CHAPTER 3

Methodology

3.1 Introduction

Enterprise transformation is a process to take an organization from its present dilapidated state to a desired future and better state. Today we all live in a globally, highly competitive market and highly complex environmental conditions, which are forcing enterprises to take up transformation efforts in order to sustain, prosper and grow. Enterprises cannot keep functioning and working the way they have been in the past. Enterprises need to adapt rapidly and continually to new situations, environment and forces on an enterprise-wide basis. This can happen through enterprise transformation and the process of enterprise transformation can be carried out either as a continuous method or as a discontinuous method as and when required. Continuous methods look at means and ways to make improvement in the already existing process, while discontinuous methods look at ways and means of overhauling the entire process or system.

While digging deep into the realms of enterprise transformation, first of all we needed to have a clear understanding of what enterprise transformation is. Hence it is necessary to define enterprise transformation the way the common man could understand. A few narrowed down representative definitions of enterprise transformations are given below.

- Process of adapting to market forces for sustenance and enterprise growth.
- To impart value to the customer through improved or overhauled culture, process, technology and resources.
- A fundamental and radical change in the way the enterprise is functioning.
- Revamping the working of enterprise as a whole to obtain competitive advantage and breakthrough performance.
Transformation is a process that needs to follow a series of sequenced steps. Hence the need for a methodology that could help in the transformation needed to be devised to enable small enterprises to achieve desired results. Thus was born the “SENTRAMET”, a methodology for transformation of small enterprises, most suited in the Indian context.

3.2 Objectives of the Methodology

The main objective of this methodology is to provide the ailing small enterprise sector with a set of activities in a desired sequence to enable the enterprise to leave its current state, to which it has been chained since its inception, over to a new future state, propelling it to a new trajectory of survival and growth. Alongside this objective is another major objective of keeping the transformation process as simple as possible so as to enable anyone with even a little technical knowledge to implement the transformation methodology. Further the methodology is designed such that it incurs the least cost in terms of implementation to overcome the burden of capital infusion.

3.3 Development of the Methodology

The preliminary work was based on two main criteria namely simplicity and cost effectiveness. Hence the process of creating a simple and low cost methodology for the transformation of small enterprises began with a survey of the need for enterprise transformation of small enterprises. The need for transformation was assessed based on a questionnaire prepared. Sixty six small enterprises were approached. While some refused and many accepted, the questions were asked to the proprietors and partners of small industries, who accepted to be a part for the research in and around Ranipet, Tamilnadu, and fifty eight individuals were involved. This resulted in a good amount of information and understanding of the way the small enterprises were run. Further analysis of the information gave insights into the various problems faced by the small enterprises, along with the constraints that taunted them and the blockades that prevented their growth. Discussions were held both individually and as groups to gather information and analyse the information obtained. We were able to arrive at the conclusion that there were basic hiccups that prevented the growth of small industries. The prime constraint was identified to be the capital to make changes in the system of
functioning and transform the enterprise. Secondly the process of transformation had to be simple and easy to implement due to the fact that almost half of the owners of the small industries were not technically qualified and among the rest, a large portion were educated technically to the diploma level only and a few were qualified to the graduate level and the ones with still higher qualifications were a smaller lot. Keeping this as an important criterion it had to be kept in mind that the process of transformation had to be as simple and as easy as possible for understanding and implementing. Hence was born a simple and cost effective methodology for transformation known as the small enterprise transformation methodology and abbreviated as “sentramet”.

The sentramet is not a strict prescription of a sequence of actions but a suggestion of set of activities to be performed in a logical order so as to suit the needs and requirements of the small enterprise attempting transformation and these can be changed or modified to overcome any constraints and suit the requirements.

A preliminary investigation of several small enterprises gave an insight into the major components of a small enterprise. It was evident that the enterprise was made of primarily people and processes followed by the technology and resource components. There cannot be any contemporary small enterprise without any of the above mentioned components. It was concluded that the prime and major elements of every small enterprise is a composition of the following.

i. People
ii. Process
iii. Technology and
iv. Resource

This is only a generic and broad classification of components of an enterprise and a briefing of the elements is given below.

The people of the small enterprise are the most important component of every small enterprise. It is the heart of every enterprise. Generally the small enterprises are dependent heavily on their employees as they are mostly labour intensive in nature. They need to be developed effectively for the enterprise to function efficiently. The
employees of an enterprise are either directly or indirectly in contact with suppliers, customers and management of the enterprise. They are the supporting pillars of every enterprise and no enterprise can sustain or grow without their help. Hence people of the enterprise form a very important component of every small enterprise.

Process can be defined as a set of activities performed in an enterprise to convert a set of inputs into desired outputs. The process determines the work that needs to be done, the activities to be performed, assigning tasks to employees, the decisions that need to be taken and a host of other things involved both directly and indirectly in the production. Be it service or manufacturing, a process needs to be in place for everything to happen in an enterprise. No enterprise can exist without a process, making it an important component of every enterprise.

