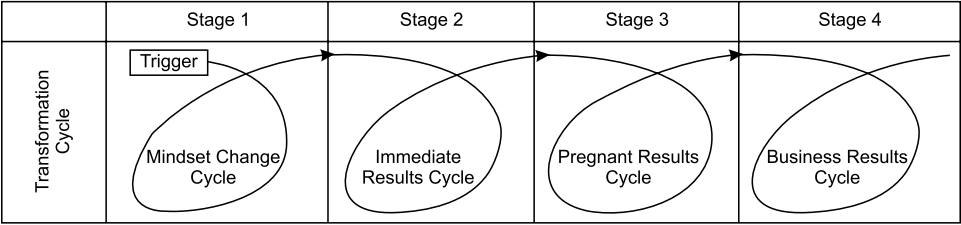Stage 3 : Pregnant Results Cycle
Stage 4 : Business Results Cycle

	Stage 1	Stage 2	Stage 3	Stage 4
Transformation Cycle	Trigger — Mindset Change Cycle	Immediate Results Cycle	Pregnant Results Cycle	Business Results Cycle

Figure 6-16. Four Stages of Transformation Cycle.

2. Mindset Change Cycle

Transformation Starts from Mindset Change

For transformation of a relationship and for results to appear, the first stage is mindset change. Mindset change begins with T1 and then cascades to T2. It can not happen the reverse way as symbolic mindset change starts with Do and Demonstrate of Tier 1 company.
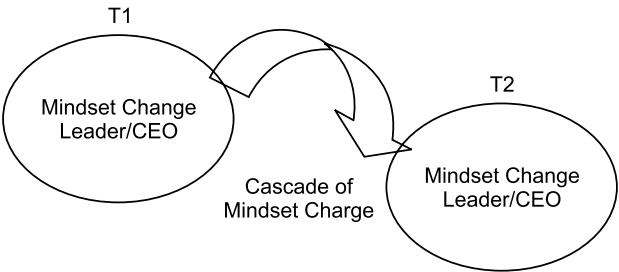
T1

Mindset Change Leader/CEO

T2

Cascade of Mindset Charge

Mindset Change Leader/CEO

Figure 6-17. Mindset change is necessary for both T1 and T2.

The mindset change cycle is the same irrespective of the Tier because the subject of mindset is based on human nature. Mostly the person experiences some internal and external pressures. Internal pressures refer to the push a person feels from within such as an urge to prove oneself, a personal interest in some area etc. External pressures are provided by the environment, for example a difficult financial situation
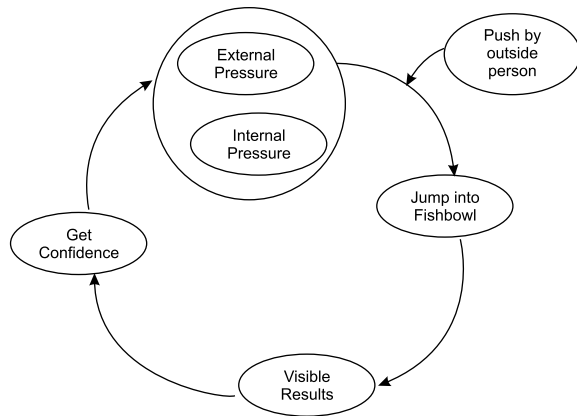
Figure 6-18. The mindset change cycle.

Apart from these pressures a push from another person gets them out of their inertia, making them jump into the fishbowl. The handholding and inspiration from a mentor is a key factor. Early visible results give the person the confidence in the approach adopted thus creating a mindset change. This mindset change cascades to the next level snowballing into a bigger initiative.

The internal pressures for the Sona VSME Chief came from his past experience of success in transformation project. The external pressures included success of peer companies and extreme pressure to improve suppliers in a drastically changing business environment.
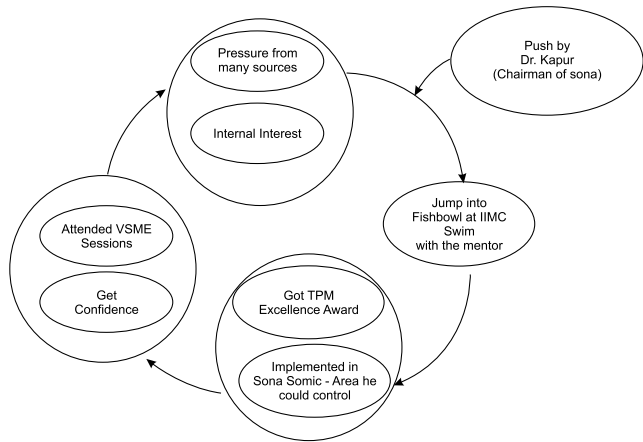

Figure 6-19. The mindset change cycle is the same irrespective of the Tier because mindset is based on human nature.

Push by Mentor

Sona VSME Chief got the push to jump into the fishbowl from the company Chairman who decided to participate in the VSME Program. He pushed the VSME Chief to attend the eleven days session at Indian Institute of Management, Calcutta (Batch 5, Middle Level Managers' Course). After this trigger to jump into the fishbowl the VSME Chief started working for VSME initiative with complete motivation.

**Figure 6-20. Sona VSME Chief attended the eleven days
session of Middle Level Managers' Course at IIM Calcutta.**

Paragon MD's internal pressure arose from a desire to prove his worth to his father. Sources of his external pressures included a major financial crisis, line stoppage etc. External push was provided by the Sona VSME Chief though there was no enforcement. Once the Paragon MD agreed to join VSME, the Sona VSME Chief became his mentor.

The Paragon MD started implementing VSME learnings under the VSME Chief's guidance in a small area. Basic tools such as 5S and Workplace Transformation were applied to achieve quick and immediate results. Shoji Shiba's Snowball Principle was applied to start making an impact on the entire organization.

Pushed by Mindset Change the snowball started rolling. The next stage in the transformation cycle started – Immediate Results Cycle.
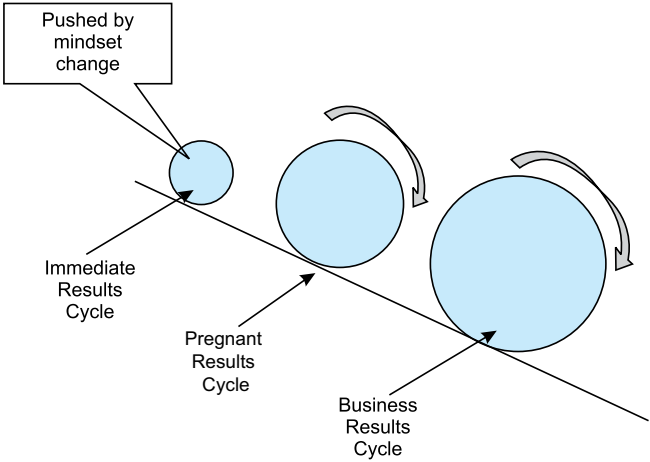
Figure 6-21. Pushed by mindset change, snowball starts rolling first bringing immediate results and pregnant results, then yielding business results.

3. Immediate Results Cycle

Triggered by mindset change the top management took leadership in implementation at Paragon and got immediate results. Well known, simple and easy to implement tools were applied to vitalize the people in the organization to get started. Once small results started appearing the management made the benefits visible.
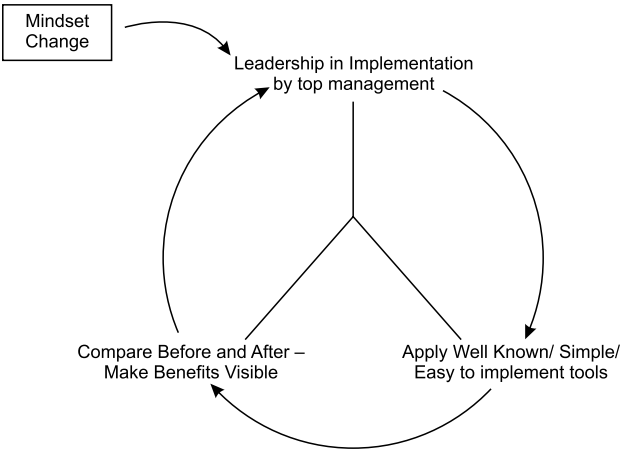
Figure 6-22. The process for Paragon to get Immediate Results.

Paragon MD made visible efforts to demonstrate his leadership such as spending time on the shopfloor with his team. The company was temporarily, but immediately, able to resolve their cash flow problem ensuring that lines were not stopping.

In November 2011, Paragon undertook a major 5S drive for cleaning the plant's environment. Some immediate results achieved include decreased production fluctuation and improved line stability.

Figure 6-23. In November 2011, Paragon undertook a major 5S Drive cleaning the plant's environment.

Apart from change in the environment, within three months time Paragon got other visible results from 5S and Work Place Transformation for example, cash generated from sale of scrap, space saved, reduced wastage, material distance travelled reduced and high employee motivation.

Figure 6-24. Space was cleared in the plant with the Workplace Transformation initiative.

Paragon sold the scrap accumulated over the years and in Sep 2011 generated Rs. 6.38 lacs, followed by Rs. 7.58 lacs the next month. They were immediately able to clear supplier payments and regularize production.

Paragon was constructing another building to overcome space crunch. With implementation of Workplace Transformation in June, they freed up 100 sq mtrs followed by an additional 75 sq mtrs in Sep 2011. Paragon immediately stopped construction of the new building easing pressure on the cash flow.

4. Pregnant Results Cycle

Invisible Problem Needs Analysis

The common factor in the above is improvement results achieved by maintaining the current infrastructure/business/system. These were visible problems and brought immediate results to the company. Savings can be further increased by fixing the invisible problem.

Visible problem
can be fixed immediately

Invisible problem
need more analysis
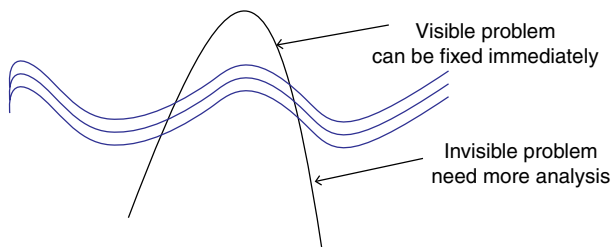
Figure 6-25. Invisible problems need analysis and understanding before they can be solved.

A visible problem is like a rock in the midst of the sea, the tip of which is visible and can be easily dealt with. However an invisible problem is like the depth of a rock inside the sea which can not be gauged by looking at its tip. It needs some understanding and analysis. Similarly invisible problems need analysis and understanding before they can be solved.

While analyzing the invisible problem, Paragon focused on their biggest issue – a strained relationship with their customer. When Paragon got immediate results through VSME, they started analyzing the reasons behind this issue.

Sona Engineers working with Paragon played a key role in making the analysis for transformation. Mr Furuhashi, the Japanese Expert, dispatched under national VLFM initiative, guided them onsite very enthusiastically and boosted their morale.
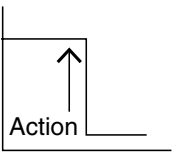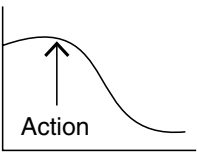
Example of Analysis

There were many reasons for customer delivery schedules not being met such as manpower issues, material related problems, poor planning and machine breakdown. Paragon decided to begin the analysis with machine breakdown and found that 40% of the times it was the fuse of the machine PLC that was causing disruption.

Sona Engineers guided the Paragon Team to conduct Why-Why analysis of most critical cause of machine breakdown, fuse problem and take action. For instance it was found that fuse problem occurred frequently because of back current. In about eight months machine breakdown was reduced from about 184 hours per month to 24 hours per month, improving the operating efficiency of equipment by 45%.

But analysis alone is not enough, it is important to make radical changes to get results from transformation. Outsider's impact is indispensable to understand process of flow oriented analysis because it needs onsite practice and focus on critical points of improvement.

Comparison of Immediate and Pregnant Results Cycle

The Immediate Result Cycle and the Pregnant Results Cycle, studied above have some basic differences. A comparison of the two approaches is summarized in the figure below

Type of Approach	Simple Tool Implementation Approach	Analysis Based Approach
Type of Cycles	Action Immediate Results Cycle	Action Pregnant Results Cycle
Time Taken for Results to Materialise	3 Months	8 Months

6-26. Comparison of results of two types of approaches :
Simple Tool Implementation Approach and Analysis Based Approach.

5. Overall Business Results (Tangible & intangible)

VSME aims to get a breakthrough in the Tier 1 and Tier 2 relationship. The Business Results Cycle starts from customer's satisfaction i.e. happiness with the supplier.

The Immediate Results Cycle brings benefit only to T2 i.e. the Supplier. This has no impact on T1 i.e. the customer. The Pregnant Results Cycle of T2 positively impacts T1 thus making him happy. When customer is happy business results of T2 get realized thus setting the Business Results Cycle rolling.

Improve Critical Parameters

Two critical parameters that define customer happiness are "On Time Delivery" and "No Rejections" i.e. Quality Product.

Between June and Nov 2011, Paragon's delivery situation improved but was still in 80 to 95% range. From Dec 2011, Paragon has consistently delivered On Time In Full (OTIF) 100% to all three plants of Sona making the customer fully satisfied.

Customer return of rubber parts has consistently reduced going down to zero in certain cases. For example the return of Rubber Parts from Sona Dharuheda which was 16700 in June 2011 has reduced to zero since June 2012. The in-house rejection of rubber parts also reduced after VSME. During the immediate results cycle rejections reduced from 195,289 ppm in June 2011 to 154,709 ppm in Oct 2011. However during the Pregnant Result Cycle, after analysis of root cause and changes in material, the rejections reduced to 39,503 pieces in Feb 2012, a decline of almost 75%.
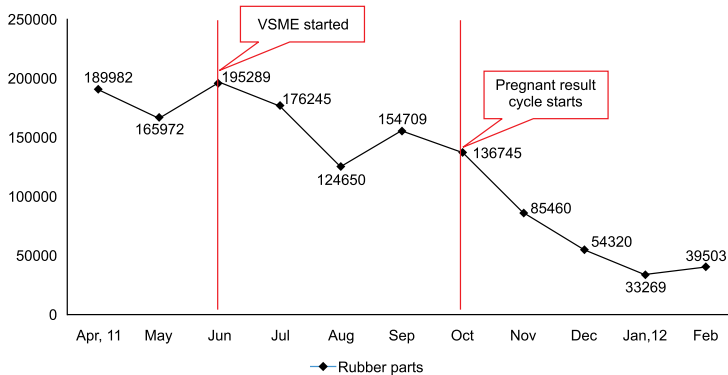
6-27. In-house rejection of rubber parts also reduced after VSME.

Increased Sales to Sona

After these efforts Sona was very satisfied with Paragon. Sona has decided to increase the business to Paragon and also started involving them in the development of components for new products. Paragon's sales to Sona increased from Rs 36.5 lacs per month in April 2011 to about Rs. 55~58 lacs per month in June~Oct 2011. Once the Pregnant Results Cycle began Paragon's sales to Sona increased further to Rs. 63.5 lacs in March 2012. This is close to a 100% increase in business. In addition to stabilizing their current sources of business from Sona, Paragon also received new business from them.
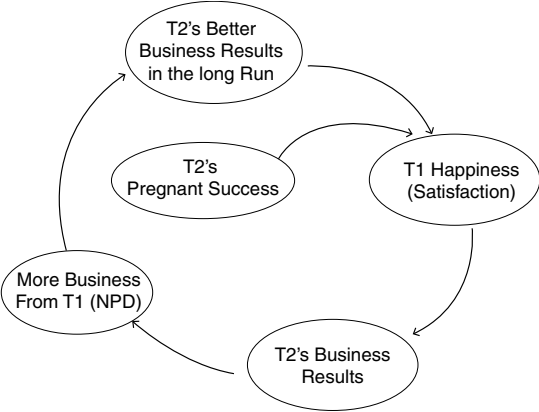
6-28. Customer (T1) Happiness Cycle.

Cost Savings at Paragon

Paragon was able to save large costs due to overall improvement of efficiency of plant which started from MD's mindset change. But Sona had committed not to ask for a price reduction from Paragon. However, Paragon says that they would offer a price reduction if Sona (T1) asks for it because of the substantial cost savings. It is necessary to understand here that for both T1 and T2 reductions are at slower pace than other transformations. Therefore, such a reduction in price may take place at a later stage.
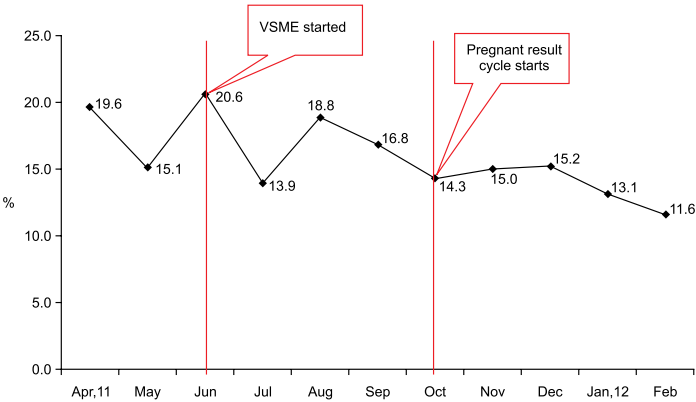
6-29. Paragon experienced savings in Manpower Costs which reduced from 20% to 11%.

Paragon experienced cost saving in manpower costs, input costs and inventory costs. Manpower costs as a percentage of sales stood at almost 20% in April 2011. In the first three months of the VSME this percentage reduced to about 15 to 16%. After the Pregnant Results Cycle this percentage further reduced to about 13 ~ 14%.
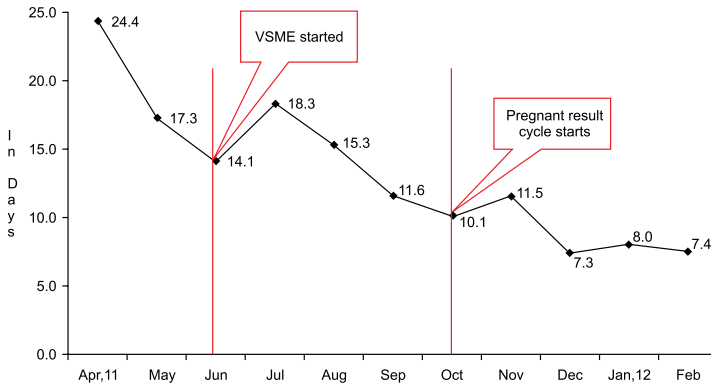
6-30. In April 2011, Paragon maintained an inventory of 24.4 days which reduced to 7.4 days in February 2012 after the Pregnant Results Cycle started.

Once Paragon managed the flow of material and production, the inventory levels also reduced. In April 2011, Paragon maintained an inventory of 24.4 days which reduced to 14.1 days in June 2011 and after the Pregnant Results Cycle to 7.4 days in February 2012.

Intangible Benefit

Emotional Bond Created

The intangible benefit of VSME is an improved relationship between T1 and T2. An emotional bond has been created between the two companies as well as between Sona VSME Chief and Paragon MD. The Sona Engineers also share an emotional bond with Paragon and expect to see an improvement every time they visit the plant.

New Business Received

Once the customer happiness cycle is realized it results in fresh business. From June 2011 till March 2012, Sona was giving business of 31 products to Paragon. From March 2012, another 12 products have been added to the basket.

The new business received from sona indicates three symbolically important facts:

1 Sona now has trust in Paragon's future
2 Sona has a sense of belonging to the same community, like a family.
3 Paragon has ensured future business which means future survival

Feeling of Belonging to Same Family

The objective of VSME is to create a new type of win-win relationship between T1 and T2. This objective has been clearly achieved in the Sona-Paragon Case. On April 24, the MD of Paragon wrote to the Sona VSME Chief as follows:

"Sir, the best part of your approach is that you can very effectively deflate the CEO's arrogance. You make things look so simple by breaking them into small and manageable steps which not only boost confidence but also motivate once the desired results are obtained. You managed to put things so beautifully which my father was never able to do."

This is the emotional bond between the Sona VSME Chief and the Paragon MD.

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Chapter 7

Locomotives for Transforming India's Business Environment

Necessity to Overcome India's Weakness

India seems to have the right ingredients for becoming a front runner in innovation as well as research and development, yet the number of patents filed by Indians remains quite low.

The reason for this could be that a small number of Indian companies have research & development departments. Sometimes these R&D departments are more like design centres with little focus on cutting edge technology research. In addition, Indian industry's forecast of long term technology trends is not always aligned to the trends that finally emerge. India has best in class academic institutions and research capabilities but the research output does not highlight this capability. With limited research collaboration between academia and industry or intra academia collaboration this capability does not get fully leveraged by India.

In this chapter we share two cases – one that highlights how an Indian company overcame India's weakness in the area of R&D and the other how three leading Indian academic institutions collaborated to create fusion of Management and Technology.

7-1 Overcoming India's R&D Weakness
– Sona EPAM Case

Development of a Breakthrough Product: The Sona EPAM Case;

Authors: Dr Ravindra Nath Sharma
                    (Sona Koyo Steering Systems Ltd),
Kalpana Narain (Full Spectrum)

Publishers: JICA and CII, December 2012

This section is a summary digest of the above detailed case study summarised by the authors of this book under permission of the original authors. The comments of the authors of this book are shown in italics in this section. The rest is text from the original case. Full text of this case can be obtained from CII.

1. Introduction

Founder Chairman of Sona Koyo, Dr. Surinder Kapur always says that India needs companies with the Print to Build capability. Indian companies need to pursue the mission to move away from being Build to Print. Only then can we build an India that we can be proud of. This case is the journey of Sona Koyo to achieve their Chairman's mission by overcoming India's R&D weakness stemming from the national drawback in technology development.

From Build to Print
To
Print to Build

Sona is a Tier 1 company providing steering systems to OEMs. The company, started as a Joint Venture with Maruti Udyog Limited, entered into collaboration with Koyo of Japan in 1987. Till the year 2000, the company developed steering gears, earning respect in the Indian automobile industry for its quality.
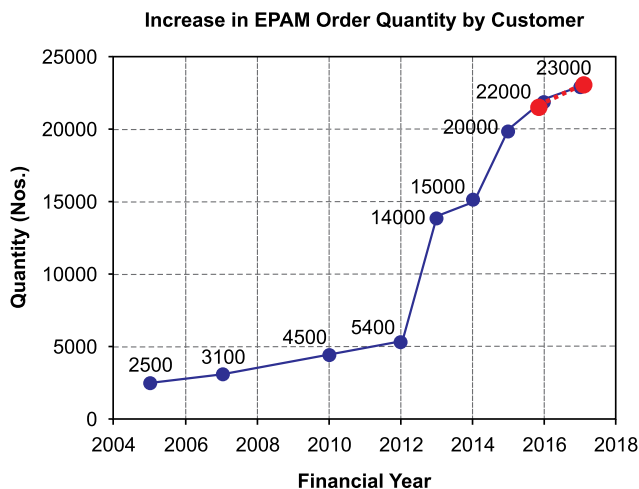
Increase in EPAM Order Quantity by Customer

Figure 7-1. Increasing order quantity for EPAM from Sona's Partner Customer.

Besides developing products for its main area of business, the company had laid down its long term strategy from the year 2000. After much exploration the company decided to address the US off-highway market. This story focuses on the process of how Sona developed the key technology for off highway products. This off highway product has slowly become one of Sona's prospective businesses.

When Sona started developing this product in 2005, the order placed by the partner customer was only 2,500 per year and it continued even after 2 years, this stood at 3,100 pieces and in 2010 the number increased marginally to 4,500. These numbers would be considered highly unattractive by any steering manufacturer for passenger cars. But because Sona was committed to develop the product they ignored the numbers.