Technology is the application of scientific knowledge for engineering tasks and manufacturing tasks to make a process simpler, better, faster and more efficient. It is the driver of every enterprise which plays a predominant role in the upliftment of any enterprise and has always been considered as one of the most important drivers of growth of an industry in the long term. Enterprises that have embraced technology have always experienced an edge over others, helping them to gain competitive advantage through higher quality and lower costs. It is undeniable that technology makes production processes more efficient, thereby increasing competitiveness and reducing vulnerability to market fluctuations (UNIDO report 2016). Technology is considered to be like a wave; you can ride on the wave by embracing it or go down resisting it. Hence it is considered to be a major component of every enterprise.

Resource is the reference to a set of available inputs that are either converted into outputs or aid in the conversion of a set of inputs into outputs. They contribute to the success of every enterprise to undergo processing to get converted into products for use by customers. Resources are of two types, tangible and intangible and are in the form of knowledge, infrastructure, emotional and other physical and non-physical assets. Availability of resources contributes to the overall development and growth of an enterprise. They help in the growth of the enterprise. They can raise the product cost and production cost and vice versa. They contribute immensely to the development growth and sustenance of an enterprise and hence capture a prominent place in the enterprise.
3.4 Method

The Small Enterprise Transformation Methodology is a ten step process that comprises of the following steps.

i. Review of available literature
ii. Review transformation experiences of small enterprises
iii. Develop and conduct survey
iv. Analyze the collected data and information
v. Develop simple and cost effective transformation methodology
vi. Implement the methodology to transform
vii. Critique the methodology and identify constraints
viii. Improve the methodology and implement
ix. Analyze the transformation
x. Perfect the methodology and transformation

3.4.1 Review of Available Literature

Literature happens to be the foundation for this research. A wide variety of literature has been examined to study the various methods of enterprise transformation carried out by researchers and experts. This has helped to identify the principles of enterprise transformation methodology along with the various practices followed by researchers, practitioners, experts and industries. It has also helped to get insight into the advantages of the methodologies and also identify the shortcomings of the same. Thus it provides us with the knowledge of what to do and what not to do, what to take, what to leave and what to improvise. It has also provided the route to create a simple and cost effective methodology that would be apt for small enterprises. The collected literature has been reviewed in chapter two.

3.4.2 Review Transformation Experiences of Enterprises

Generally practical experiences give us more insights into any project taken up and implemented. Theoretical information and stuff may not give us the difficulties and
shortcomings of transformation. Real time implementation would give the blockades faced and expose the bottle necks of implementation. Apart from this, the solutions that were developed would pave the way for easier implementation of the transformation process. Hence a review of the practical implementation experiences of the few entrepreneurs who dared to transform their enterprises was done with the help of several one to one discussions with the owners, partners and managers involved in the transformation processes of the few enterprises who attempted to transform. The discussion yielded results in the form of constraints, blocks, implementation difficulties faced, and dos and don’ts of the transformation process. This helped in saving time, resources and money and helped in easy learning from others experiences, rather than self-learning through the University of hard knocks.

3.4.3 Develop and Conduct Survey

A survey is a set of relevant questions asked orally or given in written to an individual or a group of individuals to give us an insight into happenings, get feedbacks, check and gain information and knowledge, collect data and analyze data, information, results of processes etc. In our case, a survey questionnaire was used to gain insight on what was happening in the small enterprise arena and analyze the information collected to check the need for enterprise transformation. This had been done keeping in mind the scope of the study and the variables that are important for the study.

3.4.4 Analyze the Collected Data and Information

The information and data collected from a survey is of great importance for any researcher to identify and work on the shortcomings to eliminate and improve upon them. The identification of the positive aspects help in sustaining them and work upon them to make further improvements. Analysis of data and information exposes us to a host of problems faced and is essential to maintain the integrity of the research. The reason behind doing this is to uncover the need for transformation along with the unexpected hidden influences, identify connections and correlations, shed light on drawbacks and reasons for inabilities, effectiveness, ineffectiveness, failures etc.
3.4.5 Develop Transformation Methodology

The need for a simple methodology was clearly visible from the information collection, data analysis and survey. While talking to the promoters it was a highlighted feeling that the existing and known transformation methodologies were hard to understand and implement and was difficult to comprehend unless the technical and managerial knowledge of people implementing it was good. The second commonly expressed feeling and need was that the process of transformation was a time consuming process that needed a huge investment along with time to start getting results. Hence a simple and cost effective methodology was developed with consultations and discussion with the promoters and managers of the small enterprises comprising of an easily understandable five step methodology which was later named as Sentramet.

3.4.6 Implement the Methodology to Transform

The herculean task of implementing began after approaching sixty six small enterprises out of which fifty eight participated in the survey and only four agreed to test the methodology devised by us. This means that only six percent of the population (small enterprises) approached, were ready to go ahead with the implementation of the transformation process. As the process took off, to our disappointment one more enterprise dropped off citing lack of funds as the reason bringing down the participation rate to a mere 4.54 percent. Faced with several constraints, the project took off in the three enterprises one after the other and moved at a snail’s pace due to the constraints and took a time period of thirty two months for all the three enterprises to complete the implementation. Each one was into the manufacture of a different product, namely a fabrication unit, comprising largely of welding operations, a mill board manufacturing unit catering to the packaging and stationary industries and a machine shop, involved in machining components for manufacturing industries.

3.4.7 Critique the Methodology and Identify Constraints

The implementation of the methodology was a tiresome, time consuming and cumbersome process as it was the first time it was being implemented. There were
several flaws that were identified that were not letting us proceed further with the implementation process and they needed to be overcome after identifying the constraints that were stalling the movement. The data and information collected during the implementation were analyzed to identify the limiting factors. Several discussions, experiments, opinions and criticisms helped in problem identification and constraint identification.

3.4.8 **Improve the Methodology and Implement**

Once the problems and constraints were identified, a brain storming session was held with the enterprise promoters, managers involved in the transformation process, the employees involved in the processes being transformed, the suppliers to the enterprises and the customers of the enterprises. Every one of them had something or the other to contribute during the brain storming exercise. It began with a brainstorming session in all the three enterprises individually and later it was a combined session with all the three together. There were four quarterly brainstorming sessions to discuss the flaws and overcome the same. There were several revisions of the initial methodology which was a continuous process. One important point of note is that the methodology being implemented in enterprises involved were in three different areas of production and had to be customized to meet the requirements and hence there were several minor changes to be made in the methodology individually to accommodate the needs of each type of enterprise.

3.4.9 **Analyze the Transformation**

A comprehensive analysis of the transformation methodology was made to scrutinize the effectiveness of the methodology. Analysis is generally based on performance metrics. Hence a set of metrics were taken into account and the results of the transformation were pegged against the metrics that were obtained before the transformation process was initiated and compared with results obtained after transformation. This made it clear as to where the transformation helped and where it did not help. The areas that needed improvement were thus identified and more impetus was given to those areas to make the transformation successful. Further feedback from employees, managers and the promoters were obtained to retain the
efficacy of the areas that did well and increase the efficacy of the areas that needed to be concentrated on to get improvements.

3.4.10 **Perfect the Methodology and Transformation**

Armed with the information and data collected through the transformation and based on the feedback obtained, there was a narrowing down to a generic methodology that could be common for any industry. The basic set up would be the same for all enterprises but minor changes and adjustments may be needed in a few cases depending upon the need as and when required. The figure of the final methodology obtained after discussion, experimentation, testing and revisions is given below.

![Diagram](image)

**Fig. 3.1** The Small Enterprise Transformation Methodology (SENTRAMET)

The methodology obtained comprises of basically five major steps namely observe, assess, identify, focus and overcome, applied to the major components of every enterprise namely people, process, technology, and resource. This leads to the
desired transformation by going through a process of preparing, planning and implementation to obtain the desired results.

3.5 Observe

This section relates to the observation phase which is the first phase of the methodology and also the first step towards transformation. It provides a description of the things to be observed in the enterprise. Every enterprise is composed of four components, namely process, people, technology and resources. In order to observe the process for understanding it, a process map is created at the macro level as well as the micro level. The process map will give a full-fledged understanding of the product flow path and the actions taken throughout the process. It also gives information on the inputs and the outputs of the process.

Secondly the people who form the most important asset of any enterprise are observed to find out what work is being performed by each employee and their contribution to the enterprise. This will provide insight into what kind of people are involved and in what capacity they are involved, how they contribute to the growth of the enterprise or how they hamper the growth, who contribute and who disrupt the growth of the enterprise.

Further, the technology used by the enterprise is observed and studied, where technology is an embodiment of tangible products such as the computer and intangible things like knowledge about processes and methods in an enterprise. It is important for us to know and understand the kind of technology being used in the enterprise to further the transformation because technology acts as an important transformation enabler. The observation of technology will provide insights into the need to leverage the information to improve efficiency and performance of systems, products and services.

Every enterprise functions in its own way and there is no standard way to function and no hard and fast rules to regulate the functioning of an enterprise. But the way an enterprise functions and operates is of utmost importance both for the enterprise and the people who transform it. A complete understanding of how an enterprise functions and what exactly is happening is not an easy process. But the fact
remains that without knowing what is happening in the enterprise and how things are happening in the enterprise, it is impossible to even think of a transformation initiative. The enterprise in general is composed of people, process, technology and resource. Hence it is imperative that all the components be observed and understood.