Over time as Sona continued to demonstrate their ability to refine the product design and quality the numbers started increasing. The partner customer's confidence increased slowly but surely and finally they were
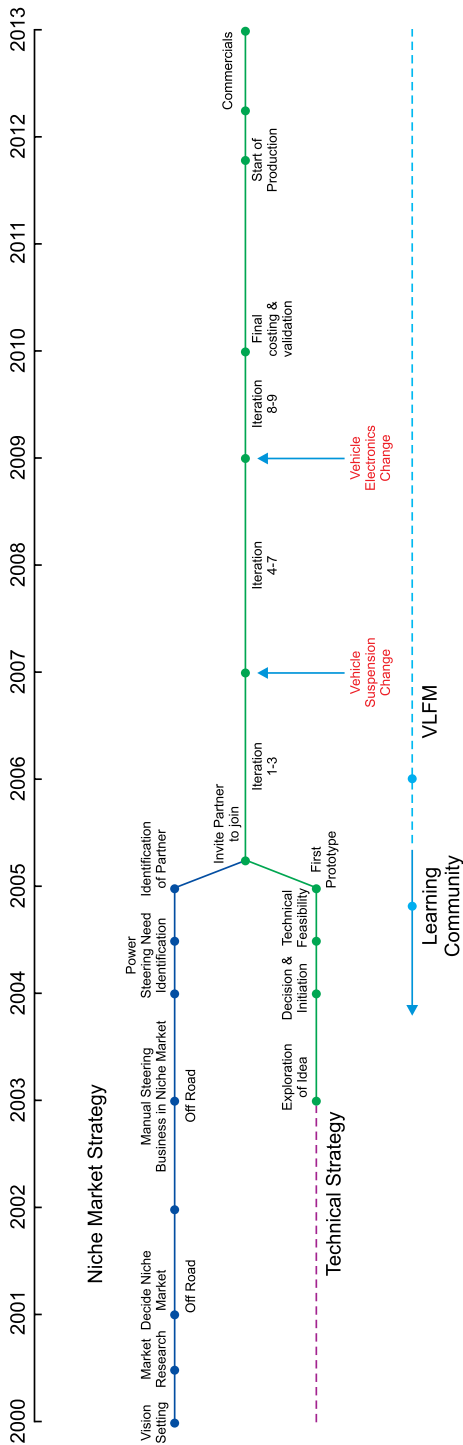
Figure 7-2. This project took 12 years from its beginning until it became a profitable business.

convinced about the product as well as Sona's capability. Suddenly in 2012 they decided to place an order for 14,000 pieces, i.e. 5.5 times the initial orders. This partner customer has now placed orders for 20,000 pieces in 2014 and 22,000 pieces in 2016. In addition, it is projected that the partner customer's requirement will go up to 23,000 pieces per annum by 2018 (Figure 7.1).

Though EPAM has become a front running product of Sona today, this is not the only aspect that excites them. Sona's top management is excited by its many possible applications beyond installation on USA's off-highway vehicles. This product can positively impact the lives of many at the bottom of the pyramid in India. It has possible applications in the farm equipment sector helping to remove the pain of the Indian Tractor users. Eighty per cent Indian tractors have a manual steering making them hard to steer and leading to excessive driver fatigue. EPAM will also make it possible for the aged as well as the village women to comfortably drive tractors restoring them as earning members of the family!

2. Three Phases in Sona's 12 Year Journey

This project took 12 years from its beginning until it became a profitable business. This 12 year journey can be divided into three stages as shown fig. 5-1

    1. Vision Setting Stage: 2000~2001
    2. Exploration Stage: 2001~2004
    3. Technical Development and Commercialization Stage: 2004~10

In this summary the authors of this book mainly focus on the third stage which was the main part of Sona's 12 year journey.

Vision Setting Stage: 2000~2001

In the year 2000, Dr Kapur could foresee an increasing application of electronics in the future and realized that Sona may find it difficult to survive in such an environment. Based on his foresight, the senior management team at Sona was asked to explore the Power Steering business - a product where electronics were being increasingly applied and a business of which Sona already had some understanding and capability.

They launched a core technology project, which was later successful. A market study commissioned by Sona also provided positive indications. This gave the company the confidence to go ahead with the development of Electric Power Steering (EPS) for Off Highway Vehicles (OHV).

Exploration Stage: 2001~2004

Having made an entry into the overseas Off Highway Vehicles (OHV) market in 2001 the company had access to the customer as well as end-user feedback. On talking to some customers Sona realized that they found manual steering difficult to use. This became the trigger to explore the need for power steering in OHV.

In 2004 Sona decided to focus on Electric Power Steering (EPS) which has four critical components: Torque Sensor, Electric Control Unit (ECU), Motor and Reduction Gear. Sona explored the Core Technology and then tried to answer the question as to which of these four parts is most critical to procure. Sona realized that they already had the technology for Reduction Gear. The Motor can be easily outsourced and there were possibilities to buy Torque Sensor from an existing manufacturer. It was clear that the ECU, the brain of the EPAM, is what is not available off the shelf. Sona therefore decided to focus on ECU development.
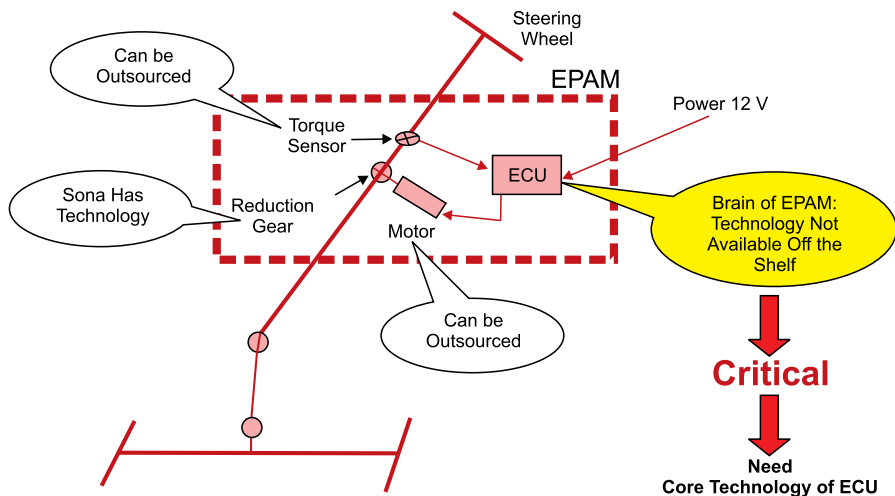

Figure 7-3. Sona explored the Core Technology and tried to focus on the critical component to be developed by them.

Since they did not have in-house capability in electronics, Sona proceeded to identify a partner for making the physical sample and a partner for testing and validation of ECU.

Technical Development and Commercialization Stage: 2004~2012

This stage is the reciprocal process between two different activities – technology development and commercialization. Technology development activity started after 2004. By 2005 they discovered that power steering was the need of their target niche market – Off Highway Vehicles. In 2005 they also identified a partner customer – they carried out the development for this customer's products. This is the beginning of a long and tough commercialization process.

Commercialization phase overlapped with EPAM's product development phase. It started in 2006 after identification of the partner customer. Overall product development underwent two critical technical changes: one in 2007 and the other in 2009. Commercial production began in November 2011.

3. Sona's Unique Activity for Creating New Product Development

Setting Up Innovative Development Environment

An innovative organization and a physical work environment are critical to achieving success in a breakthrough project. Sona learnt the details of creating this physical environment and innovative organization during the Learning Community and immediately applied it to their breakthrough project. This is one of the key success factors for the project.

As a prerequisite to the setting up of Innovative Development Environment is the commitment and capability of the Top Management. Dr Kapur, the founder, Chairman and Managing Director of the Company, is a technology oriented person. He holds a doctorate degree in mechanical engineering from Michigan State University. A visionary leader, he always wanted to try new things with a mission to "Build a Company that India is proud of".

Mr Deshmukh, today the Deputy Managing Director of Sona, was at that time the COO. He holds a bachelor's degree in Metallurgy from IIT, Bombay combined with valuable industrial experience.

Dr Kapur and Mr Deshmukh have worked together for over three decades and share a common passion for technology. They have an emotional tie and shared the passion to develop EPAM with their own team.

Setting Up a Dream Team

A breakthrough idea can come from one or two geniuses but converting that idea into a commercially viable product requires joint effort of 10~30 people. The first task is to set up a team that is willing to be devoted to the Breakthrough project. Sona called it a dream team. There are three critical requirements for a dream team to succeed:

1. Emotional tie between the team leader and CEO/COO is a must
2. Team leader and deputy team leader must be experts in their respective areas
3. All team members including the team leader must be passionate or crazy about the project

Emotional Tie between CEO/COO and Team Leader

A Breakthrough project has no standards or well defined processes often causing failure. In such a scenario if there is no emotional tie between key people there will be much suspicion and passing the buck. Mr Deshmukh, who was leading this project for Sona, selected Dr R N Sharma (affectionately called Aren) as the team leader. Though they did not have an emotional tie to start with, fortunately another person in Sona, Dinesh Sharma, had such a tie with both. He played the role of the connector and brought them together

Though no emotional tie existed between Aren (team leader) and his deputy Nitin, fortunately they both found a common passion for new technology and research. This passion created an emotional bond between them.

Team Leader and Deputy Team Leader Must Be Experts in Their Area

The EPAM team leader holds a doctorate degree in Physics and has close to 15 years experience in the R&D function. Having a strong passion for research, he joined Sona in 2005. The Deputy Team Leader of EPAM project holds a Bachelor of Engineering Degree in Electronics and has been involved in development of products such as the Sine Wave Inverter, PMSM & BLDC motor control, an Electric Bike, a Compact Submersible Pump, a PA System, Electronic Energy Meter and a Time Attendance System. The rest of the dream team members are experts in various domains such as Automotive, Mechanical, Electronic Hardware and Software, Simulation, Debugging, Testing, Prototyping etc.

This type of team is seldom created and this was the first time Sona had created such a team. It shows the high expectations of the top management from the team and creates pride and confidence in the team.

Creative Organization Culture

Such a dream team needs a creative organization culture to generate innovative outputs essential for a breakthrough project. Sona set up five elements which bring out the creative organization culture. The pushing factor amongst these five elements is the physical atmosphere and the pulling factor is the daily "celebration" activity. The three characteristics of the organization are that it is flat, flexible and there is unity in the team.
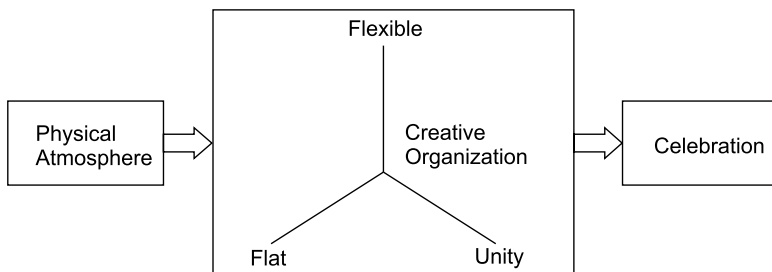

Figure 7-4. **Five elements of the dream team are an innovation of Sona.**

These five elements, that are Sona's innovation, are explained below:

Physical Atmosphere

To break down boundaries of hierarchy and help develop a bond amongst the team members, Sona created an innovation room at their R&D center. This room has an infinity ("∞") shaped center table, bean bags, and toys for team members to enjoy and also have brainstorming sessions. The rest of the set-up is very open with no cabins and everything is open for all to see.

Daily "Celebration"

The team created an environment of fun and togetherness. Festivals, team member's birthdays and achievement of important milestones, such as successful demonstration of EPAM to Customer, are celebrated. The team puts up posters of motivational quotes to keep in high spirits. This kind of daily celebration creates the pull factor.

Flexible Organization

The dream team was given a flexi hour option – reach any time before 10 am everyday. Naturally the HR department did not instantly accept this request. Mr Deshmukh had to make efforts for them to accept this unusual and exceptional request.

Flat Organization

With a view to create a flat organization and break down hierarchical boundaries, the members address each other by their preferred names such as Aren, Jerry, Anni etc.

Unity among Team Members

To promote a feeling of unity among team members, Mr Deshmukh gave it a name (InnovaTEam, pronounced as Innovate Team) and designed a logo

which is a combination of 'innovate' and 'team'. The letters of innovaTEam are brought closer to reflect the closeness amongst team members and their team work. The red dot on 'i' reflects boldness and the violet background represents freshness. The team often wore to work T-Shirts with this logo. This helped to build their image in the traditional organization.
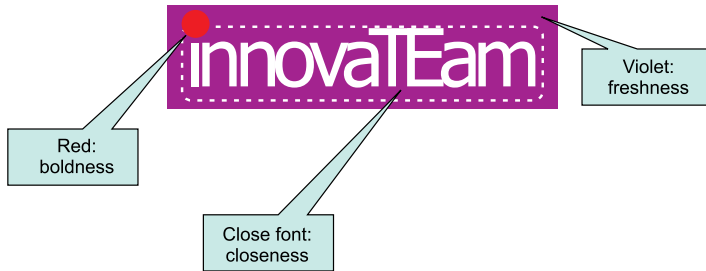
Figure 7-5. To promote a feeling of unity in the team they were given a name and a logo.

4. Protection from KILL POWER

Being a drain on the resources of the company, a breakthrough project generally faces resistance from the main organization. People of the main organization have a tendency to KILL a new project as they do not believe in it.
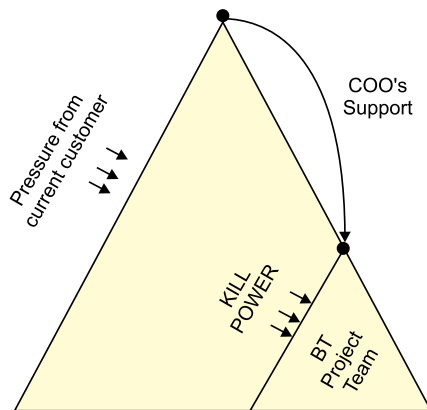
Figure 7-6. The Breakthrough Project needs to be protected from Kill Power of the Main Organization[2].

How to protect the project team is the Innovator's Dilemma[1]. Innovator's Dilemma says that a project that does not focus on the future customer cannot sustain. The main organization is focused on the current customer which gives current income and wants to KILL such a project. Similarly the EPAM project of Sona relates to the future customer of Sona; not the current customer. It was necessary to protect this project from the "KILL POWER" of the main organization

Three main aspects of a strategy to protect from KILL POWER are

    1 process of decision making
    2 place where the breakthrough project team works
    3 support of senior management

Process for Decision Making

A project committee was formed by Mr Deshmukh. It included experts from various cross functional departments of the main organization and, of course, members of the Dream Team. All decisions related to the project were made by this project committee. A total of five members from the project team – the Project Leader, Deputy Project Leader and Heads of each part of the project – are members of the committee. From the main organization there are four members

Figure 7-7. A committee was set up for taking decisions related to the project.

Physical Distance between Main Organization and Breakthrough Project Team
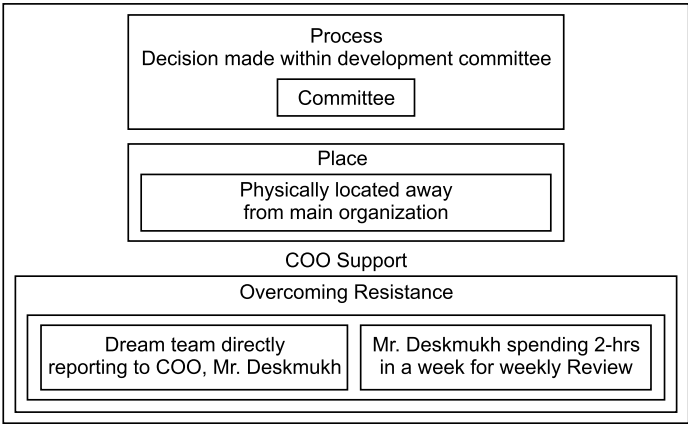
The Project Team's workplace was created in a separate building about 300 meters away from the main administration building and production plant. To maintain a learning environment it was collated with the employee training hall.

This strategy of keeping the project team separate worked well for Sona. In 2006~07 the Indian Auto industry was growing rapidly and the main organization was doing good business. Everyone was busy meeting customer requirements and delivering to targets. The innovaTEam worked quietly at their pace away from the busy workplace of the main organization. Suddenly, in 2008 there was global downturn, production in the main organization was slow and the plant had to be shut down on a couple of occasions. The environment in the main organization was somewhat subdued. The InnovaTEam continued to work unaffected at their own pace, as they had done before. Keeping a physical distance between the main organization and the InnovaTEam meant that they were not affected by the usual ups and downs of a business.

Direct Support of COO

Weekly Review

The COO, set in place a weekly review and support mechanism. To reduce resistance to the Breakthrough project, he directly supervised and reviewed progress – symbolizing to the main organization that the project was supported by senior management and was important to the Organization.

Quick Decision Making

Typically the COO took project related decisions quickly. For example, during a review meeting he asked the procurement head to provide a Vehicle to help the Dream Team test the product. On another occasion he gave immediate approval to Nitin Jain's request for a visit to the US to interact with the partner customer.

Technical Guidance

The COO often provided technical guidance to the team. When the team was trying to handle the overheat protection issue of EPAM, he provided a technical solution. Though he is an outsider to electronics, he has knowledge of material science (as a graduate in metallurgy) and was able to bring in an outside perspective to the problem.

Performance Evaluation

The COO personally drove the vehicle where EPAM was installed and gave feedback to the team. He evaluated the product from time to time and guided them in making improvements. His long standing experience in designing and manufacturing steering systems, and several interactions with customers of steering systems helped him give an accurate feedback.

5. Why Sona Took Long Time to Accomplish Technical Development and Commercialization

Although Sona implemented many excellent strategies to accelerate development of a breakthrough product, the entire journey from envisioning to commercialization took 12 years. Figure 7-2 clearly shows that the Vision Stage lasted from 2000~1, Exploration Stage was from 2001~2004 but the technical development and commercialization took 7 years. Of these 7 years technical development took only one year and the commercialization process took six years.

The prototypes were developed through an iterative process starting with requirement identification followed by solution determination and design of improved prototype. The samples were made based on feedback from partner customer's project managers, engineers, and test drivers. After every cycle of improvements Sona dispatched the prototype and the partner installed and tested them. After evaluation of prototype by their designers, engineers, and test-drivers, the partner customer gave feedback for further refinement till they found it good to go. This process is shown in the flow chart in figure 7-8.
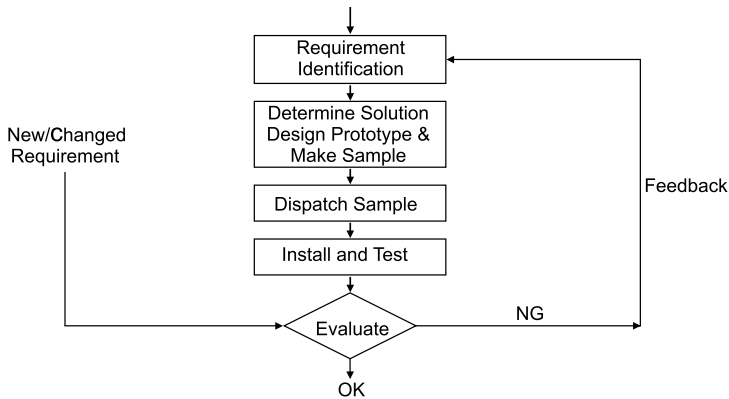
Figure 7-8. The prototypes were developed through an iterative process starting with requirement identification followed by solution determination and design of improved prototype.

Figure 7-9 shows the average time taken for each stage of the development. We can see that in various stages of prototype development process, the stage of sample making takes the longest time.

Once the prototype was mounted on the vehicle the partner customer conducted performance trials and was satisfied with initial performance. Yet, they had a number of concerns such as lumpy feel, encroachment of operator station, lower than expected assist level, reduced returnablity etc. Sona developed Prototype 3 addressing and eliminating all issues raised by partner customer. During the entire journey Sona made nine prototype iterations. After the third and seventh prototypes, there were major changes in the technology of the vehicle (such as changes in suspension system and electrical system of the vehicle). These nine iterations could be divided into three distinct streams in the development cycle: (1) the first three prototypes, (2) the next four prototypes, and (3) the last two prototypes.

To understand and learn from the process of making several prototypes in different streams, the following were studied:

1. cycle time for each of the nine iterations,
2. cycle time for each stage of the iterative process mentioned above, and
3. time taken in prototype making and evaluation.
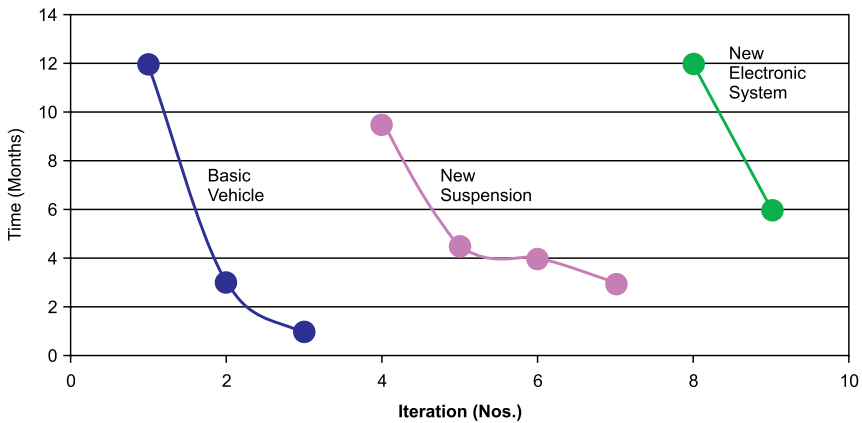
Figure 7-9. In the EPAM case the technological changes in the vehicle necessitated three streams of the iterative process leading to longer cycle times.

From this data it is clear that whenever there is a technological change in the vehicle, the iteration cycle time experiences a jump. With every technological change in the Partner's vehicle, the prototype undergoes a new development cycle. Making the sample for the first time takes the longest time, after which there is only a learning curve, so the iteration time reduces with every step.

If there were not so many iterations required by the partner customer the development and commercialization would have been much quicker. What were the factors that enabled Sona to continue the product development process even through such a long iteration process and a number of failures on the way. The authors of this book believe that there are three reasons for this perseverance:

1. *Sona Chairman's strong and continuous belief in the breakthrough product, in the team and in the need for development of a breakthrough product.*
2. *No change in top management through out the 12 years. The Chairman, being the owner, remained continuously for a long time. The COO and other members of the top management also served continuously in their position and had an emotional connect with the Chairman's mission*
3. *In addition Sona is an engineering company with a long term focus. They are not a company with a short term view.*

6. Lessons from Sona EPAM Case

The Sona EPAM journey has highlighted some very useful lessons that can help Indian companies to overcome some of the limitations of the new product development process. These are shared below

Long Term View

One of the most important lessons was commitment to consistency. New development starts with a strategy and the two wheels of the Sona strategy were market and technology strategy. There was no change in the long term strategy of the company and there was no change in the top management over these years. Thus there was consistency and no sudden changes in the work plan. The core team also remained unchanged for these years. This symbolizes the long term view of the top management at Sona which is important for Breakthrough.

Technical Feasibility is Easier than Commercialization

Determining the technical feasibility of a breakthrough product is easier and quicker as compared to commercializing a product. The commercialization of a product gets established only when the product is accepted by a customer or a partner. This takes a long time and is relatively more difficult. If the product is a part of a final end user product the relationship with the customer becomes critical.

Commercialization is difficult in such instances because:

1. two independent organizations need to cooperate
2. technology change may happen in the end product leading to rework on the breakthrough product
3. it takes time to explorer the real need of the end customer, i.e. the consumer.

It is, however, a different matter with the Technical feasibility. Here it is a single organization that works on its own towards their goal and their vision. Moreover, all issues can be solved by a scientific process.

Commercialization is much more complex. Figure 7.9 gives a comparative analysis of the factors that determine the time taken during technical feasibility and the commercialization phases.

	Technical Feasibility Phase	**Commercialization Phase**
No. of Organizations	Single	Two or more
Complexity	Low: Involves scientific technical process	High: Involves a mix of Technology + Society+ Human Relations
Exploration of Needs	Measured by direct parameters	Determined through Latent needs of the customer
Time taken	Short	Long

Figure 7-9. Comparison of the technical feasibility phase and commercialization phase.

Study the Big Picture

EPAM is like a trunk of the tree. The product development people must expand their view beyond the trunk to understand the forest. Otherwise their efforts of developing the trunk (EPAM in this case) may not fit the needs of the forest (Off-Highway Vehicle industry in this case).

In the EPAM case the technological changes in the vehicle necessitated three streams of the iterative process leading to higher cycle times. The vehicle technology rather than the steering system technology (tree rather than the trunk of the EPAM case) is what changed during these six years. Forecasting how the tree would evolve rather than just focusing on the trunk might have helped the team expedite the development cycle.

Dealing with Changes Beyond Your Control

Besides the technical changes there were changes in the team members at the customer's end. During the development period of seven years three project leaders were changed by the customer. The reason for the change was that partner customer's job rotation policy required a project leader to move every two years.