3.5.1 Observation of Process

A process is a series of activities (tasks, steps, events, operations) that takes an input, adds value to it, and produces an output (product, service, or information) for a customer (Ron Anjard, 1998). In order to understand the process component of an enterprise, the process needs to be observed and observation begins with a process map. A process map is known to give a clear picture of what happens in an enterprise in a sequential order and how these happen in the enterprise. The purpose of a process map is to provide a mechanism for studying or analysing a process or portions of a process (P. Savory and J. Olson, 2001). Process maps are a key concept for providing an overview of a company's business processes (Malinova, M., Mendling, J., 2013).

3.5.1.1 Process Map

The process map is a diagrammatic representation of the various steps that a product goes through sequentially, using standard symbols. They visualize the main relationships between processes and facilitate a basic understanding of how the company operates (Malinova, M., 2014).

Any process map generally consists of several elements and the elements that may be a part of the process map are

- A set of actions in a sequence
- A set of materials or services entering in the name of inputs a and leaving in the name of outputs
- Decisions that need to be made
- The people who are involved
- And also the time that is involved in each step
- Time measurement of process
For a process map to be in place, it needs to describe a process which can be in the form of an administrative process, service process, manufacturing process or production process or even a project plan. Hence a process map is a flexible tool that can be adopted for several purposes.

3.5.1.2 Types of Process Map

Process maps are of several types and the various types are discussed below.

**Macro level process map:** It is a consolidation of several small processes/sub processes into a single activity. This gives a big picture of the process and helps in seeing the main steps of the process. This is drawn to get an overall view of the process as a whole and plays a vital role in defining the scope of the process and helps providing the big picture for the top management in an easier format. They generally don’t get into the details of the process but provide a basic picture for understanding the process or describing the process to non-technical people, customers, suppliers, other department staff and other newbie etc. They contain generic tasks performed in the process and include the following elements

- Process flow using gateways as their decision points
- Few details about the tasks in the process
- Details about the performers in the process
- Use of annotations to highlight different parts of the process

**Micro level process map:** Processes generally have an enormous amount of data and the micro level process map shows small steps of the process in minute detail. This gains importance as an observation tool to have a very clear understanding of all the details of the process such as inputs, outputs, resources used, people involved and so on, to name a few. These maps are also known as detailed process maps. The physical boundaries of the teams and/ or departments are the boundaries of the micro level process maps itself. They are created usually when there is a requirement of process improvement and for a thorough understanding of the process to get in depth details. These maps contain huge information in terms of the quality, type of input etc. about the inputs so that the required outputs are achieved. They also contain details and information pertaining to the behaviour of the
processes. The creation of a micro level process map helps in providing a clear picture of the process inputs, process outputs and process variables and once we have the details in hand it makes it easy and possible to list them. And with the help of the list it is very easy to start prioritizing them and identify the ones that are most important. Further we can provide details to the process map through the inclusion of specialized tasks, sub processes and also the flow of data and information in the process. We can obtain a precise description of the process through details like identification of automated tasks and activities and manual tasks and activities, a logical grouping of sets of sub processes and mini tasks to create a hierarchy in the process map, documentation of the flow of data throughout the entire process and even the reuse of the existing process maps through the use of global sub processes.

**Deployment process map:** A deployment process map is also known as cross functional chart or down across process map or swim lane flowchart. The stakeholders and steps of a process are articulated in this process mapping tool. They are meant to represent the activity sequence as steps and the interactions that happen between people as individuals or as groups. Every single person involved in the process is shown in the map which is constructed in a matrix format, and tasks and activities are clearly placed in sequence. The deployment process maps throw light on the relationship between the process flow and the people who govern it. They also reveal inefficient areas, duplications and non-value adding activities. These process maps help in the examination of the participants who/which are main reasons for delays, backlogs and problems associated with them. It also finds use as a business planning tool plus an identification factor for the one responsible for implementing a process in an enterprise. The map is constructed in such a way that all the activities are linked together in the same sequence in which the events occur and the activity is kept to the individual or department supposed to be carrying the task. Thus the completed map provides a clear picture of which group of people or team or individual person undertakes which task and sub task at which stage within a process.

**Several levelled process map:** This is a kind of process mapping which is not used so often but it gains importance when a set of activities and tasks which have a sequential order have to be mapped in several levels one after the other. It acts mostly as a communication tool to various levels of people in the enterprise.
3.5.1.3 **Guidelines for Mapping a Process**

Every process that needs to be mapped uses a standard set of symbols and these symbols are the language of the process map. These set of symbols help in communicating the elements of the processes and let both internal people and external people understand the process happenings. The macro level processes use what is called the primary symbols and the detailed process map uses both the primary as well as a set of symbols known as the secondary symbols which aid in detailing the elements of the process in an elaborate way.

A set of the primary symbols used to represent a process map and the symbols and their description are given in the form of a table below.

**Table 3.1 Primary Symbols Used in Process Mapping**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Activity</td>
<td>The circle is an indicator that an activity or a task is being performed</td>
</tr>
<tr>
<td></td>
<td>Decision</td>
<td>The diamond is representative of a decision to be taken at that point</td>
</tr>
<tr>
<td></td>
<td>Delay</td>
<td>The symbol resembling the alphabet D is indicative of a delay in the process</td>
</tr>
<tr>
<td></td>
<td>Storage</td>
<td>The inverted triangle represents storage of components coming out of the task or activity</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>The arrow is a symbol that represents the transportation of a component</td>
</tr>
</tbody>
</table>

On the other hand there are a set of symbols known as the secondary symbols of process mapping that finds utility in the detailed mapping process. They are meant to keep the viewer informed about every detail of the happenings of the tasks and activities that take place in the process.
A list of the secondary process mapping symbols is given below.

**Table 3.2 Secondary Symbols Used in Process Mapping**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Document symbol" /></td>
<td>Document</td>
<td>This symbol is used when a physical document has to be documented. Multiple symbols are used for multiple document generation.</td>
</tr>
<tr>
<td><img src="image" alt="Flow Direction symbol" /></td>
<td>Flow Direction</td>
<td>The arrow represents the direction of flow of the process.</td>
</tr>
<tr>
<td><img src="image" alt="Continuation symbol" /></td>
<td>Continuation</td>
<td>This symbols represent continuity from one page to another in case of long processes which cannot be drawn in a single page.</td>
</tr>
<tr>
<td><img src="image" alt="Manual Input symbol" /></td>
<td>Manual Input</td>
<td>Any input given manually is represented using this symbol.</td>
</tr>
<tr>
<td><img src="image" alt="Computer Storage symbol" /></td>
<td>Computer Storage</td>
<td>This symbol is used when data/information needs to be stored on a computer.</td>
</tr>
</tbody>
</table>

3.5.1.4 **Considerations in Mapping a Process**

There are certain basic level activities involved while mapping a process for it to be completed successfully and they are given below. They are divided into primary and secondary phases.

**Primary phase**

- Identification of process beneficiaries
- Team formation
- Need for the activity of process mapping (such as understanding of process, making changes in process, problem identification in process etc.)
- Deciding on the scope of the map
Secondary phase

- Identify and determine the process inputs
- Identifying and determining activity involving transformation of the inputs and their corresponding output
- Numbering and naming the activities in a sequence which includes the decision points

Process maps find utility at several levels and it is important to identify the level of scale that is most appropriate based on specific purpose for which it is needed. There are several types of process maps as given below

- Macro level / bird’s eye view process map
- Micro level / detailed process map
- Deployment process map
- Several – leveled process map

3.5.2 Observation of People

People or the employees form the heart of the enterprise. It is the people /employees who make the organization followed by the process, technology and resources. Without the help and heart of the employees, it is just not possible to effect transformation in an enterprise. Hence it is very important of us to observe the people of the organization to have an understanding of their behaviour, expectations, drives and needs.

Generally, in a majority of the enterprise, especially the small ones, most of the expectations, drives, needs and aspirations remain unsaid and unexpressed. Hence, in order to uncover these it is important for an employer to observe and understand their employees who are an integral and critical part of the enterprise. This comes through establishing a good rapport with them for which the enterprise need to have a good system of communication, an open environment, good employee-employer relationship and motivation that will promote the well-being of the enterprise through cooperation and teamwork. The need for every enterprise is a happy and productive workforce.
Small enterprises have a small workforce and this is a boon in disguise. It is easy to establish personal contact with every employee of the organization to identify their strengths and weaknesses. It helps in improving upon the talents that are already out or lying latent and dormant inside the individual. Performing a simple personal SWOT analysis on every individual in the enterprise with the help of other employees is sure to bring out the best and the worst among the employees. This would help in using the human resource effectively.

One of the most common questions that come to the mind when asked to observe people is “what to observe in the employee?” Hence the enterprise needs to have an observation on the level of engagement of the employees. The level of engagement by the employee acts as an indicator towards categorization.

3.5.2.1 Classification of People

The employees need to be understood for the skillset that they possessed so that the kind of job that could be allotted to them could be decided. The right people need to be deployed for the job for the effective completion of the job and hence they needed to be categorized under the following four categories and it is common for all enterprises to categorize their employees under any of the below categories not only for job allocation but also to decide on their wages and salary.

**Unskilled employee:** These are people who perform simple jobs which involve no technical knowledge and their jobs will require no big previous experience nor will it include independent judgement but familiarity with the occupational environment may or may not be required depending on the need. Further the kind of work may at times require familiarity with the product being made in addition to the physical contribution.

**Semi-Skilled employee:** For an employee falling under this category, generally the nature of work would be of a defined routine kind where independent judgement may not be a large part of the job nor would specific skill sets be required to fulfil the assigned jobs to this category of employees. The decisions are generally made by others for these employees and their job is limited by limited scope and limited operations performed routinely.
**Skilled employee:** These are the employees who have the ability to work efficiently through exercising a considerable amount of independent judgement to perform their duties. They are people who discharge their duties with a sense of responsibility. They possess thorough technical knowledge about the job that they carry out.