Impact of change of people at partner customer's end was as follows

1. Every new member needed to be explained all the work done in the past
2. There was no emotional connect with new member at partner customer's end
3. There was always the risk that the new member may have a different vision and approach for the project.

Sona realized that to minimize the risk of people change we need to:

- Have a communication matrix (80-90%)
- Interact with the end user of the product rather than just OEM alone
- Develop close bonding quickly with every new member of the team

Common language is the voice of the end user. Therefore Sona could make the new members of the Partner's team understand the project quickly.

"Trigger" is Necessary to Transform Strategy into Real Products

A strategy gets converted into a real product when there is a trigger. Sona received a strong impact after joining the Shiba Learning Community. They then applied the new methodology to go to the technical feasibility stage. After the technical feasibility they got the confidence to go ahead with the product development. This also provided the trigger to start the Market Feasibility for the product.

7-2 Realizing India's First MOT-PGPEX-VLM Case

Breakthrough in Higher Education for Transforming Indian Manufacturing: VLFM Program

Authors: Shoji Shiba (VLFM)
Venkatesh Balasubramanian (IIT Madras)
Published in: Research in Higher Education -Daigaku Ronshu No. 42 (March 2011): 371-386, published by Research Institute for Higher Education, Hiroshima University

This section is a summary digest of the above detailed case study summarised by the authors of this book under permission of the original authors. The comments of the authors of this book are shown in italics in this section. The rest is text from the original case. Full text of this case can be obtained from IIT Madras.

1. Introduction

Post Graduate Program for Executives – Visionary Leaders for Manufacturing (PGPEX-VLM) is the Middle Level Managers' Course under the National VLFM project. The details of this course are explained in Chapter 1.

It is the first of its kind unique program being conducted by three leading academic institutes of India – Indian Institute of Management Calcutta, Indian Institute of Technology, Madras and Indian Institute of Technology, Kanpur.

This program has *three unique features for higher education system in India.*

First is collaboration between Government, Academia and Industry. Even among the academic Institutes, for the first time three leading Institutes, IIM C, IIT K and IIT M have come together to teach a joint program in management and technology. Unlike the traditional higher educational degrees such as MBA, MS or M.Tech, this program is focused on integrating both technology and management necessary for "Big M."

Second, the teaching style adopted for training the participants included new innovative method to change the mindset and skill oriented course delivery focused on leadership development.

Third, there was a breakthrough brought about in the learning environment. Participants had the unique opportunity to be resident in three different Institutes that have traditionally acknowledged the importance of holistic education. The learning environment also exposed the participants to a combination of theory and practice. They also had the unique opportunity to observe and learn from different cultures in India and Japan.

Under VLFM initiative, PGPEX-VLM which is the Middle Level Managers' Course was formally announced on May 7, 2007 and inaugurated on August 27, 2007.

Figure 7-10. First batch of the Middle Level Managers' Course at IIM Calcutta after the Inaugural Ceremony on August 27, 2007.

2. Breakthrough in PGPEX-VLM

Breakthrough in Collaboration

Collaboration has multiple aspects. Three important aspects of this collaboration are between stakeholders, the body of knowledge and the impetus to utilize the graduates of PGPEX-VLM.

Collaboration by Stakeholders

There are three stakeholders in this process, Government, Academia and Industry. Each stakeholder plays different role as indicated in Figure 7-11.
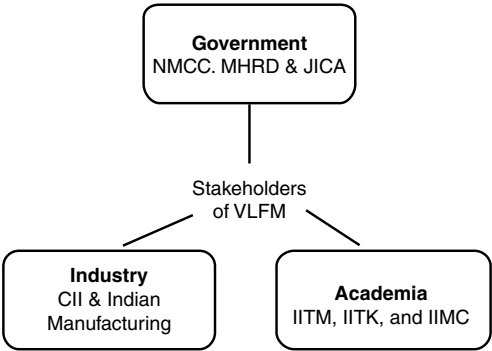
Figure 7-11. There are three stakeholders in VLFM, who play different roles.

To integrate the roles of stakeholders PGPEX-VLM setup a working organization, called the Co-ordination Committee (Figure 7-12). The overall administration of PGPEX-VLM is under the leadership of the participating institutes by rotation. PGPEX-VLM Coordination Committee comprising the opportunity coordinators from IIM Calcutta, IIT Kanpur and IIT Madras, nominated by respective Directors is responsible for normal operations of the program. Though this organization setting looks like a common practice, but breakthrough point exists in how this organization works effectively. The secret of this success will be discussed later.
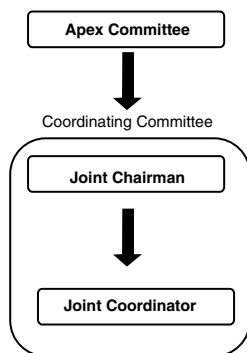
Figure 7-12. Academia set up a Working Organization for PGPEX-VLM.

Collaboration to Integrate Technology and Management

This opportunity is designed to generate knowledge at the intersection of engineering and management. Hence the modules were planned to be a blend of manufacturing technology and management. Functional knowledge of management is provided at IIMC and manufacturing systems and technology are taught at both the IITs. Leadership and decision making in particular are taught at both IIMC and IITM.

The breakthrough of the curriculum lies in the coverage of modules in different Institutes. The participants, during the stipulated period, spend 5 months in IIMC, 2 months in IITK and 2 months in IITM and Industries.

Collaboration to Create VLFM Community

Graduates of PGPEX-VLM, owing to their unique training have developed skill sets that may not be optimally utilized by traditional manufacturing industry. The necessary environment to enable these graduates to contribute to the nation is provided by the alumni of other programs for senior managers and executives. They share a common language, tools and culture referred to as the "VLFM culture." In order to achieve these results in a sustainable way, close interactions between faculty and participants of VLFM broadly referred to as the "VLFM community" is encouraged.

Breakthrough in Teaching Style

Transfer of knowledge in contemporary style although time tested may not be adequate to bring about the visionary leaders that this program aims to produce. Hence it was decided to have three major breakthroughs in teaching style. These start with fundamental change in the mindset of both the faculty and the participants towards learning. The second breakthrough was in the way courses are delivered to the students. The focus on leadership development for executives is probably the most critical part in management education.

Breakthrough in Mindset Change

Faculty forms the essential component in knowledge transfer and grooming of visionary leaders. Hence it was initially decided to seek a mindset change in the faculty towards the concept of developing visionary leaders. A motto, "to teach is a word of arrogance," which represents this mindset change was framed and followed by the faculty in the VLFM community. This motto means that the role of faculty is not to teach or profess or deliver courses but to plan a process that creates a system for transformation of participants. This is demonstrated by the creation of innovative learning environment for the participants, which is described in detail in later sections of this paper.

**Figure 7-13. Role Model behavior in classroom for mindset change.
All participants wear the VLFM uniform to the classroom.**

Breakthrough Style of Course Delivery

This opportunity as mentioned earlier is jointly offered by IIMC, IITK and IITM. The expertise of the faculty in each of the three Institutes was identified and course modules planned accordingly. This offers the best of the available expertise to the participants. In addition, faculty jointly teaches courses, which attempts to decrease the teaching in which one expert delivers in his unique style.

Another style of teaching is "out of class room teaching". Figure 7-14 shows the differnt learning places that students go to during the one year course. The spend a total of 9 months in academic institutions in IIMC-IITK-IITM, get exposure to industry for 2 months. In addition, they spend 0.5 month in Japan. This teaching structure shows the basic philosophy of PGPEX –VLM which revolves around theory principle and real world practices.
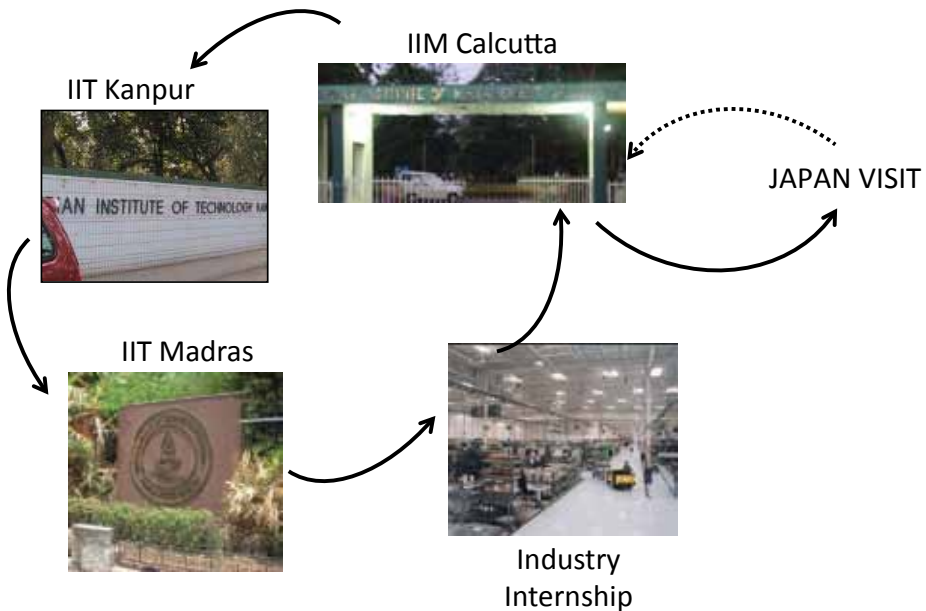

Figure 7-14. Migration model of course delivery is a breakthrough in teaching style. It creates the foundation for mindset change of participants.

Breakthrough in Learning Environment

"To teach is a word of arrogance. We can only create innovative learning environment" is VLFM motto. The highlight of the innovative environment is migration to different environments. PGPEX-VLM students migrate starting from IIMC to IITK to IITM after which they proceed for internship in industry. They return to IIMC for the final placement and then proceed to Japan for an industrial visit. PGPEX-VLM is a residential program, migration create a sense of moving a big family.

This migration gives participants a feel of the local culture and language. IIM Calcutta located in Kolkata, West Bengal exposes participants to East Indian culture. IIT Kanpur is located in UP, a centre of north Indian culture and IIT Madras located in Chennai in the state of Tamil Nadu, provides exposure to South Indian Culture. At the end of program students visit Japan, where English is not spoken. These environmental changes have a strong impact, especially from point of view of English as a primary language for business.

The essential lesson from continuous migration is a capability to see the world in a comparative way. "There is no single right solution, opportunities are infinite". Many students learn this principle through their migration experience. Students start to think about what is their own unchanging identity under such diverse environments. They realize that adaptation is not enough, because it is reactive. Then they think about the need for an unchanging identity. This identity is the starting point to develop visionary leadership.

3. Implementation and Results

Since its beginning in 2007, 154 students have graduated from the PGPEX-VLFM program. The 6th batch is currently in the middle of their course. Students from all batches were placed in the industry. The evidence of reception of this program by Indian manufacturing society can be observed from the annual salary offered to the PGPEX-VLFM graduates, summary of which is presented in Figure 7-15

Batch	Year	No. of Participants	No. of Sponsored Participants	No. of Participants Placed	Median Salary in Million Indian Rupee (INR)
1	2007-08	30	2	28	1.36
2	2008-09	32	4	28	1.10
3	2009-10	30	4	26	1.15
4	2010-2011	28	5	23	1.28
5	2011-2012	34	3	31	1.35
6	2012-2013	33	4	Not Available	Not Available

Figure 7-15. Batch-wise details of participants' enrolment and placements (up to February 2013).

First batch participants had a higher salary compared to participants in succeeding two batches. This may be attributed to the presence of more experienced participants in the first batch. Annual salary of INR 1.1 Million is extraordinarily high in Indian job market. According to information provided by a popular job search and information services provider in India, INR 1.1 Million is nearly double the salary of equivalent cohort experience as shown in Figure 7-16. It also shows that only top 10% of people employed in manufacturing sector earn a salary of INR 1.1 Million. It is interesting to note that even in IT and Finance sector, only the top 20% of professionals in Finance and top 15% in IT with same experience earn a salary of INR 1.1 Million .

	Manufacturing	Marketing	Finance	IT
Median salary in Million INR	0.4	0.5	0.55	0.75
% with salary more than 1.1 in Million INR (Indian Rupee)	10%	13%	20%	15%

Figure 7-16. Data for students with seven years of experience in different functional areas.

Of course this high salary is a result of higher responsibilities in their respective organizations. Figure 7-17 shows the change in job designations before and after graduation for the PGPEX-VLM.

Category A

```
100
 80
 60
%  40   39
 20
  0                           0
     Before        After
```

Category C

```
100
 80
 60
%  40                        25
 20
  0  0
     Before        After
```

Category B

```
100
 80                          72
 60  61
%  40
 20
  0
     Before        After
```

Category D

```
100
 80
 60
%  40
 20
  0                           3
     0
     Before        After
```
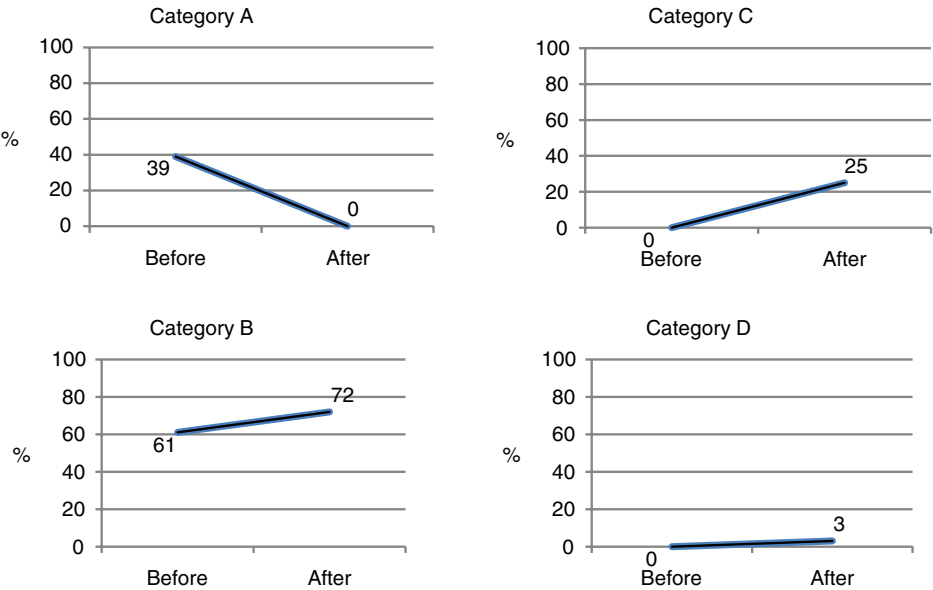
Figure 7-17. Change of designations before and after PGPEX-VLM in Batch 2 (Graduates of 2008-09). Category A is junior level with designations like Engineer and Senior Engineer. Category B is lower-middle management with designations like deputy, assistant or manager. Category C is upper-middle management with designations like chief, senior or executive manager. Category D is people who started their own business.

Figure 7-17 clearly shows that graduates were upgraded to at least the Middle level and one quarter of the participants were placed in upper middle level positions. Upper Middle level managers are usually responsible for managing multiple units of an organization, which means that PGPEX-VLM helps them to enter senior manager level.

Another indirect measure of recognition is the frequency of independent reporting in the mass media. Media usually highlights events in society after prioritizing the editorial perception of what is required. Hence the frequency of appearance could be used as an empirical criterion to understand the expectation of Indian society from PGPEX-VLM. One of the national news networks IBN and its affiliate CNN had reported the inauguration of PGPEX-VLM in 2007. Over 33 independent reports of PGPEX-VLM have been made since that report in the media. This is substantially higher than any other new program of higher education in India.

4. Key Success Factors for Implementation

In a short period of five years, many signs of success for PGPEX-VLM have emerged. For example large number of applications for limited vacancies, successful placement, etc. The unique process for implementation of this program starts with societal environment that beckons the transformation, the real change leaders who work to make it a success and the external influence on these real change leaders to grasp this opportunity.

Some key factors for the programme's success are the fact that it was **initiated half step ahead** of the Tipping Point[3] and that a few visionaries were able to **visualize feasible breakthrough ideas**. VLFM is a breakthrough idea that was nurtured by national leadership at the tipping point. This visualization of a breakthrough idea by national leadership is an essential attribute for the success of any program.

Another key factor is the **focus on critical societal needs and individual desire**. As a nation with strong democratic tradition, the political leadership of India aspire to have inclusive growth. The political leadership in India envisioned growth through job creation in higher employment domains of manufacturing and agriculture. However if personal aspirations for individual growth are not addressed, the migration of labour to high paying avenues cannot be arrested. Hence it is imperative that the program designed for starting the transformation process tries to address these latent desires of individuals.

In this case Real Change Leaders (RCL) came together for making transformation successful. J R Katzenbach[4] has described the importance of RCLs as an essential component to bring about any transformation and particularly breakthrough ideas. Shoji Shiba found this to be true while implementing breakthrough management principles in his diverse experience as well as during VLFM. While Katzenbach had perceived an RCL as an engine to transform a single organization, in the VLFM transformation process multiple stakeholders collaborated to achieve a common goal. Each Institute has its independent Directors, academic senates and faculty councils who oversee their academic functioning. It is unique that these organizations collaborated to create a feasible breakthrough project within a year.

This was possible primarily due to the people involved, who we refer to as the RCL. To understand why these RCL would join together requires

understanding of the structure and nature of association. In this case, the RCL could be easily classified into two layers. One is the executive level, which takes the final decision with respect to the respective Institutes, i.e., the Directors of the participating Institutes. The PGPEX-VLM is aligned to the objectives of the Directors. As a way of describing, Prof S. Chaudhari (IIMC) had expressed, on many occasions, his management and technology vision by enhancing domain knowledge in manufacturing and developing strong management and leadership skills to transform the participants into valuable human resource. Prof S. G. Dhande (IITK) has also mentioned about striking a balance between professing and practicing. Prof M. S. Ananth (IITM) emphasizes the requirement to balance the left and right brain activity and not compartmentalizing academic initiatives. These fit the basic concept and direction of the PGPEX-VLM. All the three Directors have a deep understanding of the industry and participate actively in different roles. These three directors were brought together by Dr. V. Krishnamurthy for the VLFM program, a person who was behind the formation and transformation of many government run heavy industries in India, Dr. Krishnamurthy was respected by all the stake holders and effectively was the force that bound all the stakeholders making breakthrough possible.

The second layer of RCL is the respective co-chairpersons of the PGPEX-VLM. These chairpersons also run the program on a daily basis along with their faculty coordinators. Prof Pal (IIMC), Prof Mittal (IITK), and Prof Narendran (IITM) work on the operations research and are widely respected in both the academic and industrial communities.

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Chapter 8

Locomotives to Impact India's Social Structure and Culture

Inclusive Growth is a Key Issue for India

The census figures of 2011 place India's population at 1.21 billion, which is more than one sixth of the world's population. The country is expected to be the most populous by 2025. More than 50% of India's population is below the age of 25.

Over the last ten years India has also remained amongst the fastest growing economies of world. The growth being service sector led its benefits have not trickled down to a larger percentage of the population. The income and education gap between the haves and the have nots is continuously widening with the income getting increasingly accumulated in the hands of a privileged few.

Such a situation can hamper the long term growth of a nation. Unless a larger percentage of the population is folded into the process of growth and income disparities are reduced, the country can get catapulted into a completely undesirable direction. The key issue for India has become inclusive growth – i.e. a process whereby a larger percentage of the population partakes in the process of economic growth and reaps its benefits. Indian industry also realizes its role in creating a new relationship with the society.

Here are two cases of how organizations have created a new relationship with society:

The first case is of a large FMCG company that first understood the unserved need of the customer and then converted the product into a source of livelihood for them. The noble goal that Godrej started with was to design

and develop the "just right" refrigerator affordable by the BoP customer. However, as the company experienced the lives of people at the BoP they realized it was more important to convert it into a source of income, impacting the lives of the BoP in a positive manner.

The second case is that of building a win-win relationship between the Customer (T1) and the Supplier (T2). With **80% of Indian** manufacturing companies being categorized as SMEs they form the backbone of this sector in India. More often than not the relationship of the Tier 1 with Tier 2 is that of Order-Instruct-Control which turns into a win-lose relationship. Anand Automotive helped create a new community based learning process focused on having a win-win relationship with the SME. This new way of lifting up the level of SMEs has utilized the wisdom of traditional Indian communities.

Let us see the uniqueness of these two and how they fit to India's need of inclusive growth.

8-1 Changing the Life of BOP – Godrej Chotukool Case

Chotukool – The Experience of the Development Journey, A Corporate's Approach to Breakthrough for Societal Impact

Author: **G Sunderraman (Godrej & Boyce Mfg. Co. Ltd)**
Publishers: JICA and CII, December 2010.

This section is a summary digest of above detailed case study summarised by the author of this book under the permission of the original authors. The comments of the authors of this book are shown in italics in this section. The rest is text from the original case. Full text of this case can be obtained from CII.

1. Introduction

Godrej is a 115 year old organization, known for its noble minded approach towards society. The current Chairman, Mr Jamshyd N Godrej is a person with a deep sense of the responsibility of the corporate to positively impact the lives of the people and to give back to society. The symbolic example of Godrej Chotukool outlines an innovative role that corporates could play in building inclusive growth businesses and brings out a new unique relationship between business and society. The new relationship facilitates a collaborative self reinforcing co-evolution of sustainable development model.

Three key characteristics of Chotukool make it a symbolic case of inclusive growth business:

- It is a breakthrough specifically created by focusing on the un-served section of the society
- It is an example of co-creation with potential consumers, entrepreneur intermediaries and development partners
- It is relevant in the backdrop of the growing interest around the world to build sustainable models for inclusive growth as business initiative

The key facets of Chotukool development bring out a new and higher dimension of relationship between the society and the business in building inclusive growth.

2. What is Chotukool and its Impact

What is Chotukool

Chotukool is a small 43 L cooler, weighing 8.9 kgs that meets the daily needs of a family of five living in the rural and semi-urban areas in India

- It runs on solid state cooling engine with advanced semiconductor technology instead of traditional compressors and refrigerants.
- It operates on 12V DC – can work on battery, inverter or even solar power.
- Chotukool has a small foot print (less than 592 X 418 X 472 mm).
- The full plastic body is totally rust free.
- The unconventional top opening ensures cold air settles down in the cabinet to minimize heat loss and power consumption.

- It keeps the basic needs of water, milk, vegetables and fruits fresh and cool between 5°C to 15° C for a typical small family of five.
- It works best in the average ambient temperature of up to 35° C prevailing in India.
- At Rs. 3250- Rs 3790 (depending on the model), it is priced at about half the current entry level 170L direct cool refrigerators.

Building a New Relationship between Society and Business

The Chotukool journey started from the noble mind of the Godrej Group Chairman. It led to the creation of Chotukool as a breakthrough disruptive innovation to meet the daily needs of the underprivileged segment of the society. The breakthrough product demanded a 'breakthrough in business'. The business was co-created in the 'Fishbowl' experiments. This improved the larger societal capability through practical training, new entrepreneurial ventures at local level. Village women became effective housewives which is now slowly building a new societal value 'just right', appropriate for a sustainable society. These new values in turn are reinforcing the noble mind by inspiring further disruptive innovations.
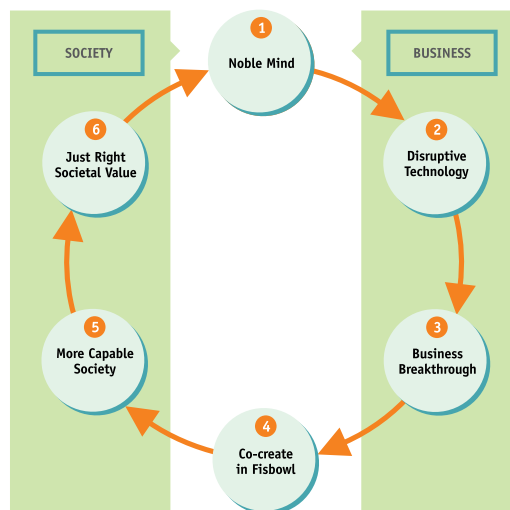

Figure 8-1. New relationships between society and business for inclusive growth.

Success depends on how well the society and businesses at large accept, diffuse and reinforce the 'just right' value for societal sustainability. But on its part,

Chotukool team continues to proactively build enlightened partnerships and constantly iterates the business models by jumping into the fishbowl, moving between the level of thought and level of facts, and reinforcing the 'just right' breakthroughs to co-create a viable business ecosystem with sustainable societal focus. This is a journey – never a destination.