**Empowered employee:** This tribe of people are the one who have all the skills of the skilled employees and also possess the extra skill of guiding and supervising the skilled employees. They have the ability to identify problems and provide solution for the problems. They also take decisions as and when necessary for removing bottlenecks.

Based on the level of engagement of the employees they could be categorized as follows

**Actively engaged:** What the organization needs to look for in an employee, is commitment. The committed ones are called the proactive employees. These employees throw their life into their work and they are representative of the embodiment of employee activism. They conduct themselves to the highest possible levels in the most positive way leaving no room for negative actions. They are highly social beings and have the highest level of employer engagement. They are dedicated to the core and believe in the employer and the enterprise. They are also the ones who love their job and are very loyal to the enterprise. This innate loyalty to the enterprise, job and team binds them to the enterprise.

**Engaged:** Employees who look for opportunities to go to the next level in their career are known as climbers. These people find comfort in the stability of staying with the same employer for a longer period of time. These are the dependable lot of employees and the need of the organization. They engage themselves so that they are able to reach to the next level of the corporate ladder. Higher salary, better perks and the next designation stand as motivators for these employees.

**Not engaged:** Known as slackers, they find ways and means to avoid work. They come up with excuses for their lack of working and have the least energy and enthusiasm with the lack of the will to work and never care about the organization and
fellow employees. They are filled with low motivation, are bad at keeping up time and deadlines. They try to sleepwalk through their work time without energy and passion while commitment and dedication are unknown to them. Their unannounced absenteeism is a hindrance in planning and scheduling work and results in inability to serve the customer on time and meet deadlines. They have unclear expectations and resentments unknown to and hidden from the employer, leaving accountability uncared for.

**Actively disengaged:** The “rebels” as they can be called are the troublesome lot that resists every new initiative. They are egoistic and terrified of change and the first to resist change and they refuse to change. But as Darwin said, “It is not the strongest species that survive but those who are able to adapt to their environment”. They mistake grievance and outspokenness for truth and courage respectively. They misguide their fellow employees and bring down employee morale and productivity. The key factor for the growth and performance of an organization is adaptability and flexibility without which the organization is headed toward decline.

The figure given below is a representation of the way in which employees of an enterprise are categorized through observation.

![Employee Categorization Through Observation](image-url)

**Fig. 3.2** Employee Categorization Through Observation
3.5.3 Observation of Technology

Technology is defined by the Wikipedia as the collection of techniques, skills, methods and processes used in the production of goods and services or in the accomplishment of objectives such as scientific investigations. The dictionary definition states that it is the application of scientific knowledge that deals with the creation and use of technical means and their relationship with life, society and environment.

Today’s industrial scenario is a fast-paced one with every industry vying with each other to get better business and technology plays a vital role in the present industries to beat the competition and have an edge over its competitors. The tough part to be noted is that technology is evolving at a very fast pace and today’s young consumers have become highly tech-savvy unlike the older generation who are trying to catch up with the young. The advent of newer and better technology pushes out the older technologies and makes them outdated and obsolete. The fact remains that if an enterprise does not keep itself updated with the latest technology it is very likely to lose out to its competitors.

Technology cannot be hailed as a transformation driver for the enterprise but it is an enabler for sure. Hence it is something that cannot be ignored by any means. In the business context, technology never stops improving as there is a continuous need and demand for better and more advanced technology. This makes technology a dynamic entity of an enterprise. The use of technology has its own advantages and disadvantages.

Based on the level of automation of the processes of the enterprises, the processes can be classified as under.

- **Fully automated process:** These are the processes where the interference and support of humans are completely absent and the machines take care of all the operations by themselves to be performed in the process.

- **Semi-automated process:** These are the processes which require both support and interference of humans at several stages of the process. The machines control the process partially and humans the rest of the process.
• **Manual process:** Theses are processes where all the operations are performed by humans and the control is fully in the hands of humans.

**Role of information technology:** In today’s scenario, information technology plays a crucial role in running businesses. Hence based on the role played by information technology, the operations are categorised as follows.

• **High:** In this type of operation information technology plays a major role in the business operation of the enterprises.

• **Medium:** In this type of operation the role played by information technology is relatively lower with reference to the running of business operations of the enterprises.

• **Low:** In this type of operations the role played by information technology is very low rather almost non-existent when it comes to running the business operations.

**Advantages of Technology in Business**

• **Increased production:** Most enterprises automate their processes with the help of technology which results in production increase and increased efficiency.

• **Increased competitive advantage:** A well implemented technology is sure to help small enterprises gain a competitive advantage and gain a place for itself in the market.

• **Reduced time:** There is a considerable amount of savings in terms of time as technology implementation results in better utilization of time and other resources along with automation playing a big role in saving time for production.

• **Accelerated innovation:** Use of technology helps in creation of newer and better products and services to succeed in today’s competitive market. It also helps products and services reach customer faster and quicker.

• **Easier and faster communication:** The current small businesses depends heavily on communication and information flow. The use of technology for the purpose of communication and information transfer would save enormous
amount of time, energy and manpower through the facilitation of quicker and easier flow of information and communication.

**Disadvantages of Technology in Business**

- **High implementation and training cost:** The cost of implementing technology in the enterprises is pretty expensive and hence the initial investment cost goes up. This is also followed by high maintenance cost which is an additional burden on the expenses of the enterprises. In order for the employees to use the technology they have to be trained on the technology which is another painful and slow process that eats out money, resources and time.

- **Not safe at times:** It’s very easy to lose information and data when technology is involved. Further to add fuel to fire, hacking of information can create havoc to the enterprise. The threat of valuable and secret information being stolen looms large over enterprises which work on niche segments where indigenously developed high technology is involved.

- **Overdependence:** Many a times too much of dependence on technology has killed the relationship between employees and made the process of communication mundane and less involved leading to boredom and dissatisfaction.

Keeping the above in mind it is important for the small enterprise to observe the kind of technology that is being used and also think of what kind of future technology would be required to take forward the enterprise. They also need to look if the technology being used is currently in vogue or obsolete, so that they can choose the right technology or upgrade, if it is obsolete. If the enterprise does not use technology, suitable technology could be selected for implementation for the betterment of the enterprise.
3.5.4 Observation of Resources

Resources of an enterprise are anything which could be thought of as a strength or weakness of a firm (B. Wernerfelt, 1984). This “anything” may include physical resources such as raw materials, equipment, financial endowment etc. human resource related things such as training, experience, skills etc. as well as organizational resources such as firm image, process, routines etc. (K.E. Marino, 1996). The resources of every enterprise are its biggest assets and management of these assets called “Asset Management” forms a very crucial part of management of an enterprise. The assets of an enterprise can be categorized into tangible and intangible assets. The tangible assets refer to the physical assets and the intangible assets refer to the non-physical assets of an enterprise.

The tangible/physical resources of every enterprise vary considerably but they fall under any one of the following categories given under.

i. The people employed by the enterprise.
ii. The machines, tools, and other equipment used by the people.
iii. Raw material, parts components, other materials and consumables, power etc.
iv. Plant vehicles used for transportation of people and materials and handling materials etc.
v. The premises, land, office building, factory building etc.

The intangible resources are those assets which cannot be held or stored but have high value to the enterprise. These valuable resources do not depreciate monetarily over a period of time but at the same time may not have value outside of the business. These resources can take several forms and these forms are non-physical in nature and do not include investments made or loans availed. Many a times they are generalized as intellectual capital and form an invaluable resource for the small enterprise as most of the intangible resources are the ones that can foster creativity within the enterprise and at the same time have a high revenue generating potential.
On a general note, all the resources of every small enterprise is very likely to fall under any one of the categories (barring a few exceptions) as shown in the figure below.

![Resource Categories in a Small Enterprise](image)

**Fig. 3.3 Resource Categories in a Small Enterprise**

### 3.5.4.1 Resources in Small Enterprises

**Man / human resource:** The most important resource of any enterprise is supposed to be the human capital. Humans are the creators of the organization and this is very well known and accepted by all the enterprises worldwide. Every enterprise requires this human capital to run its business and achieve its goals and is that asset which lets enterprises make money. We have gone far and deep into a knowledge based economy and the need for humans with skills and knowledge is becoming increasingly important for enterprises to compete, survive and grow beating competition. The human resource has become the most important competitive advantage of any enterprise and form the key to success.

**Machine:** Today’s modern world is a world full of machines and it is next to impossible to think of an industry without machines. Industrial machines have taken a
very important and predominant place in this world as they have replaced the need for human labour. The dependence on machinery has increased manifold. The quality of the work along with the speed, consistency, repeatability, dimensional accuracy, uniformity etc. remains unmatched to the way machines work. They not only play a major role in manufacturing but also have a phenomenal importance in material handling where men cannot even think of venturing to such environments and dream of lifting such enormous weights. Automation has taken deep roots in today’s industries. The use of machines means faster and better production and more accomplished work. When man and machines work together in tandem, the sky is the limit for improvement.

**Money/finance:** It is generally said that money is just a veil and intrinsically unimportant and what really matters is the goods produced, the quality provided, services rendered etc. However this belief cannot be taken these days. Money in the form of investments is what can offer all the above. Money or investments form the base for infrastructure, machines, equipment, etc. Money promotes economic growth and production along with productivity. Industries purchase raw materials, pay their workers and meet all their expenses with the help of money. Hence money as a resource plays a crucially vital role in every enterprise and it is an undeniable fact that money helps and facilitates the survival and growth of any enterprise. It can also be called as financial asset and financial asset of an enterprise is a tangible asset which refers to the cash available in hand or deposits which can be accessed easily whenever needed along with the capability of the enterprise to invest and the ability of the enterprise to mobilize funds when needed. The financial asset is the value that is obtained from some kind of a contractual claim, which could be in the form of bank deposits, investments, bonds etc. The availability of finance in abundance is for sure a great driver for growth and survival.