Social Impact of Chotukool

On October 14, 2010, the Chief Post Master General, Mumbai, unveiled Chotukool 'Thunder' and announced the signing of the Memorandum of Understanding to canvass, book orders and deliver the small cooler Chotukool to end consumers in select towns in Maharashtra.

Figure 8-2. A family in Vikhroli, a Chotukool Customer for 2 years.

For Chotukool, reaching out to a large untapped rural market is critical for growth. India Post certainly provides a wide spread network and infrastructure for distribution. This is natural. The unique significance of this event is that it marked the beginning of a new type of business partnership between a government service delivery organization and a private sector organization for societal development through a business to business contract to distribute Chotukool.

Figure 8-3. Paan Shop owner in Maharashtra is now able to serve a cold paan.

Chotukool's price of Rs 3790 is about half the monthly family income of around Rs 7500 to Rs 10,000 of such families. The solid state cooling chip with a life of 100,000 hrs makes maintenance cost negligible. Low price, low running cost and maintenance free service, make Chotukool an affordable cooler for the unserved consumer.

Chotukool provides additional income to entrepreneurs such as small kiosk businesses selling cool water, cold drinks, chocolates and milk produce. Traditionally, many Indians chew 'paan', and many like their 'paan' served cold. Some Kiosk owners used Chotukool to serve cold 'paan' earning higher revenue of Rs 40 to 50 per day.

This product also promotes a life style in harmony with nature. Vegetables are stored in Chotukool at 12°C and do not lose their natural flavor and nutritional value. The water at 10°C to 12°C is at the right temperature for drinking directly. Traditional refrigerator users often add 'normal' water to the over cold water to make it 'right' to drink.

Chotukool is a symbolic example of inclusive growth business as it improves the living standard, livelihood and life style in natural harmony of the people at the lower end of the economic pyramid.

3. Development of Chotukool Business

Phases of Development Journey

Development of Chotukool over the last three years exhibits four distinct phases – Discovery, Design, Development and Diffusion.

Discovery Phase

The breakthrough team conceived Chotukool as a product that "meets the daily needs of cooling of a family of five in the rural households" (*Noble Mind*). The team members visited target consumers in their rural houses and observed their daily life by *Jumping into the Fishbowl*. Through open ended interviews, they learnt about the buying habits, living routines, day to day chores, pain points and unmet needs for daily cooling requirements (*understand and learn life*). From this understanding, the team created the concept of Chotukool as a light weight, small sized, easy to move, battery operated solid state cooler (concept creation).

Figure 8-4. Jumping in to the Fish Bowl in Maharashtra village.

Figure 8-5. Jumping in to the Fish Bowl in Karnataka.

Design Phase

The team tested the concept *in the field* to validate the required size, temperature and cooling and storing about four kilograms of vegetables, five bottles of water, a liter of milk and two small vessels of left over food. They conducted *laboratory experiments* to test the cooling performance

of the thermoelectric cooling module (TEC) (*experiments*). The team then converted the concept into a cooler *design*, developed a *value proposition* for the target consumer around the unmet and unexpressed needs and designed a unique *value delivery* and *business model* that reaches out the product through entrepreneurs, and women from self help groups (*design*). A prototype of Chotukool was made first in CAD (Computer Aided Design) and then as a rapid prototype model (*prototype*).

Development Phase

Commercial pilots were conducted across a dozen towns over ten months in 2008-2009. Using prototypes of Chotukool they validated the price, color preference, daily storage requirement and other features (*pilots*). These pilots in collaboration with customers, suppliers, designers and entrepreneurial intermediaries provided valuable collaborative learning platforms and opportunities (*co-creation*) to integrate the stakeholders' input to develop breakthrough business designs (*business model*).

Diffusion Phase

The team converted the business model into a market development strategy for scaling up (*strategy*). For example, they *focused* on small kiosk based shops selling daily need items for low income consumers in mid sized Maharashtra towns to build an initial customer base in commercial segment. The team built partnerships with NGOs, Government organizations such as India Posts and private entrepreneurial firms working for societal development. They also partnered with self help group women in NGOs to canvass, demonstrate and sell Chotukool in their local areas. The team partnered with a global part supply expert firm to reduce cost and increase energy efficiency of the Chotukool (*building partnership*). These partnerships facilitate the diffusion of Chotukool (*diffusion*). The partnerships and processes developed during diffusion phase continuously build the foundation for scale up and growth of Chotukool business. (*Growth*)

Common Characteristics of Spiral Convergence

While the steps in each phase of the journey are different the over all development process exhibited a common pattern with three distinct characteristics. *On-site immersion*, following thorough *iterative learning* and converging on *sustainable society* focus were observed in every phase. We call this the 'spiral convergence'. The essence of the spiral convergence is shown in the system dynamic model.
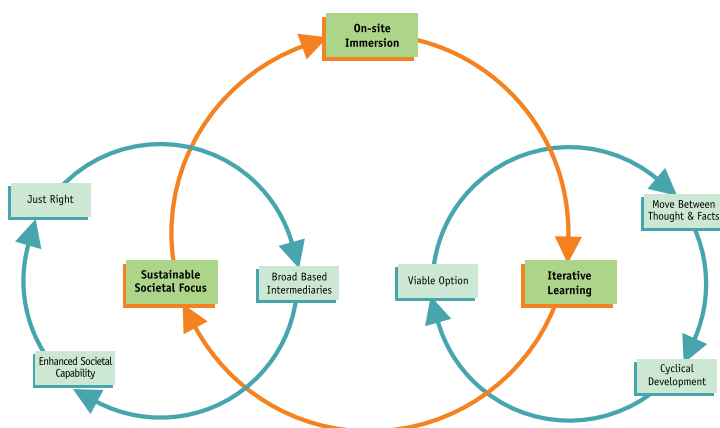

Figure 8-6. The Common Characteristics of Spiral Convergence.

Onsite Immersion

Onsite Immersion refers to the concept of Jumping into the Fishbowl. The Chotukool team jumped into the fishbowl of various villages and their reflections after enabled the creation of a new hypothesis such as the latent need of the target consumers for easy mobility. Immersive experience of the Chotukool team is distinctly different from a traditional survey based market research that validates existing hypothesis of functions and features such as cooling temperature and size for food storage.

Iterative Learning

[Move between Levels of Thought and Facts]
The breakthrough teams constantly **moved between the levels of thought (concept) and the levels of fact** (field experience). This is the essence of the

WV model2 of proactive problem solving proposed by Prof Shiba (page 75) in his book Four Practical Revolutions in Management. In section 3.3 of this paper, this process is explained through two symbolic examples of Spiral Convergence in discovery and development phases.

[Cyclical Development]
The breakthrough team went through cyclical development by thinking through creative alternatives and validating experiments to build progressively more viable options. For example, during the design phase, the design engineers of the Chotukool breakthrough team made prototypes with commercially used plastic cold storage boxes and experimented with different cooling options to finally arrive at the choice of solid state cooling engine. The team iterated from the concept to experiments to designs to prototype and then back to concept as the first iteration rarely ever provides a viable solution in the breakthrough journey. The two symbolic examples of Spiral Convergence in section 3.3 and the comprehensive model shown in section 3.4 explain this cyclical development.

[Arrive at Viable Option]
The breakthrough team arrived at a viable option through iterative learning. For example, the Chotukool team created top opening 'box' option to meet the storage of daily requirements after iterating different alternatives with customers in the field and testing prototypes back in the in-house design laboratories.
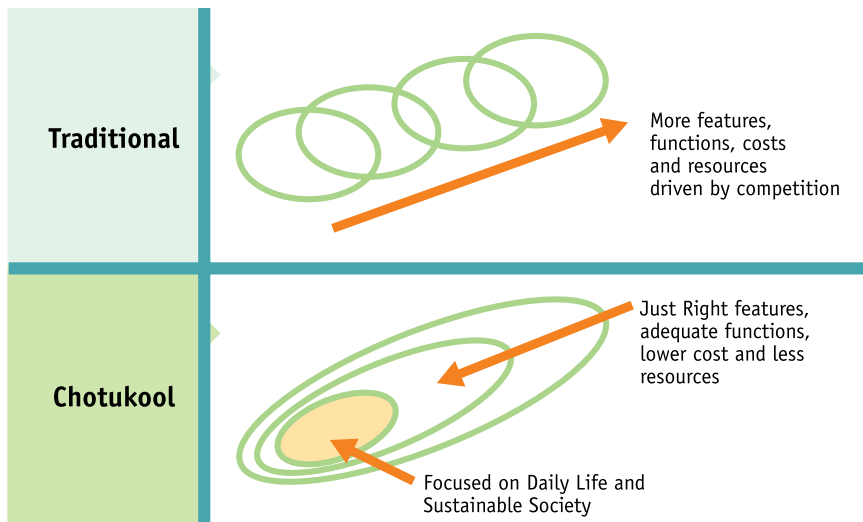
The Sustainable Society

Sustainable Society focus is the third key characteristic of spiral convergence. Viability and feasibility are not viewed from the lens of narrow organizational profitability or short time competitive advantage focus. The Chotukool team converged to a sustainable society focus through three essential components.

The focus is on achieving results that meet the just right needs. The Chotukool team targeted a 5° to 15°C temperature in the storage compartment that adequately meets the daily needs of keeping vegetables fresh and providing cool water to the target rural customers. This is achieved by using a thermoelectric cooling engine that consumes power at 40 to 65 W instead of traditional compressors which consume a peak power of 90W-100 W.

A 30% reduction in peak connected load reduces the energy foot print and contributes to a sustainable society.

Chotukool was designed focusing on 'just right' features for the target consumers based on their daily needs and aimed at creating a sustainable society focus. The design reduced or eliminated features offered by traditional refrigerators but not important for day to day life of the target consumers. The typical competition focused product designs, in contrast, constantly add features and functions on size and capacity to gain superiority in the market as shown schematically in the diagram. Competitive designs that exceed the 'just right' needs of the society and users put a sever strain on the energy footprint and resources.

8-7. Chotukool was designed focusing on 'just right' features for the target consumers based on their daily needs and aimed at creating a sustainable society focus.

Chotukool provided a distinctly different mix of features and functions compared to a competitively focused traditional 170L refrigerator in India.

A sustainable society focus drives a wider participation and inclusion in the growth and development process. For example in comparison with traditional refrigerator sales affected through dealers and distributors in India, the Chotukool team is building new channels such as women entrepreneurs and India Posts so that a larger number of agents and intermediate stakeholders participate in the development and diffusion phase for extensive reach and wider sharing of benefits of growth.

Sustainable society focus creates a larger societal ability. For example, the breakthrough team trained over 200 entrepreneurs for demonstrating and canvassing Chotukool. Skill of communicating the Chotukool benefits to users through simple point by point talk helped them improve their ability of persuasion. They leveraged this ability in their other day to day interactions.

The communities and users involved in the Chotukool breakthrough gradually began to accept, adopt and diffuse new emerging socially responsible values 'just right' and "small is beautiful" (bigger is not necessarily better!). For example, one of the earliest users of Chotukool has since shifted to a larger house a year back, but did not upgrade to a traditional 170L refrigerator as she tells her neighbors that "the small Chotukool adequately serves their purpose".

The next section explains with symbolic examples from the Chotukool breakthrough journey how the spiral convergence process with common characteristics manifested across the phases of development.

Comprehensive Model of Chotukool Development

Figure 8-8 illustrates the full development process with all four phases, highlighting the spiral convergence through alternatively moving between the level of thought and the level of facts.
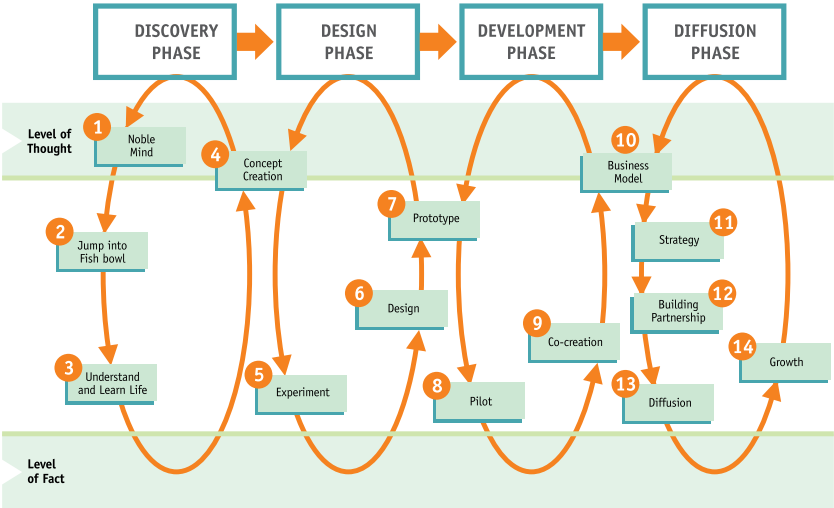

Figure 8-8. Comprehensive Model of Chotukool Development.

An Example of Spiral Convergence in Development Phase – Piloting Market Introduction –

Chotukool was introduced in Osmanabad, Maharashtra in February 2009 in a community event called 'Sakhi Mela' – Sakhi means friends and Mela means a gathering for fun. Six hundred self help group women from forty neighboring villages participated in this event. This market launch was a symbolic example of spiral convergence in the development phase.

The idea of this event came from Swayam Shikshan Prayog – a partner NGO. The team leader jumped into the fish bowl by attending and experiencing another such event almost six months before the planned launch. This on-site immersion in real event provided first hand experience in how women travel to the event, eat together sitting on the floor, exchange learning from fun events and take back small souvenirs to their villages.

The design and organization of the event went through the iterative process with the members of the partner NGO. The joint team developed a number of options of fun events to introduce Chotukool and the opportunity for women entrepreneurs to canvass and earn commission. For example, the idea to bring Chotukool in a palanquin and singing folk songs highlighting the benevolence of Chotukool in the homes of villagers were co-created with community members through iterative learning. Co-creation helped add fun relevant in rural context, make the program culturally interesting and create local surprise elements. For example, the organizing team of village women brought in men dressed as women in a skit to add fun and surprise.

Figure 8-9. Women carry Chotukool in a palanquin.

Figure 8-10. Men dressed as women in skit to demonstrate Chotukool's benefits.

The breakthrough team constantly drove 'just right' values and sustainable societal focus. In contrast to similar city launches where large variety of food items from five star hotels has been a norm, the food served in Sakhi Mela was traditional Indian bread, vegetables and plain rice. The 'court' skit enacted by women entrepreneurs explained the value of 'just right' cooling Chotukool provided.

The final choice on one single color 'Candy Red' demonstrated the practical business wisdom of the women entrepreneurs to 'just right' limited color option that minimized inventory and part stocking for future service delivery. The intuitive choice driven by business prudence also supported the emerging sustainable society focus – less is good!

Women entrepreneurs improved their communication skills through the skits and plays to demonstrate the benefits of Chotukool for the village ladies or by singing the religious songs on the virtues of Chotukool. Godrej team learnt how a fish bowl experience of a large gathering spontaneously turns into a co-creation platform. Six hundred women participants went back to their villages with some tips on living a better life and bonded closer as a community. The launch of Chotukool was incidental!

4. Approach to Inclusive Growth – Lessons from Chotukool

Key Factors to Build Inclusive Growth

The Chotukool development journey has brought to light three fundamental components of 'the system of breakthrough' for inclusive growth business, namely, the *core breakthrough system*, the nurturing *organizational macro system* and the *maturing socio-economic context.*

Core breakthrough system consists of four reinforcing cycles. A passionate breakthrough team (1) focused on improving life (2) of the less privileged segment of the society by experiential learning (3) and leveraging their integration skills (4) to build an inclusive growth business.

Organizational Macro System reinforced this core. This was championed by the noble mind of the top management of Godrej (5). The breakthrough system was constantly enriched through external information network

(6). The team leveraged outside knowledge networks such as the VLFM Community, industry bodies such as CII, government organization such as India Post, experienced academics such as Clayton Christensen and consulting organization such as Innosight.

The Socio-economic context provided strong support for the breakthrough business to drive inclusive growth. *The new emerging societal value* (7) of 'just right' facilitated the adoption of Chotukool in the target communities. *Tangible business opportunity* (8) in the long term drew the participation of external stakeholders and development partners and sustained support of internal stakeholders in Godrej for Chotukool.
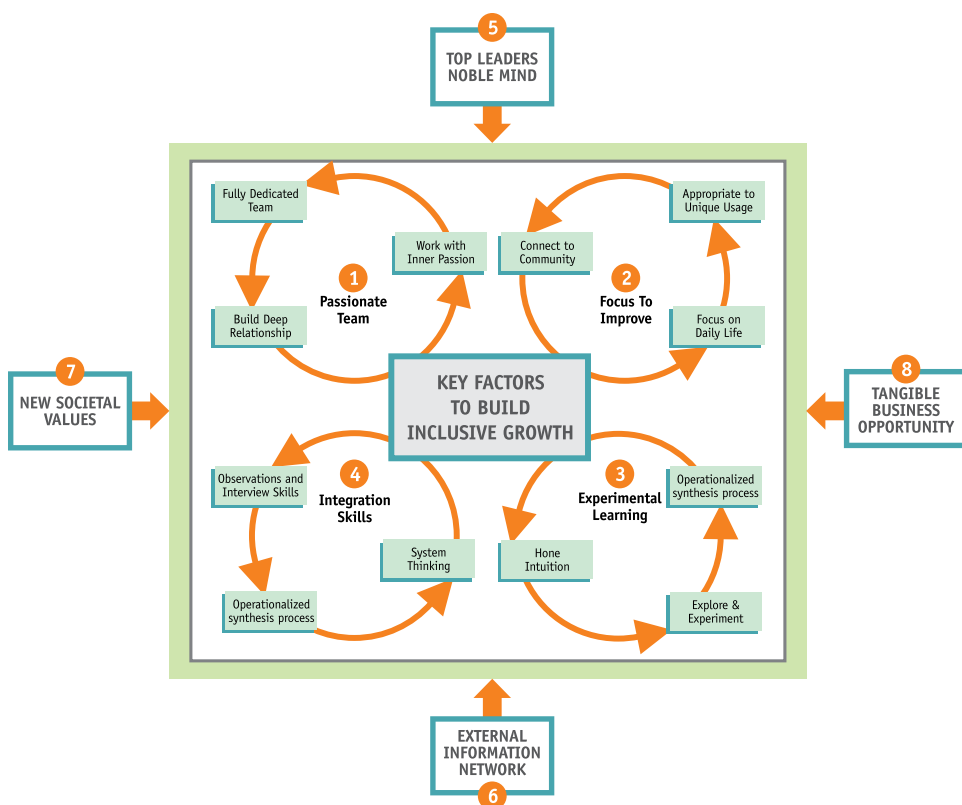

Figure 8-11. Key Factors to build Inclusive Growth.

Core Breakthrough System for Building Inclusive Growth Business

- The inner core began with passionate people. The team worked together dedicatedly for over three years on Chotukool and spent several weeks in villages with no hotels, restaurants or even safe drinking water supply. Even though some members contracted viral fever and digestive ailments during trips to rural towns and villages they continued to travel to the less developed parts of India to 'swim in the fishbowl'.
- Learning from failure is a key factor in building Chotukool as inclusive growth business. In the early stage of the project in 2007, prototypes produced a drop in temperature of only 15°C. The inner frustration as well as discouragement from people outside the core did not deter the team from continuing to pursue the goal.
- The design team head personally experimented with prototypes in laboratory simulation of Indian environment conditions and improved the cooling performance. The field focused team selected focused micro usage segments through experiments on storing daily used food items in different ambient conditions that Chotukool could address.
- A "never say die spirit" is an important element of the inner core of inclusive growth business.

Organizational Macro System

Noble Mind

The noble mind of the Godrej Chairman is critical for the nurturing organizational macro system. The top management of Godrej approved investments in tooling, product development and technology licensing for Chotukool treating it as a 'learning project' with a long payback. The management support to the Chotukool project helped the team sustain over the long three year journey of discovery and development.

Godrej as a company has demonstrated a deep commitment to society throughout its 115 year history. Godrej has focused on the local community and has been running a school for the children and a welfare center for the women members of the employee families for over fifty years.

The brand values of Godrej i.e. Progression, Experience, Empathy and Expression portray this noble mind. Chotukool amply demonstrates these

values of Empathy, Expression, Experience and Progression as illustrated in the earlier sections.

This noble minded approach and long term view were critical factors in supporting inclusive growth business of Chotukool within Godrej.

External Network

The information, knowledge and skill flow through external connections was a critical factor in Chotukool development. Mr Sunderaman had been the director of VLFM module on vertical exploration for latent needs of consumers for four batches. As a module director, he spent a large amount of time with Japanese experts such a Prof Mori during his visits to India and absorbed inputs on concept creation and R&D management. The continuous inputs and practice of breakthrough competencies such as observation, interview, five step discovery process and conceptualization skills learnt through VLFM have been critical in the spiral convergence process. He traveled to Japan twice in a period of three years for special VLFM training programs funded and organized by JICA to observe, learn and absorb contemporary manufacturing practices.

The Socio Economic Context

The paradigm for Chotukool business is fundamentally different, though the socioeconomic context in which it operates remains the same as it is for other traditional competitive businesses. Two factors from this socio-economic context therefore become critical for the Chotukool idea to scale up as a strong inclusive growth business.

New Societal Value

The Chotukool design is based on the 'just right' value for consumers. The emergence and consolidation of these new societal values of 'just right', 'sustainability' and 'small is beautiful' become critical factors in building a wider acceptability and diffusion of Chotukool in the market.

The Chotukool team has seen the emergence and adoption of 'just right' societal values as mentioned earlier in section 3. It is critical that this new emerging value of 'just right' gets diffused to drive strong natural demand for Chotukool focused on 'socially responsible' mix of characteristics.

Through iterative learning over the last two years the Chotukool team innovated on a number of elements of the business model for it to grow as a viable and sustainable business without compromising on the larger societal objective and the noble mind of the top management.

Inclusive growth business turns into charity or corporate social responsibility (CSR), if at the end there is no tangible business result. There is however a danger that inclusive growth business may convert into a profit focused competitive growth business if the noble mind and sustainable society focus become weak. This critical balance needs mature decision making and passionate leadership commitment. The Chotukool team and the top management of Godrej have symbolically demonstrated this maturity throughout the development journey as demonstrated through symbolic examples in section 3.

It is critical that the Chotukool business continues these iterative developments of business model innovations for driving tangible business results in harmony with sustainable societal focus.

8-2 Utilizing the Wisdom of Traditional Indian Community
– Anand Community Activity Case

An Indian Way of Community Activity for Accelerating SME Growth – The Anand VSME Community Case

Author: Sangramsingh D Pardeshi
(Spicer India Ltd;)
Kalpana Narain (Full Spectrum)
Publishers: JICA and CII, December 2012

This section is a summary digest of above detailed case study summarised by the author of this book under the permission of original authors. The comments of the authors of this book are shown in italics in this section. The rest is text from the original case. Full text of this case can be obtained from CII.

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1. Introduction

Provider of the widest range of solutions to the Indian Automotive Industry, Anand Automotive is among India's leading manufacturers of automotive systems and components, making it the country's leading OEM supplier (tier 1 company). Today Anand has 47 plants of 19 companies spread across the country. 13 Joint Ventures and 7 technical collaborations make up this corporate house.

India's Auto Components industry, to which Anand business belongs, is amongst the leading growth sectors of India. This industry recorded a Compounded Annual Growth Rate (CAGR) of 13% between 2007 and 2012 and is expected to grow at 11% CAGR upto the year 2021 (estimates of the Auto Components Manufacturers Association – ACMA). In a business

environment that is continuously growing over 10% CAGR, the future business of the T1 companies is likely to get impacted by the capability of the Tier 2 (T2) and Tier 3 (T3) suppliers. For example, Anand buys at least 70% of its components from about 1200 T2 suppliers. The cost competitiveness and quality orientation of these suppliers enables Anand companies to establish themselves as the preferred suppliers for OEMs. The growth of Anand companies gets somewhat by the efficiency and quality of their T2 suppliers.

2. Need for a New Approach

Difficulty to Sustain Effect

Over the years, Anand launched a few initiatives to develop supplier capability. During these initiatives, Anand always faced a difficulty to sustain activity for improvement. Once Anand provided the support and put pressure to the T2 companies for their improvement, T2 companies showed visible results. But once thus support and pressure weaken the situation could turn back to where it was. In addition the need for better quality and performance increase day by day. Suppliers have difficulty to maintain the capability to continue self improvement effort.

Anand understood the need for a new approach to successfully build the self developing capability of T2 supplier. Here is a story to creating new self developing system in T2 companies.

Two Activities Were Necessary – VSME and Community Activity

The new approach is characterized by it being mutual learning focused activity. Traditional initiatives are based on the hypothesis that learners are capable of applying the learnings themselves; that after they study they get enough ability to apply and develop skills by themselves. The new concept has three distinctive differences from the traditional approach:

Firstly learning can not be divided into "has learnt" or "did not learn". It can not be two-value thinking i.e. 1 or 0 thinking. Learning is a continuous process toward unlimited perfection.

Secondly, speed and capability of learners differs from person to person and company to company. To combine their weaknesses and strength may be a useful strategy.

Thirdly, effectiveness of learning is based on mutual interaction rather than single individual efforts.

This new concept is a transformation from traditional individual based self development model to community learning based model. As the basic element of a community is mutual relationship rather than individual independence. This new activity can be divided into two parts:

1   initiation process to become a community member
2   maintain community and develop community activity

Formation of a community needs a process, to make a clear boundary between members and non-members. This is the initiation process. Once a person becomes a member of the community, they are expected to work together towards the common objective of the community.

VLFM program started this initiation process under the Visionary Small and Medium Enterprises (VSME) course (please refer chapter 1 for details). Paragon, a T2 company of Sona group, revitalized from near bankruptcy to becoming an excellent supplier within one year through this VSME activity.

This case is the story of second part of the new activity i.e. maintaining and developing the community after initiation through VSME course. During this case when we refer to the first part we call it VSME activity.

It is also important to understand that the second part of the process which is the community activity, is very much related to the culture of the Indian society. The effective measures for promoting a sense of membership and motivation for daily practice of community activity are all strongly influenced by such culture.

Start of Anand's Community Activity

Anand's VSME activity in Pune started in 2010 as a pilot trial with five group companies and 21 Suppliers. This activity was the process for initiation to become a community member. When the one year VSME training and practice were ending, the main problem for Anand was how to sustain the activity and to develop suppliers after VSME activity. At this time Mr CS

Patel, member Supervisory Board, Anand and the initiator of VSME activity in Anand, again initiated the second part of the activity – the community activity.

Now we will focus on one symbolic Anand community, the Spicer Community to showcase how this community activity has developed. The Pune plant of Spicer India Ltd is one of the five Anand companies that participated in VSME. They set up two communities with graduate participants of the one year VSME Activity. These communities have achieved many good results. This case will show the key success factors of their success.

3. Three Important Strategies for Successful Community Activity

Here are three important lessons learnt for successful community activity through Spicer's community practice. These are pivot function, community norm and mindset change towards collective genius.

T1 Pivot Creates Opportunity for Bundling

Like the father plays a pivot role in Joint Familites, to create Community Learning too something similar to the Father's Role is essential. In the VSME Community the T1 Company plays such a role. We call it "T1's Pivot Role".

During the intiation process (VSME activity), T1 intiates and supports the activity. After the intiation process, theoretically the community has freedom from T1 support, but the mentality of T1 initiation and support remains strong. Noticing such mentality Anand (T1) decided to continue to appoint a support engineer even after the end of the VSME activity. But their role needed to change from supporter/initiator to the role of a Pivot.

What Pivot Role Really Means?

A pivot is defined as a person or a thing on which something depends or turns; the central or crucial factor. The person performing the Pivot Role becomes central to that particular situation. In the Community it translates into the Pivot performing three crucial roles:

Providing the communication link – T1 assigns a support engineer who becomes the communication link between the community members. Communication channels are created between T1 and individual T2s, amongst various T2s and amongst T2 of various batches.

Providing further learning opportunities – T1 continuously provides new learning opportunities to members of the community. This is done in the monthly meetings as well as by enabling the T2s to share their learnings with others.

Facilitating regular meetings – regular meetings of the community are organised by T1 where all T2 members meet.

For playing the pivot role and providing the vital communication link, Spicer India Ltd appointed Sangram Pardesi as the Support Engineer.

Community Norms Create Bond Amongst Members

Apart from driving community activities it is also important to decide norms and disciplines. These are important to show the symbolic behavior of being a member of the community. In Spicer Community there are four important norms. The outcome of these four norms is self discipline amongst community members.
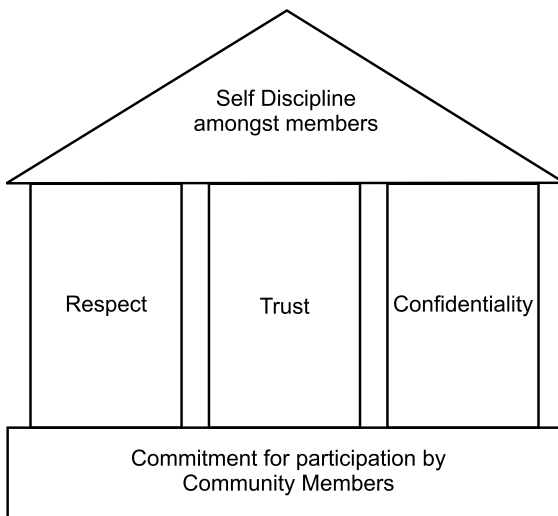
Self Discipline
amongst members

Respect   Trust   Confidentiality

Commitment for participation by
Community Members

Figure 8-12. Community norms create bond amongst members.

Commitment to Attend

Attendance is a basic requirement for participants once they become members of community. By and large the attendance seemed to improve over a period of a year.
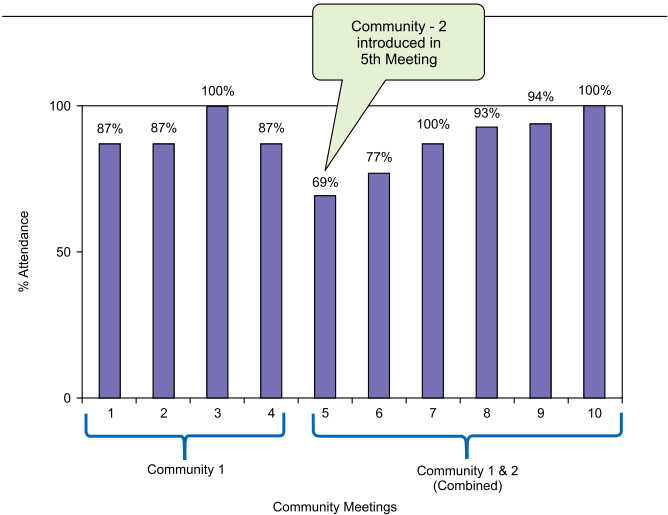

Figure 8-13. By and large the attendance in Community meetings seemed to improve over the year.

Respect

Respect and openness to learn from each other are visible from accepting and not criticizing what others share during the meetings. If someone from the community criticizes what has been shared no one will want to share or show again.

Trust

When people share details it is symbolic of their trust in other members of the community. Sharing details is important, as abstract information is not useful for any one.

Figure 8-14. Members of the community openly shares performance related information during the meetings.

Confidentiality

Maintaining confidentiality is basic ethics and responsibility of community members.
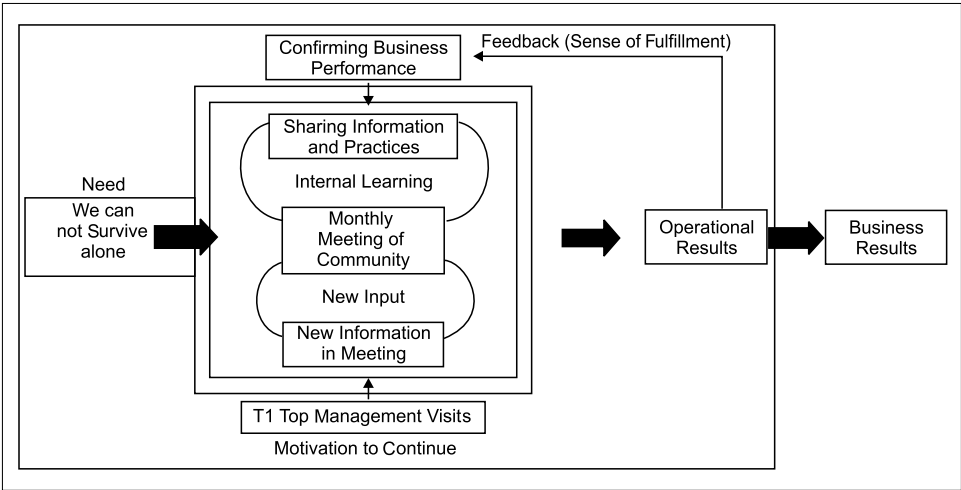

Figure 8-15. Explanation of how a sense of fulfilment is achieved through community activities.

4. What are the Community Activities

Key elements of the community activity consist of monthly meetings, top management visits and feedback mechanism. Figure 8-15 explains how the sense of fulfilment and sense of motivation are achieved through the community activities

Monthly Meetings

Monthly meetings are held at a pre-determined frequency at the plants of the T2 and T1 based. Community members participate in these meetings and interact through systematic activities that include progress sharing in the earlier month, problems and solutions, shopfloor visits, introduction of new practices and implementation and execution of learning's. The meeting flow is also explained in figure 8-16.
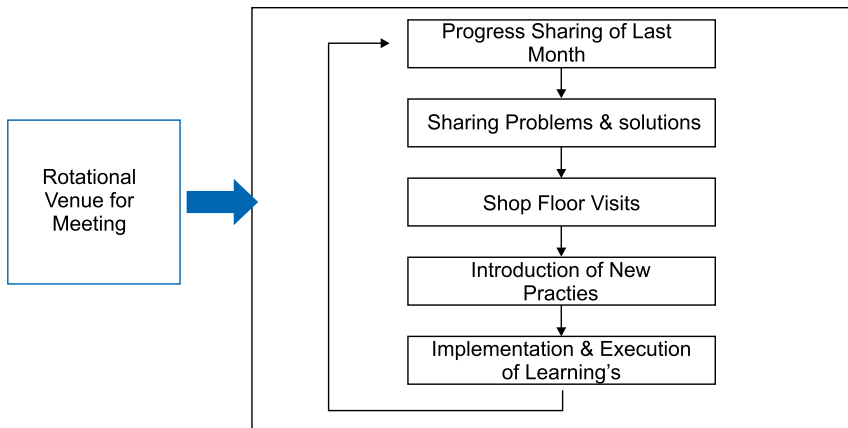

Figure 8-16. Flow of activities during monthly meetings.

Mostly the owners and plant heads of T2 companies attend the monthly meetings and in some cases managers and engineers attend. These meetings are also attended by the support engineer and representatives of the T1 company.

Figure 8-17 Mostly the owners and plant heads of T2 companies attend the monthly meetings.

Top Management Visits

Top Management visit of T1 to T2 is an activity separate from the monthly meetings and does not take place during these meeting. It is not a visit of the supply chain manager but of the T1 top management. The impact of the visit of a COO is significantly different from the visit of a supply chain manager and is a big motivation for the T2 companies. It is symbolic of T1s pivot role and encourages T2s to continue to practice their learnings. The community members get the feeling of being cared for by the T1. These visits enhance the sense of belonging of the community members.

8-17. Top Management visits give the community members a feeling of being cared for by T1 and enhance the sense of belonging.

Open Feedback System

Highlight of open feedback is performance feedback for each member company from Tier 1. this open feedback on performance results has three benefits:

1. Sharing results during the meetings creates a "sense of fulfilment" as well as a "sense of stretch" amongst community members. Some times companies have reasons for not implementing learnings and at times they become complacent after achieving good results. Information sharing helps shake them out of their complacency.

Figure 8-18. T2 management gets information about all community members which gives them a view of their positioning.

2. T2 management gets information about all community members (Figure 8-18) which gives them a view of the positioning of the members. It serves the purpose of the continuation of activity and diffusion of success stories.
3. Implementation of learnings gets accelerated since peers start thinking "If he can, why can't I" and they get motivated to implement.

5. Collective Genius Concept Supports the Community Activity

There is another aspect in community activity which is the collective genius concept. Collective genius concept starts from the premise that nobody is perfect and each one has some strengths and weaknesses. If we combine

these weaknesses and strengths we can create "collective genius". This is the collective genius concept.

Nobody is Perfect – Each One has Some Strengths and Weaknesses

We can show the strengths and weakness of the companies in the three distinct areas of Core Technology, Learning Ability and Current Performance Capability

Core Technology

Each T2 has a different specialization and therefore core technology applicable to them is different. For example 54% members of the Spicer community are engaged in machining, 38% in stamping and the balance 8% in castings. Each of them uses very different core technology for their processes.

Learning Ability

During the one year journey T1 and T2 companies received inputs on Workplace Transformation, Quality Transformation, Machine Transformation, V-Map, Heijunka, Standardize Work and Pull System. However each T1 and T2 achieved varying levels of skills and very different results. We studied the difference in the skill levels of the T2s in each of the areas, which is shown in Figure 8-19.

This difference in skill level shows the deviation in learning ability even though all Companies attended same training. It could be argued that the gap in skill level is a factor of the size of company. To analyze this aspect we used the Cross Tabulation Tool. We discovered that there is no correlation between size of the company and skill level achieved by them. For example in Heijunka one smaller company attained a high skill level while none of the larger companies have got there yet. Similarly, in Machine Transformation one smaller company has achieved a high skill level and two larger companies are in the low skill level.

Current Performance Capability

If skill level differs there is a difference in the Operational Results such as Quality and Delivery. The data from the Spicer community has revealed that average quality and delivery results were wide ranging.
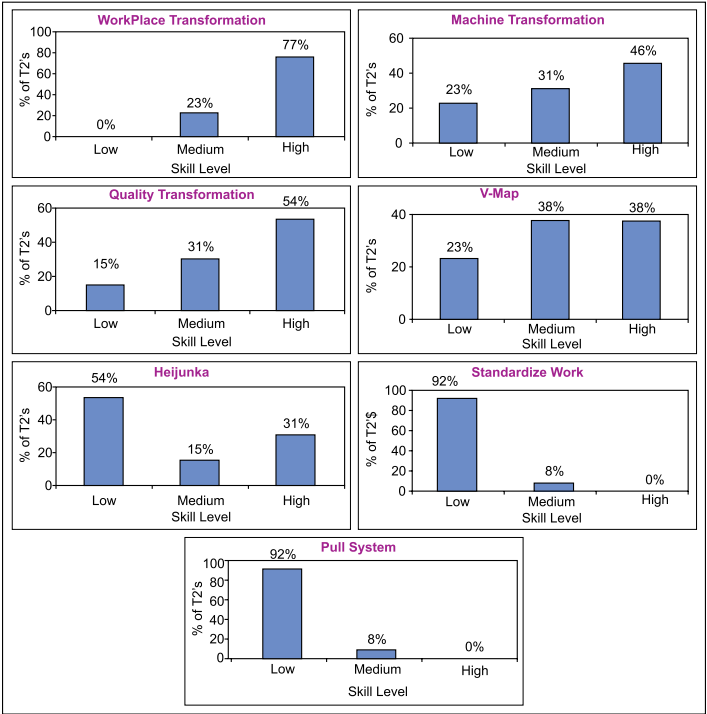

Figure 8-19. The difference in skill level shows the deviation in learning ability even though all Companies attended same training.

Every company has strengths as well as weaknesses. If we combine the strengths of the various companies we can create "collective genius". What is needed to achieve this is a mindset change. Deviation thus creates opportunity rather than a threat when it is driven by a combined power. This is another aspect and necessity of community activity.

6. Results of Community Activity

Business Results

If quality and delivery performance i.e. operational results of T1 improve then business of T2 from T1 will improve. This will further motivate T2 creating a win-win relationship between the two.

VSME training was conducted from 2009 to 2010. Then community activity started. The business results of four Spicer VSME companies from the first community were studied. (Currently there are 9 community memvbers but we focus on 4 T2 companies that completed one year of community activity. The other 5 did not complete one year yet).

A comparison of business before the VSME training with that after the one year community activity show visible business improvement.

Business of the four VSME from Spicer increased as follows:

- Rahdeya: 50%
- AVM Seatings: 60%
- Yash Industries: 54%
- Mungi: 10%. (This is a special case as new business was awarded but production of the model at OEM has dropped against the projected volume.)

Win- Win Achieved

The performance results of both the T1 as well as the T2 companies improved leading to a win-win relationship between them. The companies experienced improvement in Productivity in human work, Productivity in machine operations, 3. Work in process inventory levels. Figure 8-20 shows the improvement recorded by the four companies in these three areas.

	Tier 1	Tier 2
Productivity in Human-work	40-60%	55%
Productivity in Machine operation	39%	21%
Inventory of WIP (Work-In-Process)	58-62%	85%

Figure 8-20. Improvement of performance results of both T1 and T2 helped develop a win-win relationship amongst them.

Happy Cycle of Intangible Results

While this community activity provided tangible results such as operational and business improvements, some critical intangible results have also appeared in the following areas:

1 Skill Development
2 Self Fulfillment
3 Sense of Community

Skill Development

During various VSME modules T2s received many inputs on various concepts. This was knowledge which could become skill only with practice. This community activity provided the platform for continued practice and T2 companies were able to attain a certain level of skill.

For example by end of the Year 2011, Yash Industries had implemented Heijunka planning only on the Model Line. By September 2012, after the community learning activities and spending two years in this journey they have implemented Heijunka on 5 lines. Their team has developed skills in Heijunka planning, implementation and diffusion

Self Fulfilment through External Recognition

Sense of self fulfilment comes from various factors such as achieving improved business results. But one intangible factor that enhances such a sense of fulfilment is external recognition. The Spicer VSME's (T2s) are also supplying parts to other T1 companies as well as to some OEMs. For all four VSME's other Customer/T1 who are not Anand companies appreciated and recognized the efforts of the VSME Activity which have led to progressive results.

Some other T1s who are not Anand companies have requested the T2's to start following the VSME practices on their lines too. This kind of recognition helps to build internal motivation within Tier 2 for continuation of learning and execution.

Sense of Community

The symbolic behavior of sense of community is attendance and participation in monthly meeting. The attendance trend of Batch 1 Community Members has improved over the two year period. In the first year the average attendance of the community members was at 91%. After the community activity the average attendance improved to over 97%.

Holistic Development of Community Members

The community members experienced a number of intangible benefits which were captured in their comments during one of the meetings. The push for applying the learnings and achieving these benefits came from the need to get the ability to schedule in a changing world and yet reduce losses and wastage. The pull came from the possibility of making the customer happy by scheduling and delivering to targets. They achieved intangible benefits in the areas of planning, people involvement, alignment and their own daily life.

Often T2 are small companies who do not have the opportunity to learn how to use manufacturing management tools. During VSME they learnt the use of some planning tools, for example making production plan when there is a large variety of parts. They learnt many tools but they were not able to implement all the learnings during the VSME activity. They slowly implemented these during the community activity.

The T2 companies were able to improve their skills of communication and people involvement through Community activity. In their feedback they say that they are able to resolve problems through employee idea schemes and have been able to improve the transparency in their work.

The community activity also impacted the personal lives of T2 members as they started applying some of the tools learnt to organize their personal lives. One of the community members uses the planning and budgeting learnings to make a monthly budget for his home.

7. Seven Practical Suggestions for Creating Community Activity

From the Anand Spicer experience following are some suggestions that can help create a community activity:

1. Common Goal: All community members share a common goal which creates continuous improvement of suppliers capability and it will bring out better win-win relationship between T1 and T2

2. Physical Proximity: All members of Spicer community are based in the same city i.e. Pune

3. Relatively Compact Groups: The Spicer VSME Community currently has 9 members.

4. Non – Threatening Forum: The Anand T1s created a non- threatening forum by not enforcing T2 to become a member of the community. A non-threatening environment was also created by the T1s following the "Do and Demonstrate" principle rather than "Order and Instruct" methodology.

5. Sponsorship and Support of a Larger Entity: There was visible involvement of senior management of Anand T1s. Additionally there was visible support from Anand Corporate. For example the Chairman, Mr D C Anand hosts the annual VSME event at his farmhouse in Pune.

Figure 8-21. Mr D C Anand encourages Anand Community Activity by his presence during the Annual VSME event at his farmhouse in Pune.

6. Interdependence for Learning: In the Spicer community the interdependence has been seen in the members learning together for last 18 months. They share the best practices and enable each other by sharing their expertise in various tools.

7. Cultural Affinity, Language: All members of the Spicer community are from Pune. This cultural affinity and common language have helped to bring the members closer together.
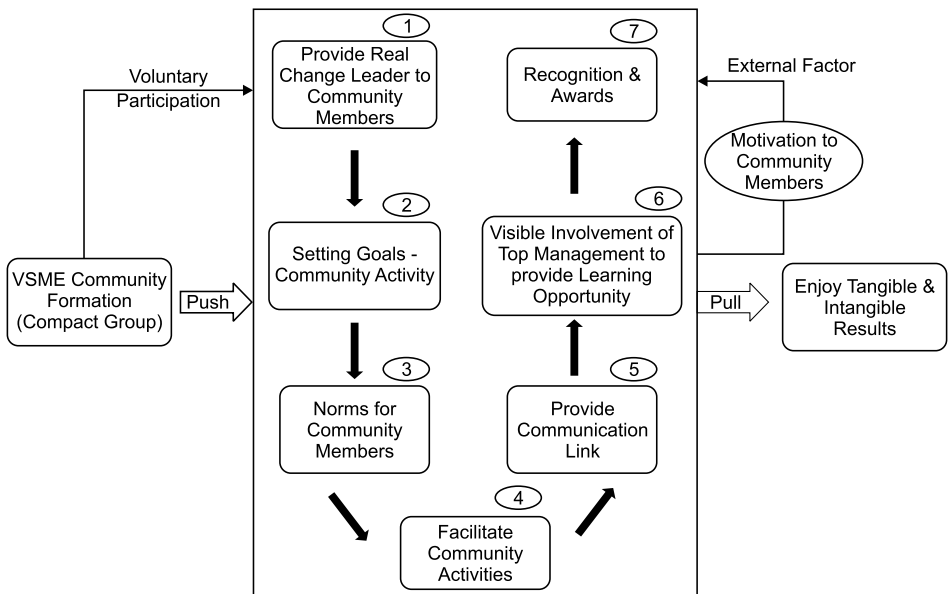
Figure 5-7. Seven Practical Suggestions for creating community activity.

At the T1 Corporate level Anand is committed to sustaining this initiative in the long term for developing their entire supplier's operations. It is not only a Spicer activity or a local activity at the city level in Pune. The Anand Group comprises 47 plants of 19 companies spread across the country. The owner Chairman invites all the members of the Anand Community to his private home for an annual meet. This event becomes the platform for T2s of different Anand companies and from different batches to share their learnings. It is a forum to appreciate the achievements and progress made and provides necessary encouragement for continuing the community activity. It symbolizes the support of Anand Group to this community activity.

Part III: After Efforts Some Flowers Bloom …

We stated earlier that the objective of efforts of capability building is to focus on creating locomotives. But is creating locomotives enough? Can they alone create a long lasting impact? Will they bring sustainable transformation?

The answer to all these questions, of course, is NO!

Will it be acceptable, if after successful capability building only locomotives of transformation survive and others in society die? The answer yet again is No!

Therefore during the process of developing locomotives, the efforts have to be focused on avoiding a situation where only concrete and desert remain. The focus also has to be on also enabling flowers to bloom. Based on this thinking, VLFM has not only guided businesses to become locomotives but also focused on human happiness. The efforts have been directed at creating a society where the locomotives continue and many more flowers bloom besides the locomotive.

Part III of this book explores two different aspects of VLFM's contribution toward this higher objective:

First aspect is the contribution to new tools and methods for capability building. An innovative learning process focused on capability building rather than transfer of knowledge of skill is shared in Chapter 9. The key points necessary to design such a learning style are also shared in this chapter.

Second aspect is the unlocking of boundaries. This unlocking is the key for visionary leaders to play the locomotive role. Unlocking cannot take place by teaching but by building human capability. The process of unlocking is shared in Chapter 10 of this book.

Chapter 9: Developing an Innovative Learning Process

9-1 Three Styles of Learning Process

VLFM was initiated with the objective of building capability to transform India's manufacturing sector by learning from Japanese experts. In practice this translates into a collaborative pursuit of a common goal by thought leaders and real change leaders from government, industry and academia. Japanese experts can only accelerate the process by playing the role of outside triggers. (please refer Chapter 3).

The specific focus of VLFM is to develop the Indian way by utilizing existing objective scientific tools. But a country such as India which has the advantage of the wisdom that comes from a history of 5000 years. In such a case, the new way that emerges from an effort can only be successful if it is relevant to its society. Therefore VLFM goes beyond transferring knowledge and focuses on building skill to see the invisible and the unknown. This skill is considered essential for managers to lead their organizations through periods of drastic change in business environment and for developing a new way, in this case the Indian way.

In our experience three possible styles can be used for transferring intellectual assets – "one way style", "dialog style" and "jumping into the fishbowl style". Let us explain each style and the innovative learning process that emerged from VLFM.

1. One Way Style

The first style, called the one way style, is based on the traditional student teacher relationship. The teacher, who possesses a body of knowledge,

becomes a symbol of the intellectual asset and transfers knowledge to students mainly by talking. The students mostly try to absorb the knowledge in their own individual way with intermittent and often limited opportunity to interact.
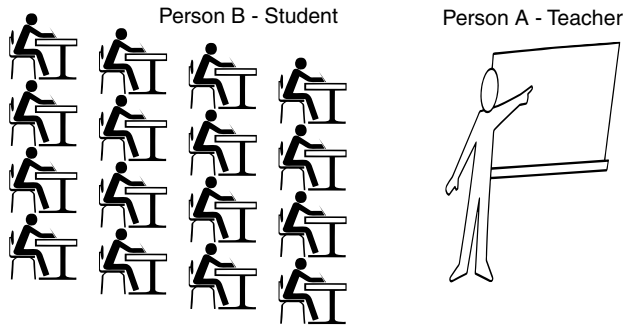

Figure 9-1. In One Way Style of Teaching teacher transfer knowledge to students by continuously speaking.

Traditionally, classrooms were also designed to facilitate the one way teaching style. A classic example of a classroom that facilitates this style of teaching was seen in one of the first universities of Europe – The Salamanca University, Spain. Founded in the year 1134, the classrooms in those years were designed with a high stage for the teacher and the students' chairs and tables placed at a slightly lower level. While this kind of classroom is not very common these days, few prestigious academic institutions in various countries do follow this style of teaching.

2. Dialog Style

The second style of transferring intellectual assets is the "dialog style". In this system the teacher, who possesses the body of knowledge, first transfers it to students, then encourages them to ask questions and follows it up with feedback. The teacher follows this cycle over and over again giving learners an opportunity to adjust their level of absorption of what is being taught.

Dialog style teaching was a big revolution and change from the traditional one way style. The one way style assumes that all students in a class have the same level of absorption and understanding. Additionally, in one way style, teaching remains at the Level of Thought, i.e. students get limited opportunity learn by referring to their past experiences.

In dialog style teaching after the body of knowledge is shared with students the teacher encourages them to refer to their past experiences and then absorb new knowledge. This leads them to asking questions. During dialog style teaching the teacher plays the role of a trigger, giving learners a chance to activate their own learning cycle. The teacher continuously encourages students to move between their level of thought and level of experience. Over the years the classrooms for this style of teaching underwent a minor change – the teacher's stage was removed. Many schools and colleges in India as well as other countries follow this design of classroom.
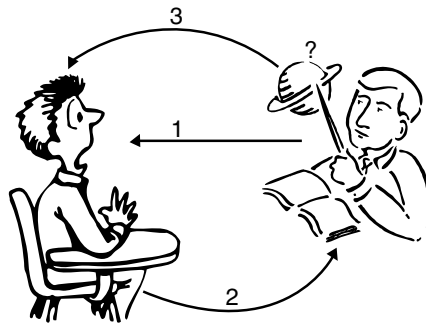
Figure 9-2. Dialog Style of Teaching person A assumes the role of a trigger giving the learner a chance to activate their own cycle of learning.

3. Jump into the Fishbowl Style

The third style of teaching is what we call "Jump into the Fishbowl" style of *learning*. It is a *style of learning* rather than teaching. The teacher creates a trigger for the learner to jump into the fishbowl. He encourages the learner from outside while the learner swims with the fish. Later the learner jumps out and reflects on what he really learnt. In this case learning begins from the learner and is not limited to only accepting what the teacher has shared.

If the idea is only to only transfer knowledge then both one way style and dialog style can be effective. Of course geniuses can create something new even with this kind of transfer of intellectual assets. But the only way to enable common people to create something new is by "Jumping into the Fishbowl".

Moreover the focus of VLFM is on developing future leaders, which needs special training. It is not pure science. Leaders are expected to create visible results necessitating behavioural action and certain behavioural aspects can only be learnt through personal experience.
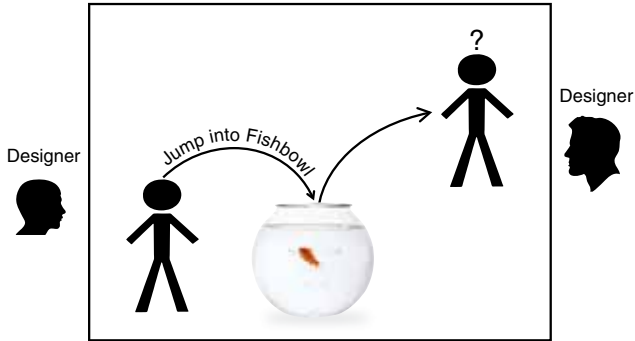

Figure 9-3. In the Fishbowl Style of Learning the teacher creates trigger for learner to jump into the fishbowl.

Why is Fishbowl Style of Learning Necessary?

The clock speed of society has become very fast leading to faster obsolescence of knowledge. In the current context the life of knowledge has reduced to three years! The question then is how does one learn something new, apply and get quick results. Waiting to get new information is a slow process. Moreover, if someone else already has a body of knowledge on a certain subject, it symbolizes that knowledge related to that area will get stale very quickly.

Therefore, the best way for a visionary leader to learn in an environment of high clock speed, is not to wait for someone to give new information. He needs to learn to perceive the symbols of rapid societal changes, explore them and formulate his own concept of the future. This is one way to identify new business opportunities.

Jumping into the fishbowl is the key methodology to perceive unexpected future changes and formulating ideas based on an understanding of such changes in conjunction with the new direction of business. This method developed by VLFM is possibly the only way to perceive changes quickly, learn about the developing business environment and identify a unique way to survive under a changing environment. It helps businesses convert the fast clock speed of change into an opportunity and stay ahead of the curve.

9-2 Five Key Points to Design Fishbowl Style Learning

The question then is how can the "jump into fishbowl style" of learning be designed? The VLFM experience has helped to develop knowhow for this style of learning. Here are five key aspects that a designer needs to observe when designing the fishbowl style of learning:

1. Design fishbowl from shallow to deep
2. Create deeper fishbowl for perceiving the invisible
3. Work on mindset change for jumping into fishbowl before classroom session
4. Design symbols and ceremonies to make participants aware of fishbowl style observation
5. Utilize Cross Cultural Impact

Let us briefly explain these five key aspects which the designer of fishbowl style of learning must keep in mind.

1. Design Fishbowl from Shallow to Deep

When a person is being taught to swim, does the trainer push the learner into the deep end of the pool where the learner cannot stand in the water. Surely not! Training for swimming always starts from the shallow end of the pool. In addition the learner is often given a float till he or she gets accustomed to the water.

Training to jump into the fishbowl is exactly same. It starts from a shallow fishbowl and moves to deeper ones. This is the basic principle for designing the fishbowl style of learning. The designer must first create a fishbowl with the needs of a beginner in mind, in other words the designer should create shallow fishbowls for training beginners.

To create a shallow fishbowl environment for the learners, VLFM designed a special style classroom. This classroom has three unique characteristics:

1. Three walls of the classroom are covered with white board from ceiling to floor
2. Classroom has no tables and is furnished with specially designed chairs
3. There are no small compartments in the classroom

Three Walls of the Classroom are Covered with White Board from Ceiling to Floor

The VLFM classroom has no windows and three of its walls are covered with white board from ceiling to floor. Such a design makes it convenient to train learners in the methodology of onsite problem solving. How the wall is related to the problem solving methodology is explained in the second aspect that designer has to keep in mind (*Point 2*). Basically learners are trained to collect data, record it while swimming and afterwards putting it into a structured form. This creates an environment of applying tools for problem solving.

Figure 9-4. Classroom for fishbowl style learning has no windows with three sides of the walls covered with white board.

Classroom has no Tables and is Furnished with Specially Designed Chairs

This design has been created for the VLFM classroom because mostly when a person goes onsite to collect data no tables are available. For example a person may collect data and take notes in many situations such as making a round of the factory or walking on the street. Such real circumstances are created in the VLFM classroom to provide an opportunity to practice jumping into the real fishbowl.

Figure 9-5. Floor of the classroom is carpeted so that people can work standing, sitting or sometimes even spreading the paper on the floor.

The floor of the classroom is carpeted to enhance this kind of learning experience. People can work standing, sitting or sometimes even spreading out their papers on the floor. This helps them to develop a mental flexibility to adapt to any working style

No Small Compartments have been Created in the Classroom

All VLFM participants learn together in a big gymnasium; there are no small compartments for them to work. Each participant observes the others and learns from them. Learning in the society is similar. The design of the classroom for fishbowl training unites the onsite reality with the learning place.

The classroom for fishbowl style learning has another very unique aspect. While three walls of the classroom are covered with whiteboard, one wall has a one way mirror. This allows the demonstrator to see from the adjacent room whatever is happening in the classroom. The voices of the learners can also be heard through a microphone.

This one way mirror symbolizes the mindset of people who jump into the fishbowl. Generally a person swimming in the fishbowl only thinks about his or her own swimming. This kind of focus is a "me-centric" attitude. The reality however is that one is generally swimming in relation with all the people in their eco system; there are people watching the swimmer from behind and the others are interacting with him or her. The person who jumps

into the fishbowl must pay attention to the existence of the relationship with others in the eco system. This is a kind of ethic for those jumping into the fishbowl. Therefore the one way mirror, not only provides the opportunity to observe from outside, but also symbolizes such a relationship with others.

2. Create Deeper Fishbowl for Perceiving the Invisible

The classroom is a shallow fishbowl designed by VLFM. But after learning to swim in the fishbowl of the classroom, which fishbowl should the learner jump into next. Here is the principle for designing the fishbowl from shallow to deep. Please see figure 9-6.
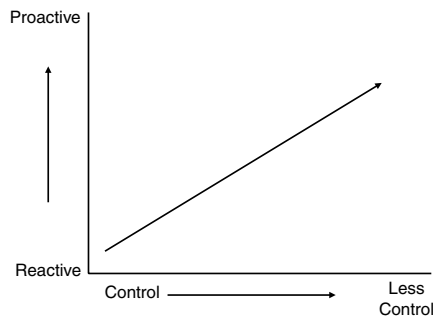
Figure 9-6. The two aspects of going from a shallow to deeper fishbowl – decreasing control and moving to proactive from reactive.

There are two aspects to going from a shallow to a deeper fishbowl. One is related to the physical environment of the fishbowl which keeps getting less controlled (x-axis in figure 9-6). The classroom for example is a completely controlled fishbowl which is designed by designer. Visits to a factory and a showroom visit are examples of a less controlled environment.

The other aspect is to convert the learners' mindset from reactive to proactive (y-axis in figure 9-6). For example after a factory visit the learners are given themes such as most impressive learnings from the factory, the challenges for the factory etc. Answers to these questions are examples of reactive mindset. Ofcourse the training to perceive these visible factors is necessary but the learners need to gradually adopt a more proactive

approach. For example they need to learn to decide on a theme related to their curiosity and their own interest, plan interviews, collect data from onsite observation, analyze the results and arrive at a conclusion. This is an example of a proactive approach. In VLFM the shallow to deeper fishbowl is designed to facilitate the gradual adoption of a proactive approach.

Let us now explain what swimming in the fishbowl refers to. It means having the ability to grasp the invisible and unknown issues. Many facts are visible onsite but often people are not even able to concretely see these visible facts. Visionary leaders not only need the ability to see the visible but also the invisible and the unknown i.e. what is behind the invisible. This is the main objective of jumping into fishbowl. For example, at times just the tail of a shark may be visible above the sea waves. Since the entire body of the fish is not visible a person could mistake it to be a small fish. The ability to determine whether the tail is that of a big shark or of a small fish comes from the ability to see the invisible. And, if a person explores deeper, they may also be able to perceive the movements that may be taking place at the bottom of the sea. This is the ability to see the unknown. (Figure 9-7)

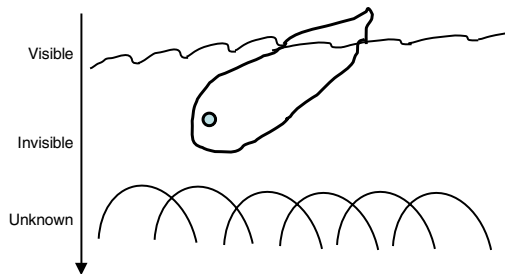**Figure 9-7. A Visionary Leaders needs to have the ability to see visible, invisible and unknown.**

A genius person can see the invisible and unknown intuitively. But common people do not have such ability and need to learn to apply a scientific method. VLFM fortunately uses such a standardized scientific methodology, called Five Step Discovery Process (FSDP – described in Chapter 5 as Unchanging Element 5).

This methodology starts from the ability to perceive the reality onsite, then decomposing these perceptions into Language of Fact. A bunch of these facts are grouped together based on the similarity of issues and abstracted to create a concept. After integrating these concepts into a diagram, a model is made. Through this model one can see the reality. Continuous repetition of this process helps to develop new insights.

Three aspects are essential for a person to perceive the invisible and unknown by swimming in the fishbowl:

1. motivation to jump into the fishbowl
2. energy to continue swimming
3. skill to apply intellectual assets such as FSDP to see invisible and unknown

Figure 9-8. VLFM created a special style for classroom as the shallow fishbowl.

Many people have a strong motivation to jump into the fishbowl and few also have the energy to continue swimming but often they do not have the skill necessary to see the invisible and unknown. This training is essential to get success from jumping into the fishbowl.

Therefore the designer's main job is to design a process that will enable the participants to quickly learn the full skill of FSDP. The unique classroom mentioned above and used for training of jumping into fishbowl focuses on effectiveness of FSDP practice. The key point while designing shallow to deeper fishbowl is to promote proactive mentality of learners.

3. Mindset Change for Jumping into the Fishbowl Starts before Coming to Classroom

We mentioned earlier, that to jump into the fishbowl the learner needs strong motivation, energy to continue and skill to apply intellectual assets. The question then arises as to how to create motivation to jump into the fishbowl and build energy to continue to swim. In other words how to develop the learner's mindset for adopting the fishbowl style of learning. 90% of the success of any task is defined by preparation before the task begins. Similarly, if effort for mindset is made after the learner arrives in the classroom, it will be too late.

The designer of fishbowl style learning needs to focus on creating the motivation in the learners' mind. For building motivation a time sequence needs to be followed as human motivation is mostly influenced by their previous experiences. Here are examples of how the senior managers' course prepares mindset of participants for the fishbowl style of learning. These include:

1 Nomination by CEO
2 Assignment of project by CEO
3 Orientation workshop by VLFM demonstrators

Let us briefly explain how participant's mindset is prepared for the Senior Managers' Course.

Nomination by CEO

In the Senior Managers' Course mindset preparation begins with nomination by CEO who identifies the nominee based on the following guidelines:

1 Learner must be willing to go beyond his daily job and contribute to the larger ecosystem such as the manufacturing industry and the nation
2 Learner must continue to work with the company for a considerable duration in the future
3 Learner must be mainly from an engineering background

Additionally, the company is asked to nominate at least two people. There are three distinct reasons for this particular guideline:

1   At the sub conscious level each learner serves as a reminder to the others that they are representatives of a company. This guideline helps create a community of the company, always reminding participants that they must apply the learnings and produce results.
2   If there are two people it is easier for them to diffuse and apply their learnings in the company. Getting senior management approval also becomes easier.
3   It fosters a competitive and collaborative relationship between two persons. If there is just one participant from a company the pressure to learn reduces and the person could become complacent.

Assignment of Project

Often CEOs assign a business related project to the learner at the beginning of VLFM. They also explain why the person has been selected for the VLFM Senior Managers' Course.

Since there is an existing community of alumni of Senior Managers' Course they also get introduced to the VLFM way by the alumni. Before the course begins participants are assigned pre-work, which is mandatory for them to bring to the class. They are also expected to read the book "Breakthrough Management".

These inputs create a foundation for a mindset towards a new style of learning.

Orientation Workshop by VLFM Facilitator

An orientation workshop is organized by the VLFM demonstrators at least 15 days before the classroom session. While the program content is explained during the Orientation Workshop, the major focus is on mindset preparation.

Few scenes from the movie "Karate Kid" are also shown during the workshop. This movie is about a young American boy who went to learn Karate from a Japanese Master. It highlights the conflicting learning styles followed in USA and Japan. The US way of learning requires application of logic before the learning begins. The learner must know why a particular learning is necessary and why a certain action is required to attain that learning. But the Karate style of learning focuses on practice without

questioning the need. In Karate Kid the Master asks the young boy to wax the car and paint the fence without any explanation of why he should do so.

To start with, the boy resists and is reluctant but he follows the instructions. He doesn't realize that his body is imbibing the critical Karate movements without focusing on the learning. This way a strong foundation is created. One day the Master challenges the boy with a Karate move, who immediately counters it with another Karate move. That's when he realizes how the Master had trained him. This experiential style symbolizes the fishbowl style of learning.

VLFM tries to create a mental readiness for experiential learning by screening few scenes of this movie and other warming up activities. Without such mental preparation participants could take a long time to start learning and absorbing.

The Middle Level Managers' Course also has a process to create mental readiness before coming to the class. Students voluntarily join the Middle Level Managers' Course after leaving their jobs. Therefore they already have a mindset for learning and are open to receiving new learning. Many take an education loan and are given a farewell before they leave for the course. This is a kind of mental preparation for learning and gives them strong determination.

In addition, Middle Level Managers' Course is a one year residential course keeping the students away from their daily family life. For them it is like going to a monastery for a year. The environment is geared towards learning creating the necessary motivation and momentum.

The process of mindset preparation before arriving in the classroom in both the courses creates a common motivation amongst participants – that of receiving new learning. This helps to homogenize the group, accelerating the learning process.

4. Design Symbols and Ceremonies to Make Participants Aware of Fishbowl Style Observation

Symbols and Ceremonies Convey Meanings

The perception of symbols and ceremonies is very useful in identifying future invisible and unknown symptoms. VLFM tries to make learners understand this aspect by intentionally using symbols and ceremonies in the classroom and the activities of the fishbowl style of learning.

The Maharabian Rule states that more than 90% communication is non verbal communication with logical information forming a small percentage of the entire communication. Within non verbal communication, symbols and ceremonies are the most critical as they convey the hidden meaning of the future.

Firstly VLFM tries to make learners aware of the existence of such symbols and ceremonies and understand their meaning.

Secondly VLFM tries to make learners sensitive to and develop the ability to identify the meaning of symbols and ceremonies. Such sensitivity cannot be taught by language and understood by logic but can be learnt through experience. For example a person who has grown up in an environment of fine art has the ability to evaluate excellent paintings without any formal education. A person who has not had such exposure can learn to evaluate paintings by continuously visiting art museums and understanding the paintings.

Similarly in VLFM it is considered important to have symbols and ceremonies in the classroom to help learners develop sensitivity towards them. Once learners get accustomed to these symbols and ceremonies, when they jump into the fishbowl they will be able to intuitively identify them.

Examples of VLFM Symbols and Ceremonies

Here are examples of symbols and ceremonies used in VLFM:

- Everyone wears VLFM Uniform which has the symbol of three eyes of Buddha
- Decoration with flowers

- Taking off shoes before entering classroom
- Posters of VLFM symbols and unchanging elements
- Pledge of VLFM community
- Informal ice breaking
- Traditional Indian ceremonies
- VLFM ceremony – Yo-One

These symbols and ceremonies followed in Senior Managers' Course are explained here.

Everyone Wears VLFM Uniform with Three Eyes of Buddha

All VLFM Courses have a uniform which always has the symbol of the three eyes of the Buddha. This symbol continuously reminds the learners of the basic concept of VLFM. The uniform symbolizes membership to the VLFM community.

Figure 9-9. All VLFM Courses have a uniform which always has the symbol of three eyes of Buddha.

Decoration with Flowers

On the first day of the Senior Manager's Course the staircase leading to the classroom is decorated with marigold flowers. Marigold is considered a symbol of creation and longevity. In the Indian culture marigold and rose petals are offered to Gods during prayers. Flowers are thus considered an approach to God.

Figure 9-10. On first day of the Senior Manager's Course the staircase leading to the classroom is decorated with marigold flowers.

Taking Off Shoes Before Entering Classroom

Participants are asked to take off their shoes before entering the classroom. Since this has many symbolic meanings for India it is a symbolic ceremony in VLFM. Indians take off their shoes before entering the temple, the *gurukul* as well as the kitchen where a family sits together for their meals. This ceremony makes the VLFM classroom a sacred place meant for learning and coming together as a community for a common noble goal.

Figure 9-11. Participants are asked to take off their shoes before entering the classroom, a symbolic Indian ceremony.

Posters of VLFM Symbols and Unchanging Elements

In the classroom posters of TTT, MFA, PTB, small m to BIG M and To Teach is the Word of Arrogance are prominently displayed. TTT (Talk, Talk, Talk), MFA (Me First Attitude) and PTB (Pass the Buck) are three characteristics often observed amongst some Indians. But it is necessary to transform this behavior to become a global leader. Therefore these logos, were created in VLFM to serve as reminders of the behavior change participants are expected to display. These logos have become common language of the VLFM community.

Figure 9-12. Posters of TTT, MFA, PTB etc are prominently displayed in the VLFM classroom.

Pledge of VLFM Community

The pledge of VLFM community to contribute to India's manufacturing and a photo of the President of India conferring the Padma Shri on Shoji Shiba are prominently displayed in the classroom. These are reminders that VLFM is a national project and the participants have pledged to contribute to the noble goal of taking Indian manufacturing to the next level.

We dedicate ourselves to
the transformation of
India's Manufacturing Sector

We pledge to

1. Unlearn the past learnings

2. Focus on applying the tools and techniques learnt

3. Contribute to get business results for the organization and Indian Manufacturing
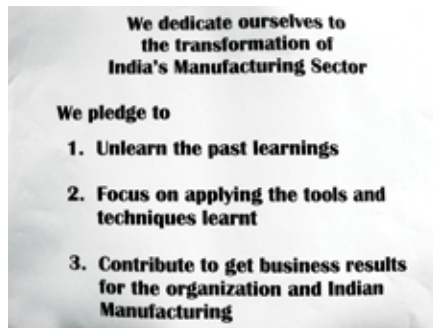
Figure 9-13. The pledge of the VLFM Community in the classroom serves as a reminder that participants have committed to work for Indian manufacturing.

Ambassador from Company

On the inaugural day of the batch, participants are report at least two hours ahead of the first session. They create an exhibition with information about their companies. This is a ceremony to promote amongst participants the sense that they are ambassadors of their company. For them to feel part of a community it is necessary for them to have a sense of identity with a company.

Figure 9-14. On the inaugural day of a batch, the participants create an exhibition with information about their companies.

In addition it also works as an informal ice breaking session when participants get to know each other and get mentally prepared for a new and exciting journey of innovative learning. The initial discomfort of being in the midst of unknown people disappears.

Traditional Indian Ceremonies

The first session of every new batch of the Senior Managers' Course starts with an invocation of Lord Ganesha, Lamp Lighting and India's National Anthem. In India Lord Ganesha symbolizes learning and wisdom and is considered a remover of obstacles. He is also considered the Lord of new beginnings. A statue of Lord Ganesha, installed in the classroom, is flanked by a poster of Three Eyes of Buddha and Padma Shri Ceremony. Lamp lighting is also a traditional Indian ceremony which symbolizes an auspicious new beginning.

Figure 9-15. The first session of every new batch of the Senior Managers' Course starts with a number of ceremonies that symbolize that VLFM is a national project.

India's national anthem is played at the beginning to symbolize that VLFM is a national initiative and that the learners are committed to contributing to India and Indian manufacturing industry.

VLFM Ceremony – Yo-One

Every session begins and ends with the VLFM ceremony of "Yo-One". In this ceremony participants first open their arms in front and while collectively shouting Yo-One clap their hands above their heads.

Figure 9-16. Every session starts and ends with the VLFM Ceremony of Yo-One.

This ceremony symbolizes that we are open to receiving new learning without asking for the logic, however odd it may seem at the beginning. It also symbolizes that once we have arrived at an agreement and are not going to revisit i. Thirdly it symbolizes a community.

5. Utilize Cross Cultural Impact

Cross Cultural Environment Helps to Jump Out of Daily Routine

Last aspect for the designer of fishbowl style of learning is to decide which fishbowl the learners should jump into. For effective fishbowl style learning it is a good idea to jump into the fishbowl which is most far away from one's daily life. Therefore the best place is a cross cultural setting.

Shoji Shiba reflects on the importance of cross cultural exposure and impact

"I first came to India in 1965 when daily life of India was completely different from Japan. My eyes were opened; it was like I had woken up from sleep and I learnt many new things. This is when I became interested in all aspects of India and absorbed them completely."

It is possible that most people have such an experience when they go into a cross cultural setting. Human beings inherently have the motivation and the capability to learn, but if they do not get an opportunity they cannot start learning. Therefore it is the responsibility of the designer of fishbowl style learning to provide an attractive opportunity and place for active learning.

In our experience most people are awakened and learn actively when they jump into the fishbowl with cross cultural setting. Here cross cultural doesn't necessarily imply a foreign country. At times places within the same country can be completely different from what the learner has been associated with. For example the cultural setting of Kolkatta is very different from cultural setting of Mumbai but both are metropolitan cities of India. This is called cross cultural setting.

Let us see the impact of this kind of cross cultural setting with a real example of VLFM.

Migration Across Country for Middle Level Managers' Course

In Middle Level Managers' Course participants migrate at least 4 times during the one year course. They start their journey with Indian Institute of Management, Calcutta (IIMC) which has an impressive atmosphere. The IIMC campus houses a big pond and a birds' sanctuary. Calcutta is also considered the center of Eastern culture in India.

From Calcutta they migrate to Indian Institute of Technology, Kanpur (IITK) for three months. IITK hosts a sanctuary of peacocks, India's national bird. This august institute remains a traditional style institute with most faculty members residing on the huge campus. The IITK township as it is called symbolizes a big joint family, a prominent aspect of North Indian culture.

Indian Institute of Technology, Madras (IITM) is the third stop for students of Middle Level Managers' Course. IITM is a sanctuary of deer even though they are located in the middle of the city. This co-existence is symbolic of peaceful nature of the religious minded and academically inclined people of South India.

The participants then go for internship in the industry followed by a ten day visit to Japan.

Location in Elementary School Provides a Unique Environment

The classroom of Senior Managers' Course is set up in the premises of an elementary school within the colony of Godrej & Boyce Mfg Co. Not only is the campus surrounded by greenery the approach road too is lined by Mangroves maintained by the Godrej family. These Mangroves are the lifeline of Mumbai and are symbolic of the environmental consciousness of the Godrej family.

**Figure 9-17. Location of the VLFM Center on the 2nd Floor of
Godrej School provides a unique environment.**

With children shouting and playing, the elementary school offers a lively environment.

Shoji Shiba says *"seeing these kids playing and shouting always makes me think that I have to work to create a better environment for the next generation. It refreshes the mindset that I need to work for the next generation."*

This environment surely has a similar impact on the VLFM participants stimulating and motivating them to learn. They come to the classroom in much the same way as small children and are reminded of their responsibility to the next generation. The active and innocent environment creates disconnect from daily life. A senior manager's daily life is full of tactical actions, management of conflict of human relations and meetings with adults. During the VLFM module they meet little children and also hear the playful shouting, a very different scene from the daily tactical life.

Self Initiated Research during Japan Visit

The highlight of the new learning style in the cross cultural setting is Self Initiated Research (SIR). This is a unique tool developed by VLFM to help unlock an individual's mental boundaries and in the process unlock new

values. The first step in SIR is to decide on a theme totally from the personal interest. It is alright to select a theme that is unrelated to the participant's area of business, for example study the process of making a Bonsai. The participant collects data in a cross cultural environment by his or her own effort. Then the data is analyzed. SIR helps unlock new value when the participant understands the process used in the area studied and comparing it with the process of his own business.

The unique learning process utilizing cross cultural environment is divided in three parts:

1. Study in India – Setting up theme and data collection in India
2. SIR during Japan Visit – onsite data collection by own effort
3. Analysis of collected data, concept creation and presentation

Study in India

First step for starting SIR is to set up small groups with 2-3 members. The members of the groups select the SIR theme based on their personal interest. It is not necessary for the theme to be related to their business in any way. In fact they are encouraged to select a theme related to the Japanese culture or uniqueness about the Japanese society. Some themes that groups have selected in the past are Bonsai, Japanese methods of worship, origin of Japanese disciplined behavior, fashion sense of young Japanese, public toilets in Japan, etc.

Having selected the theme they need to study it in advance and collect information by reading books, searching the internet etc. This is necessary since 85% participants have no prior experience of being in Japan!

The groups also have to decide what places they will visit in Japan, what kind of data they will collect and the process for collecting the data.

They take these decisions based on advice from Shoji Shiba and others who have experience of SIR in Japan. This advisory session is organized at least two times before the Japan Visit.

Onsite Survey in Japan

During the Japan Visit two and half days are assigned for SIR. After arriving in Japan, immediately they spend about half day for explore how to travel in Tokyo using the metro and how to identify the station and line etc.
A large part of the first day is meant for onsite survey conducted under difficult conditions. There are three guidelines for conducting the survey:

Self Support
- The groups undertake the survey completely by themselves. No local city guide or interpreter accompanies them during onsite surveys.
- No transportation is provided for them to get to the site for data collection. They are expected to use public transport.

Data Collection by Observation
- No questionnaire and interviews are possible since most Japanese cannot speak English and most Indians cannot speak Japanese.

Public Place
- There is no arrangement for conducting surveys. Usually it is difficult to visit factories, schools, super markets, hospitals etc. of course they can be the customer of shops but it is not possible to conduct a survey by their own initiative. The only possibility way of data collection is public place

Figure 9-18. VLFM participants undertake the survey in Japan by themselves, collecting data without any interviews by making observations in public places. No logistics support it provided to them.

Analysis and Preparation for Presentation

Immediately after returning from onsite survey the groups start analyzing the data. The presentation is generally scheduled for the second day at about 16:00 hours. Therefore they continuously work for two days without any break.

Figure 9-19. Immediately after the onsite survey, groups start analysis and preparation for presentation.

Their presentation is open to public, government officers, mass media and Japanese businessmen. They are generally eager to attend and give excellent comment from a different view from India.

Figure 9-20. On February 24, 2013 VLFM had the honor to receive Her Excellency Deep Gopalan Wadhawa, Ambassador of India to Japan, at the SIR presentation.

Figure 9-21. Mr Hideaki Domichi, Senior Vice President, JICA encouraged the VLFM participants by interacting with them during SIR presentation.

Benefits of SIR

During SIR participants collect onsite data in a country where they don't know the language. They go onsite in a city where they are not familiar with the environment. After this they prepare the entire project within two days. There is extreme pressure on participants to complete the project from data collection to presentation of results in a short time. But this training is beneficial for them for the following reasons:

Global Manager Mindset
This training is helpful for future global managers. As the current business is becoming increasingly global they need to know how to conduct business in such an environment. Therefore a basic understanding of cross cultural approaches is important. Each country has subtle cultural differences.

SIR gives the managers an opportunity to observe deeply rather than focus on the surface. They decide on a single theme, for example Japanese popular food, religion or women's costumes. After collecting data by focusing deeply on the theme they compare it with their own culture. This helps them develop a cross cultural mindset, in other words to see India for outsider's view.

Data Collection Methodology

Many Indians have the notion that English is a common language across the world. Data however proves otherwise. In the European Union, a Supranation comprising 26 countries, the English speaking population is only about 55%. Globally English speaking population is a minority. After VLFM participants visit Japan and realize that most Japanese do not speak English they understand this truth. They also have to make an effort to communicate and get meaningful business data by observing rather than interacting with people. SIR is a training to collect meaningful data by overcoming the language barrier.

Accomplish a Project from Theme Selection to Presentation

Participants decide on the SIR theme based on their personal interest, make a feasible research plan, collect data by making detailed plan of onsite visit, analyze it using a scientific method and make a meaningful presentation. This presentation includes how they could apply the lessons learnt in their businesses.

The entire process from data collection to presentation needs to be completed within two days either alone or in a group of two. This skill is useful for senior managers since they are often required to undertake research themselves or supervise a research project. However the opportunity to develop such a skill is rarely offered by real business situations.

Symbolic Example of SIR – Bonsai Vs Manufacturing

Here is a symbolic example of how SIR was conducted by two students of the Middle Level Managers' Course – Nitin Garg and Rakesh Pathak. They had an interest in learning about Bonsais because the sister of one of them wanted a Bonsai from Japan.

While in India they studied on the internet how bonsais are made and some basic nuances of Bonsai making. In Japan they explored many aspects of Bonsais such as the price, the types of trees that can be made into Bonsai and the process. While doing this study they got the inspiration

Figure 9-22. Here is a symbolic example of SIR with the theme Bonsai Vs Manufacturing. The details are explained in Figure 9-23 ~ 9-25.

that it might be interesting to compare the bonsai making process with compressor manufacturing process since one of the two students was from the compressor manufacturing industry

Figure 9-23. The participants studied the process of Bonsai making and compressor making.

Bonsai making requires selection of species, selection of size of tree, selection of pot, preparation of tree by pruning of roots, removing the soil, preparation of pot and finally putting the plant in the soil. The Compressor manufacturing process requires selection of compressor type, selection of pressure, selection of sub assemblies, assembling the components of sub assembly, final assembly on main base and final testing. The two processes have a few similarities.

The next step is to extract similarities and limitations which help to unlock new value. As a first step the students determined the aspects under which to look for similarities in the two processes. They came up with a list of six areas: standardization, precision, continuous improvement, understanding customer needs and sense of belonging.

ASPECTS	BONSAI	MANUFACTURING
STANDARDIZATION	CREATION, RE-POTTING & CONTROL PHASE	STANDARD PROCESSES FOR ALL FUNCTION
PRECISION	SOIL-NUTRIENT MIX, WATER & SUNLIGHT	QUALITY CONTROL
CONTINUOUS IMPROVEMENT	PRUNING & SHAPING PLANT CREATIVELY	IMPROVING EXISTING PROCESS
PERSEVERANCE	EFFORT + TIME = GOOD PLANT	EFFORT TO BECOME LEADER
UNDERSTANDING CUSTOMER NEED	LESS SPACE, CLOSE TO NATURE	CUSTOMIZATION, INNOVATION
SENSE OF BELONGING	A COMPANION, SYMBOL OF ACHIEVEMENT	TEAM PROUD OF ORGANIZATION

Figure 9-24. Next, participants determined various aspects under which to look for similarities in the two processes.

In the next step they extracted the limitations of the Bonsai making process from which they understood that this is a continuous improvement process leaving limited opportunity for breakthrough. Secondly, they also learnt that while there is a lot of focus on process the systems approach is missing in the Bonsai process. The limitation of this process is that Bonsai can not have big leaves nor can they bear big fruit. Thirdly, they understood that

the Bonsai making process specializes in the micro, making it difficult to replicate in the macro environment i.e. it is not easy to generalize for societal diffusion. Finally they associated Bonsai making with the future direction of manufacturing.
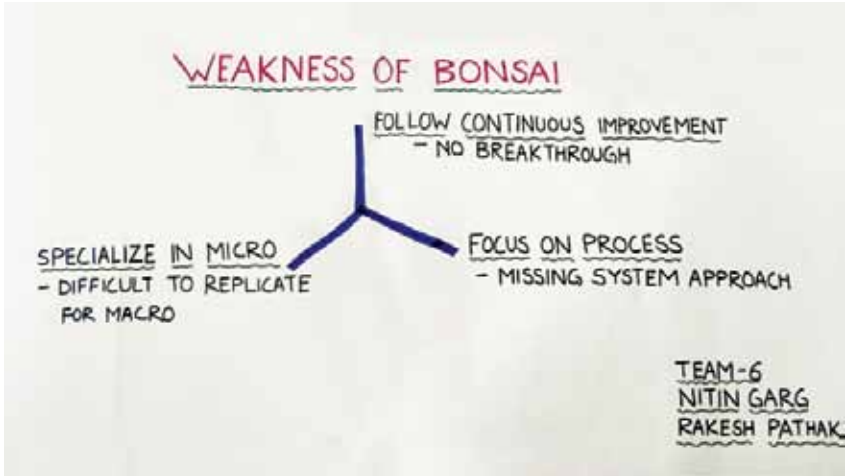

**Figure 9-25. Finally they associated Bonsai making with
future direction of manufacturing.**

The issue is not whether the conclusion of the SIR is right or wrong. The more important issue is to utilize cross cultural opportunity to unlock the existing value and to open new perspectives. SIR surely works towards this purpose.

Chapter 10: Unlocking the Boundaries Towards New Horizons

The initiator of VLFM wished that after its launch VLFM should not only create locomotives but also flowers, even if these are small flowers. In the previous chapter we described how VLFM created a new innovative learning which is called "Jump into Fishbowl" Style of learning. This chapter focuses on those who participated in such fishbowl style learning, in the Senior Managers' and Middle Level Managers' Courses.

10-1 VLFM Unlocks Existing Mindsets

1. Before-After Survey Conducted

In February 2013 we undertook a special survey of the transformation of mindset of participants before and after the course. We asked them to reflect how their mindset changed after VLFM as compared to their mindset before entering VLFM. This survey was undertaken towards the end of the course. For both courses in this particular year the participants were awaiting their graduation in February. The participants of Senior Managers' course had completed five modules and the Graduation Ceremony was scheduled for March 2013. Participants of Middle Level Managers' course had finished the sessions of the course in India. After the Japan Visit they get placed in the industry and leave from the institute.

Each person was asked to write three areas of mindset change that they experienced. They were given the opportunity to freely describe the mindset change instead of selecting pre-decided alternatives as is done in multiple choice questions. We are sure the results of this survey reflect some honest perception about their mindset change.

Their responses were grouped in thirteen categories based on the similarity of answers given. These thirteen categories were further integrated into four main areas found common to the senior and middle level managers. This mindset change that participants have experienced frees them from their old mindset and helps them develop a broader and deeper view. This is called the process of unlocking from old mindset.

2. Four Key Areas of Unlocking

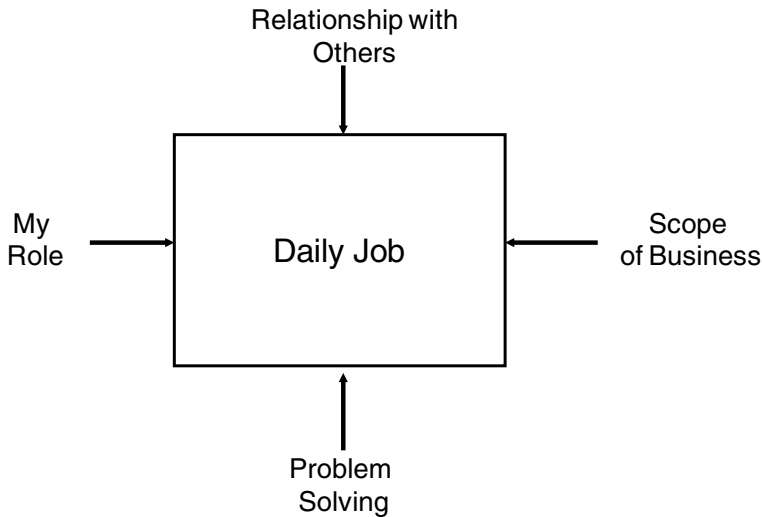What are the four main areas of such unlocking? Please see figure 10-1 which illustrates the four areas of unlocking

Relationship with
Others

My
Role   Daily Job   Scope
of Business

Problem
Solving

Figure 10-1. Four Areas of Unlocking.

First area of unlocking is the perception of the scope of business. They face many issues related to their business in their daily jobs. Before they learnt from VLFM, a wider and deeper perspective beyond the daily job was not so clearly visible to most of them. Now they are able to view their daily job in a much deeper manner.

Second area of unlocking is their relationship with others. They tend to have me-centric view and do not understand the inter-relationship with others very well. The issue is how to be aware about the inter-relationship with others and utilize the possibility of benefit to others.

Third area of unlocking is the perception about one's own role in the organization. There is a proverb that states that "your role is not given from the top, it is your perception that creates your role." People's perception is a determinant of their real role. After the VLFM experience how their perception of their role changes is the third area of unlocking.

The fourth category is the perception about the process of problem solving. The important part of business is to identify the problem and solve it with systematic process. It is necessary to perceive the key factors and important elements of problem solving. The fourth area therefore is to expand their problem solving capability.

If one just performs their daily job as it is there is very little possibility of human development. On the other hand, if a person can see the wider business scope, explore new relationship with others and identify new roles for oneself then it is surely possible to grow as a human being. In addition if one has a new perception about problem solving such as more complex and invisible problems solving then the person can become a more capable human being.

By creating an environment of experiential learning VLFM tries to free people from their existing perception of these four areas. If we can recognize such results of unlocking of the boundaries of participants, it will be one of the flowers beyond the locomotives. Also we can assume that these participants will possibly create other symbolic locomotives by utilizing the new human capability.

3. Unlocking Starts from Area of Latent Attention

Figure 10-2 shows the frequency of respondents in these four categories. Two dominant items which consist of 1/4th to 1/3rd each are observed in both senior and middle managers case. In both the cases "My Role" category is dominant. This is very reasonable because their thinking, whether consciously or sub consciously, is focused more on their role in the organization. Therefore unlocking of boundaries in this area is very critical. We are very happy to see that VLFM participants experienced unlocking in this critical area.
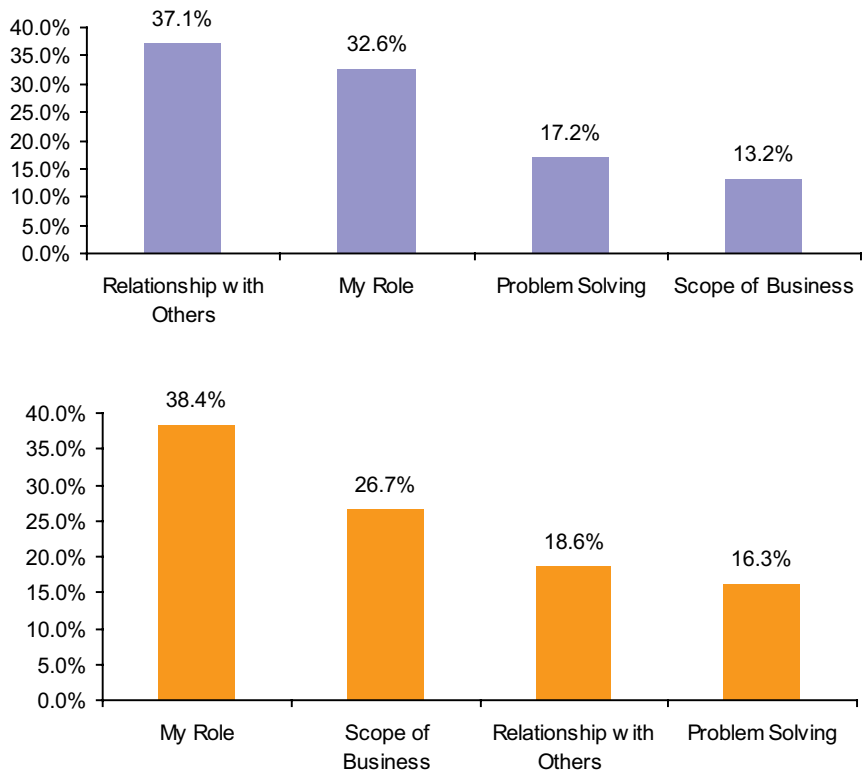
Figure 10-2. Percentage of participants who experienced unlocking in the four categories.

The next highest item however is different for senior managers and middle level managers. The survey clearly brings out a higher focus of the senior managers on relationship with others and of the middle managers on scope of business. This is a reflection of their hierarchical position in the organization. Being placed at a higher level in the organization, daily job of the senior managers already encompasses an enlarged business scope. Therefore, during the learning process, their attention to such factors is lower. On the contrary, relationship with others is a key area for them. Participation in VLFM may be a trigger to unlock their traditional mindset towards this aspect.

Middle level managers tend to have a narrow scope of business. They sub consciously feel this weakness. When they get the small m to BIG M perspective they wake up and their mindset changes from the narrow view of business to a wider perspective.

Analysis of the four main areas suggested the process of unlocking. It symbolically shows a popular story of Louis Pasteur "Chance favours the prepared mind". This pre-preparation may include both the conscious and the sub-conscious. Another proverb is that "we can not force the horse to drink water, if the horse does not want to drink water."

Unlocking does not come from instructions or teaching, but it is initiated by the learner's own initiative. Unlocking occurs only in the area where people have a prepared mind.

Let's examine this fact and process in more detail.

The four areas that we illustrated earlier can be sub-divided into 13 sub-areas (which are common in Senior Managers and Middle Level Managers). Let us use these 13 sub areas and analyze them first for Senior Managers and then for Middle Level Managers. Details of these areas, sub areas and their examples are shown in Figure 10-3.

Four Areas	Sub Areas	Examples
My Role	Role Model	Punctuality, Body Language, Note Taking, Do and Demonstrate, Apply 4W1H
	Effective Planning	Commitment to Planning, Structured Synthesis, Systematic Approach
	Look for Challenge	Proactive Attitude, Explore Breakthrough and Innovation
	Prioritization	Focus, Prioritize First Success
Relationship with Others	Listen to Others	Listen, Not Talk, Talk, Talk
	Aware of Others	Aware of Others, Appreciate Others, Aware of Being Watched, Customer Focus
	Work as a Team	Team Work
Scope of Business	Wider Business Perspective	Pay Attention to BIG M, Global Outlook, Other Industry, Whole Organization
	Time Range of Business	Future, Long Term Perspective
	Contribution to Society	Focus to Society, Noble Mind
Problem Solving	Solving New Type of Problem	Invisible Future Problem, Observation, Jump into Fishbowl
	Many Solutions	Many Factors, Complexity of Problem, Many Solutions
	Impact of Solution	Invisible, Indirect, Uncertain Aspects

Figure 10-3. Areas and Sub Areas of Unlocking of Boundaries.

4. Transformation of Senior Managers

If we look at the top 5 sub areas these make up 77.4% of the total sub areas (Figure 10-4). These five are Role Model, Aware of Others, Listen to Others, New Type of Problem Solving and Wider Business Perspective.
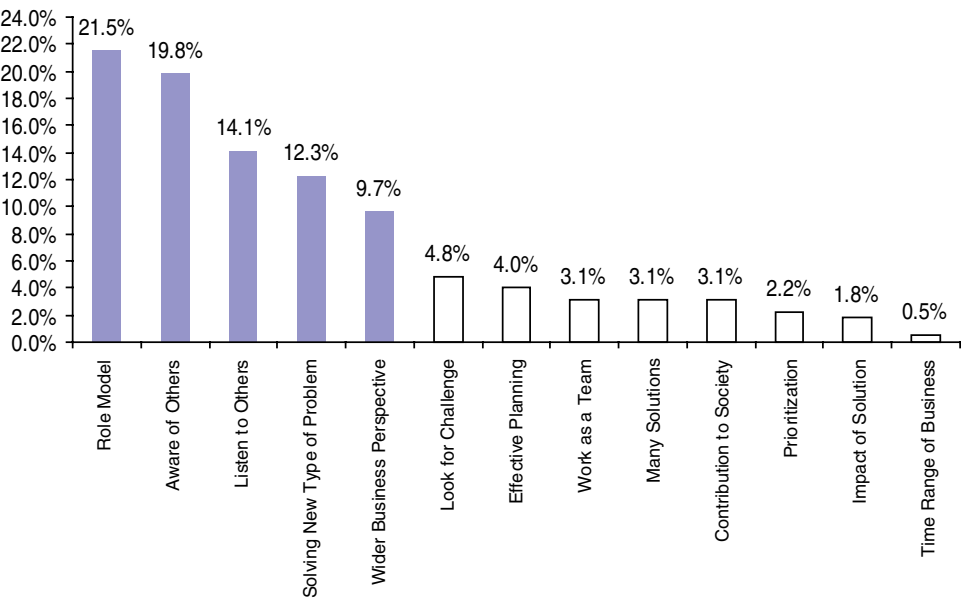

Figure 10-4. The distribution of senior managers' transformation across the 13 sub areas. Top 5 sub areas make up 77.4% of the total sub areas.

From these five sub areas (which comprise 77.4% of the respondents) a clear structure emerges. Both sub areas i.e. "Aware of Others" and "Listen to Others" belong to the area of relationship behavior with others within the organization. Role model also indicates a senior manager's behavior within the organization. These three behaviors are common for alignment towards organization goals. Please see figure 10-6.

**Figure 10-5. Note taking is a symbol of role model behavior
for listening to others.**

The other two sub areas show goal of such behavior of organization alignment. These goals are impact to a wider business area and solving invisible problem (solving new type of problem).
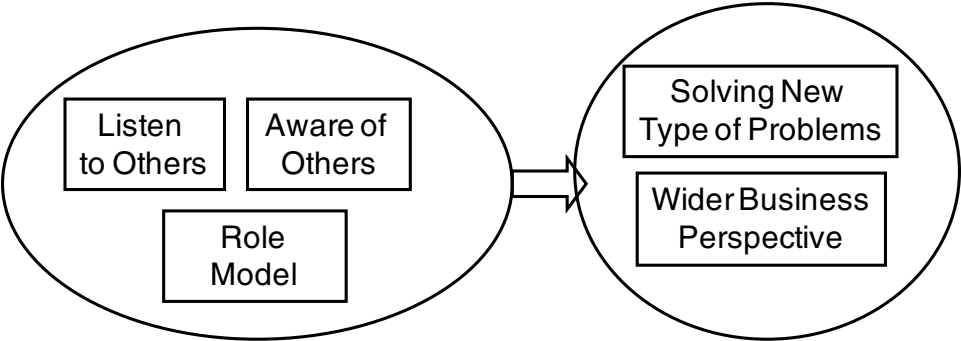

**Figure 10-6. Structure of the 5 sub areas that make up 77.4% of
Senior Managers' transformation.**

5. Transformation of Middle Level Managers

Now let us examine the transformation of Middle Level Managers by Figure 10-7. This figure shows the frequency distribution of 13 sub categories. This distribution is quite flat for Middle Level Managers as compared to that for

Senior Managers. For example, the top 5 sub areas for Middle Managers comprise 53.6% as compared to 77.4% for senior managers.

Why is this distribution for Middle Level Managers flat?

Again we many apply the "Prepared Mind" principle. During the course the mindset of the Middle Level Managers is oriented towards learning rather than working in actual business. Therefore they may demonstrate interest in wider areas as compared to Senior Managers.
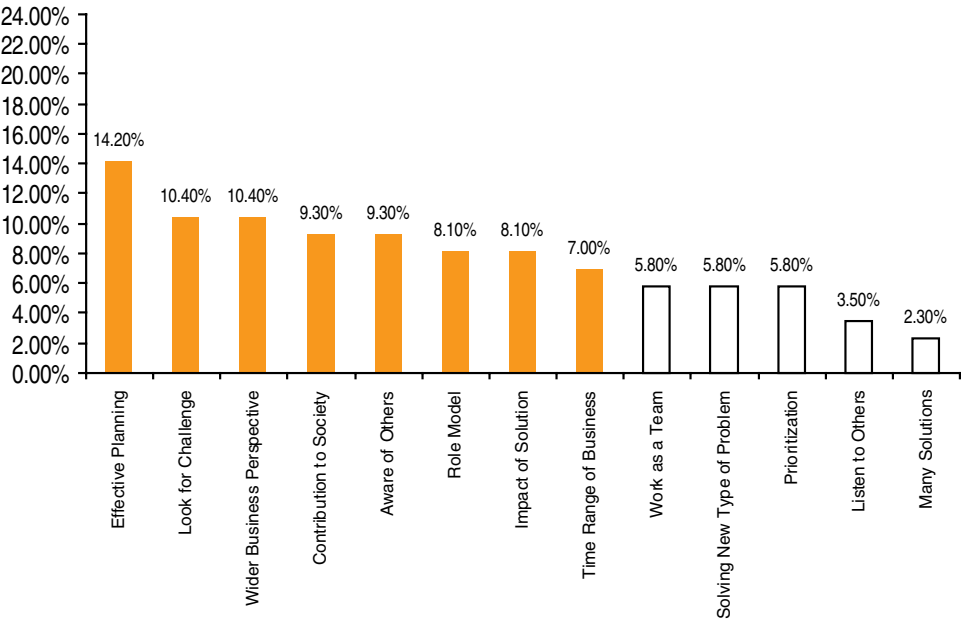

Figure 10-7. The distribution of middle level managers' transformation across the 13 sub areas. Top 5 areas make up 53.6% as compared to 77.4% for senior managers.

Now we consider the sub areas of Middle Level Managers that make up a percentage closer to 77.4%, i.e. the total of top 5 sub areas of Senior Managers. There are 8 sub areas that make up a total of 76.8% for Middle Level Managers.

These 8 sub areas are : (1). importance of planning, (2) Look for challenge (3) Wider Business Perspective (4) Contribution to Society (5) Aware of Others (6) Role Model (7) Impact of Solution (8) Time Range of Business

These 8 sub areas are structured in Figure 10-9. Basically, the structure for Middle Managers and Senior Managers is same i.e. in both cases organization activity and goal can be seen.
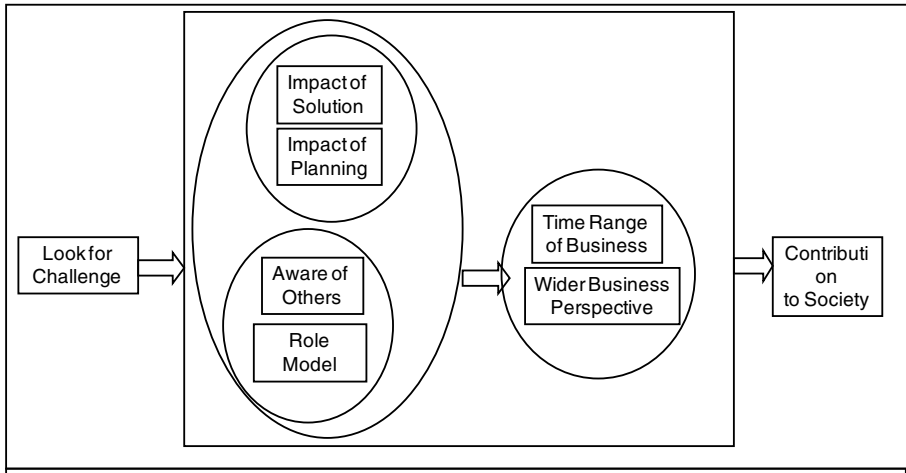

Figure 10-8. Structure of the 8 sub areas shows how unlocking takes place.

But all elements clearly show the direction towards a wider and wider perspective. For example, thinking about the wider impact of a solution, paying attention to a wider circle of people, understanding the impact of role model behavior. The goal is also being viewed in a wider sense; the business is viewed from a long term and wider aspect.

Another characteristic for Middle Level Managers is a clear evidence of the sub areas of noble mind, looking for challenges and contribution to society. These reflect the noble spirit of the youth.

10-2 Japan Visit Challenges Current Mind Structures

Japan Visit is one of the highlights of VLFM. As explained in Chapter 9, Jump into Fishbowl style requires participants to learn first in shallow fishbowl and then jump into a deeper fishbowl. In VLFM, the classroom is the shallow fishbowl and Japan Visit is the deeper fishbowl, helping to unlock the boundaries of the participants.

In what way does the Japan Visit create the unlocking effect? Here is an analysis.

In October 2012, 60 participants of Opportunity A jumped in to the deeper fishbowl of Japan. Towards the end of their visit, 30 pairs of participants discussed the most impressive lessons from Japanese society. Each pair presented three most impressive learnings making it a total of 90 items. An analysis of these items showed two very clear impacts on the participants:

Impact 1: Japanese society is a relationship oriented society rather than a Me First Attitude society; 43.1% found this an impressive learning

Impact 2: Japanese society is a manufacturing oriented society; 56.9% found this an impressive learning

These two aspects of the Japanese society are very different from the Indian society.

As both these are clearly separate impacts, we are showing these separately.

1. Impact of Relationship Oriented Society

Me First Attitude (MFA) is often observed amongst Indians. VLFM participants, who visited Japan, were very surprised to see Non MFA behavior of Japanese. This attitude has been summarized by a participant as "care/respect for people and value for people".
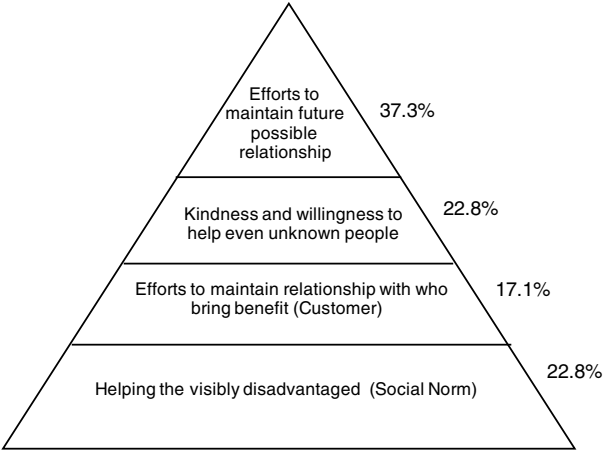

Figure 10-9. Hierarchy of Relationship in Japanese society observed by Indian Managers. (Note: Percentage shows the composition of each sub area against the total number of comments for Japan's Relationship Oriented Society).

Please see figure 10-10. It shows the "Hierarchy of Relationship" in Japanese Society. This hierarchy of relationship has emerged from the results of the survey done by the Indian participants during Japan Visit. There are four clear levels in this hierarchy of relationship.

Level 1: Helping the Visibly Disadvantaged

The most basic relationship amongst people is that of helping the visibly disadvantaged. These could be those who are physically challenged, senior citizens, pregnant women etc. Almost 22.8% participants observed this aspect. This relationship, however, is a reflection of social norms and is not necessarily unique to Japanese.

Level 2: Maintain Relationship with Those Who Bring Benefit

The second level is maintaining good relationship with those who are directly related with own benefit, such as customers. About 17% participants shared their experience about this level. Few of these are given below:

1. Some participants experienced that the metro ticket counter executive came out of his office to help them buy tickets
2. In the evening of 16th October, 2012, a Japanese super market owner called his Nepali employee to understand one participant's requirement of Indian food. He also assured of the availability of vegetarian sandwiches every morning
3. When one participant wanted to buy a kimono for his daughter, a JICA volunteer spent 30 minutes to select two dresses and negotiate the price. She tried to make the guest happy
4. The participants were also very impressed with commitment of the Japanese towards the customer. For example in Hotel Mon Blanc, during breakfast, there were only two ladies serving about 30 customers. When everyone was demanding different things the girls did not show irritation but greeted every customer with a smile

Level 3: Kindness and Willingness to Help Even Unknown People

Serving the customer is the job of a person delivering a service. But the Japanese tend to help even those who are completely unrelated and unknown. 22.8% of the participants shared their experience of kindness and willingness of the Japanese to help unknown people. For example:

1. One Japanese person walked for about 100-125 meter in the metro station to show the correct direction despite the fact that he was in a hurry
2. One office going person at Shinjuku station spent 10 minutes with the SIR group and helped them to change to the Ginza line
3. When one participant unknowingly dropped the metro ticket, an old lady immediately picked it and handed it over to him

The Indian participants who visited Japan found this kind of behavior of the Japanese very impressive.

Level 4: Creating/Maintaining Future Possible Relationship

One of the reflections of this type of behavior is to refrain from causing trouble to other people. Japanese people are generally sensitive to the feelings of others even those that they do not know. Following are some observations of the Indian participants:

1. Those boarding the metro during rush hours do not push, respecting other people's space
2. While using an escalator, people leave space for those wanting to move fast.
3. Even during rush hours, there is complete silence at the metro stations. The only sound that can be heard is that of footsteps

Another Japanese behavior of demonstrating thankfulness and intensive greeting may also belong to this level. This behavior could be because Japanese want to maintain future possible relations. Here are a few observations of participants:

1. When VLFM participants helped an old person or a child they were thanked profusely. The person generally showed gratitude
2. The Toyota guides waved good bye till the VLFM bus left their premises

Figure 10-10. While using an escalator, Japanese people leave space for those wanting to move fast. This is symbolic of them being generally sensitive to the feelings of others.

Amongst these 4 levels of Japanese behavior, Level 3 and 4 were more impressive for Indian participants. 60.1% of the items in the relationship category belong to these two levels. This indicates a surprise and new finding which is different from the Indian society. It really is one unlocking effect of the Japan Visit.

These four categories reflect the unique features of the Japanese society and how it is different from the Indian society.

What makes the Japanese society different?

- Japanese society is a "relationship based society" i.e. people are conscious of their relationship with others. Thus for the Japanese it is natural to be sensitive to the feelings of others even if they do not know them
- The Indian society, on the contrary, is an "atom type society". In this society each person is forced to be independent and to look after their own existence.
- This is a common mentality in the western society too. Some Indians misunderstand that this is the fiber of every modern society. But Japan Visit is a good experience for VLFM participants to understand that it is not only atom type societies that exist today; a relationship based society also exists. This kind of unlocking of boundaries can never happen without personal experience, especially the personal direct touch with the society that SIR provides during Japan Visit.

2. Impact of Manufacturing Oriented Society

Second unlocking of boundaries by Japan Visit is by seeing the key principles and practices of manufacturing integrated and imbibed in the daily life of Japanese society.

Manufacturing operations require people to be disciplined and follow company/factory rules regardless of their willingness. For example they have to follow SOP (Standard Operation Procedures), observe time schedules and respect the safety rules. Some people may believe that these practices are necessary only in the business life and outside the business boundary one can behave in any manner they like. Some people may believe that these are two different worlds. This kind of mindset is challenged by observation of the manufacturing orientation of Japanese society.

Based on the observations of the Indian participants, four typical areas of Japanese society were identified where manufacturing practices are being applied in daily life. Percentage below shows the composition of each sub area against the total number of comments for Japan's Manufacturing Oriented Society

Observing Discipline (42.2%)

Many people observed that Japanese behavior is oriented towards time consciousness and maintaining a good order. This is a basic manufacturing behavior that ensures on-time delivery, following standards and SOP. This manufacturing oriented behavior can be commonly seen in Japan's daily life. For example, people wait at a traffic signal even if there is no one on the road and they make a queue for boarding the metro train. VLFM participants also experienced this when they visited the Toyota factory - they waited outside the factory to arrive exactly at 14:00 hours, the scheduled time of the visit.

Such disciplined behavior creates good behavior in daily life as well. For example:

1. A female walking her dog in the morning on a road close to TIC, was seen carrying a bottle of water for cleaning the road if her dog dirtied it
2. Vehicles stopped at the road crossing to allow a small, confused child to cross the road

3. On way to Sony Archives it was observed that few young people picked up trash and threw it in the dustbin
4. JICA coordinators collected the garbage and bottles in different bags during the bus and train journeys

Detailed Planning (28.9%)

VLFM participants made careful observation of the Japanese practices that form the foundation of such disciplined behavior in society. They understood that manufacturing practices are ingrained in people's daily routine. For example, detailed planning and strong commitment to the task before implementation is a habit with Japanese people. Here are some examples from the experience of the VLFM participants:

1. Boarding of Shinkansen by 60 VLFM participants within 1 minute was planned to the minutest detail. A mock drill was conducted before the actual boarding
2. Orientation Program at JICA was well a planned activity of documentation and instructions using audiovisual aids. The planning was detailed and execution was flawless
3. Mrs. Furuhashi prepared an album of information and photos of OSU Kannonn area for the VLFM area. She had only been requested to guide the participants as a voluntary work

Figure 10-11. Boarding of Shinkansen by 60 VLFM participants within 60 seconds was planned to the minutest detail. A mock drill was conducted before the actual boarding.

Apply Manufacturing Infrastructure (15.6%)

VLFM participants also observed that the Japanese infrastructure is similar to that found in factories.

Here a few examples from the experience of the participants

Safety Infrastructure

- The emergency button in the multi user toilet at the Shinjuku metro station was pressed by mistake. Within 3 minutes a lady knocked at the door to rescue the person who might be stuck inside
- On October 14, 2012 the VLFM team saw someone fainting on the road. Before they could even cross the road to reach the person, a fire brigade and the local police had rushed to the site

Application of Visual Factory Measures in the Society

- There are visual signs in the metro stations giving directions for transfer of line and showing the way to the toilets
- The hand rails on the railway stations have instructions written in brail
- All metro lines are color coded and the stations are numbered

Figure 10-12. There are visual signs in metro stations symbolizing application of visual factory measures in the society.

Openness to Learn (13.3%)

The VLFM participants also understand that openness to learn is a common characteristic of the Japanese society. Here are some examples:

- Sony Archive and Toyota Museum illustrate the evolution of technology through real materials and moving exhibits. This is one of the shadows of the strong motivation of the Japanese society to learn
- A Japanese person about 60 years of age introduced himself and informed that he could speak Hindi. He spoke words such as bharat, yatra, dakshin, etc. He learnt Hindi out of his self interest and his inspiration was learning about Buddha.
- An elderly person sitting next to a VLFM participant in the metro explained about the Tokyo metro and also enquired about India's culture. He also appreciated Indians.

These are few observations and learnings of VLFM participants from the Japan Visit.

3. Impact of Japan Visit

We explained above the two areas of strong impact of Japan Visit i.e. Japanese society is a relationship oriented society and the daily behavior of Japanese is highly manufacturing oriented behavior.

Figure 10-13. The objective of Japan Visit is not to see Japan, but to see India from a different perspective. (Visit to Rikuzen Takada City after Tsunami organized by the support of Maeda Corporation).

The issue or discussion here is not whether these characteristics are good or bad for the society. These observations are more important in helping to unlock the fixed, narrow and restricted view of people. The objective of Japan Visit is not to see Japan, but to see India from a different perspective.

Testimony of Japan Visit participants clearly shows that all participants have established a new perspective by comparing their own common sense based on the Indian view with the Japanese common sense.

10-3 VLFM Accelerates Incremental and Paradigm Shift Unlocking

In this Chapter, firstly Section 10-1 describes how VLFM helps in the process of unlocking. Secondly, Section 10-2 illustrates the impact of Japan Visit on unlocking. These two sections suggest to us that two different types of unlocking exist.

VLFM course brings about unlocking in areas that the participants' job requires them to pay attention to. Senior Managers' unlocking takes place in areas that impact organization alignment and target goals. These are the biggest areas of attention for all Senior Managers.

This aspect about areas of unlocking is also true in Middle Level Mangers case. Their attention is focused on problem solving and behavior in organization. Their noble spirit is also reflected in the areas of unlocking, such as look for challenge and contribution to society.

Now let's see impact of Japan Visit. The areas of unlocking are completely different from those impacted during the VLFM course. The areas where unlocking takes place during Japan Visit are not their area of attention nor are these their expectation. One such area of unlocking is based on impact from the "Relationship Oriented Society" which is completely different from the Indian society, a more "Atom Oriented Society". Another impact comes from the "Manufacturing Oriented Society" of Japan. These two sources of impact reflect the fusion of areas related to one's private life and those related to their business life. In this sense the impact of Japan Visit brings a "paradigm shift" in the mindset of the participants.

If we consider the impact of the VLFM course from the viewpoint of a paradigm shift, it comes across more as incremental unlocking.

Let us understand the two types of unlocking as shown in Figure 10-14. One is incremental unlocking which takes place in a "prepared mind". The other is breakthrough type unlocking i.e. paradigm shift type unlocking. This type disrupts the mental structure and requires the person to reconstruct it.
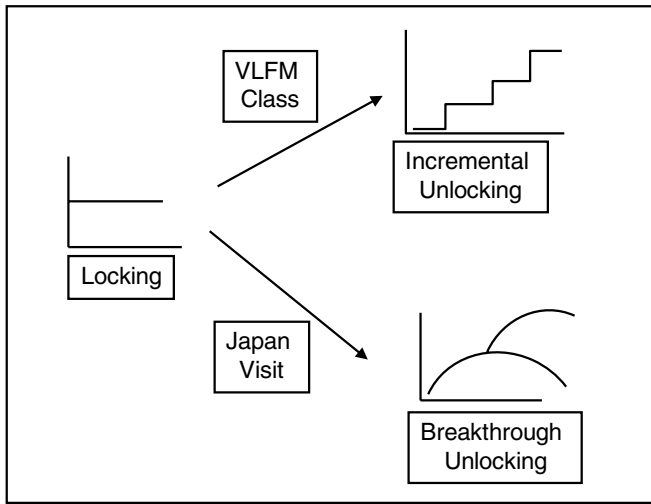

**Figure 10-14. There are two types of unlocking:
Incremental Type and Breakthrough Type.**

Successful unlocking requires both processes. Incremental unlocking is achieved by jumping into the shallow fishbowl. On the contrary, breakthrough unlocking can only be achieved by jumping into the deep unknown fishbowl.

Another important point which we need to confirm is the fact that unlocking cannot be created by "teaching". It can be achieved only by a "prepared mind" combined with courage to jump into an unknown and deep fishbowl. This is exactly what the authors describe as "To teach is a word of arrogance, we can only create an innovative and self learning environment."

VLFM created such an environment and made it possible for the Indian Senior Managers and Middle Level Managers to achieve visible, successful results through unlocking of their mindset.

Afterword

There were about 150 members of the VLFM community in the hall that day; all of them seated half back in the chairs, wearing the blue VLFM uniform that bore the Buddha symbol, each one diligently taking notes. This is a scene I observed from the stage during the 1st Annual Session of VLFM held in June of 2008.

This scene had a deep emotional impact on me. Suddenly all the struggles that VLFM had experienced till then seemed trivial. My only thought at that moment was - VLFM had come this far with the efforts of only 10 or 15 people, now with many more people, making it a national movement was surely going to be possible.

Over the last eight years, VLFM has progressed to a great extent. From a small group of thought leaders in 2006, this community has today grown to several thousand people. VLFM community companies are cascading down the new tools and concepts, thus accelerating the process of transformation in many more companies. This journey of eight years has been full of excitements, each day bringing with it new learning.

In some sense VLFM has grown like the Banyan tree. It is under this tree in Bodh Gaya, that Buddha attained enlightenment. The aerial prop roots of this tree help it to grow and expand across hectares of land. It takes decades for these prop roots to turn into trunks capable of supporting many more branches. The VLFM companies and graduates symbolize the aerial prop roots of the Banyan tree, forever progressing. As some of them develop into trunks, they are also growing new roots and becoming a source of sustenance for those below.

A Banyan tree symbolizes a noble mind and India has many people with a noble mind. VLFM therefore hopes to continue to progress like the Banyan tree.

The eight years I spent under the shade of the VLFM Banyan Tree helped me unlock my boundaries in many ways, leading me on a path of personal transformation. I was fortunate that I could jump into many new fishbowls during these years. Writing this book has been a unique experience of assimilating the learnings of these years and gaining new insights. I humbly thank the VLFM Community for giving me such a wonderful, once a lifetime opportunity. In the years to come, I hope to contribute to the progress of many new Banyan trees of VLFM.

Kalpana Narain
March 10, 2013
New Delhi

About the Authors

About Shoji Shiba

Shoji Shiba is Chief Advisor to the Visionary Leaders for Manufacturing Program, Japan International Cooperation Agency (JICA), since its inception in 2007. He initiated the Learning Community in India in 2004, which formed the bridge to the VLFM activity.

He was conferred with Padma Shri by the Government of India in 2012 for his contribution towards transformation of India's Manufacturing Sector to become globally competitive. He was honored with The Order of the Sacred Treasure, Gold Rays with Neck Ribbon by the Emperor of Japan in 2011.

About Kalpana Narain

Kalpana Narain was Director, Visionary Leaders for Manufacturing Program from 2007 until 2012. She worked for the Learning Community activity since 2004. She has jointly authored various cases which deeply analyze the success factors. In addition she has authored technical manuals and guidebooks on VLFM concepts.

Partners of VLFM Program

**National Manufacturing
Competitiveness Council**

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About the Cover

The cover of the book is a painting by JMW Turner. We used this painting to symbolize the locomotive role of VLFM and bridge between India and Japan.
Cover Photo : © The National Gallery, London. PL REPO NG 538, Reproduction Rights, Joseph Mallord William TURNER, Rain, Steam and Speed : The Great Western Railway