**Material:** This refers to the items needed for the flow of goods and services in the workplace connected with the production process to result in the output starting from the input. The management of these materials is termed as materials management. The availability of suitable material in suitable quantities to the right people at the right time plays an important role in the management and development of an enterprise. The performance of the products made and the processes involved
largely depend upon the input materials. The observation of the materials would give an insight into the kind of materials being used in the manufacturing of the products, the quality of the input raw materials and the effect it has on the output obtained along with the development of the product at each and every stage where input of materials are involved step by step.

**Technology:** The usage of science and engineering concepts for the betterment of an enterprise in terms of faster production, better productivity, efficient methods to produce products in a faster and safer way to achieve production and profits refers to what is called technology. This can be called as a capability that needs to be acquired by every industry in order to beat competition and maintain competitive advantage. Technology has a huge effect on performance and productivity of an enterprise and hence plays a crucial role in the survival and growth of an enterprise. Technology needs to be either developed in house or acquired from outside and must extend to all areas of the enterprise. Technology is perceived to be a critical element to have the ability to receive and deliver products and services to customers. The observation of the kind of technology in the enterprise will throw insights into the possibilities of growth and expansion of an enterprise.

**Infrastructure:** It refers to the physical facilities that are available with an enterprise to aid in the production and productivity of an enterprise. Infrastructural facilities such as transport, telephone, internet access, electricity, fuel, gas, water etc. play an immensely huge role as growth stimulators for an enterprise. There needs to be a focus on this area as the enterprises are highly sensitive to infrastructure facilities. The presence of better infra facilities act as driver for growth and transformation of enterprises. They also have a significant effect on labour productivity. A sound and strong infrastructural capability of an enterprise is the key to the overall development of the enterprise. The presence of good infra facilities not only promotes rapid growth of the enterprise but also results in improved quality of life of its employees and instils a pride in them.

**Knowledge:** The accumulation of useful knowledge and the extension of its application are the essence of modern economic growth (Teece, D., 2000). The application of knowledge and the application of the same are very critical to the firm’s ability to develop, and attain growth in this highly competitive arena. Today’s
economy is a knowledge based economy and knowledge is equated to wealth, as knowledge lays the foundation stone to create wealth for the enterprise through sustainable growth. Knowledge is a highly sought after intangible asset which can take an enterprise to the next level. Knowledge can result in creation of intellectual assets that play a vital role in coming out with improved products and processes. It can foster an era of better performance, faster production, and enhanced productivity in an enterprise and thus propel an enterprise from its current state to a much better state.

**Intellectual property:** Intellectual property of the enterprise, be it small or big, is one of the most prized possession for any enterprise. It is the intangible property of any business that is protected legally through intellectual property right of the law using documents and registrations. Examples of such property include intangible property such as patents, copyrights, trademarks, service marks etc. and these give the business owners the complete sole right to use or sell the information, designs, marks, symbols etc. These protections through law help the enterprises to be creative without fear and help the employees to design and create freely under these protections. It also assures them of protection from infringement by competitors. Items like blueprints, list of prized customers, drawings generated, formulas, recopies, software codes and programmes and written trade secrets of the enterprises are some of the examples of intellectual assets. They serve as the base and very foundation for the improvement, growth and expansion of the business of the enterprises. These intangible assets stand as a representative of the individual operations and processes of the business and are the ones that set the enterprise part from their competitors. In specific, these intellectual assets which are uncommon in the small enterprises, fill the voids of the market and help establish new benchmarks for the industry.

**Brand value:** David A Baker in his book, Managing Brand Equity, states that “A brand is a distinguished name and/ or symbol intended to identify the goods or services of either a seller or a group of sellers and to differentiate those goods or services from those of competitors. A brand thus signals to the customer the source of the product, and protects both the customer and the producer from competitors who would attempt to provide products that appear to be identical.” Brands are considered to be intangible and sustainable assets of an enterprise and when they are aligned with
the overall strategy of the enterprise, can act as the central lining principle for the
decision making that happens at the enterprise.

Brand value may be defined as the worth of the brand created by the
enterprise, to its customers and promoters. Brands have a psychological effect on its
customers. It acts like a promise of certain standards and quality in the product
produced. Brand value stands in the form of leveraged marketing and better product
quality. The presence of a brand value of an enterprise is a big plus and in the absence
of a brand image need to be overcome through the creation of a good brand value.

**Brand image:** Brand image refers to the impression and opinion that a
customer or a potential customer has and holds on the product produced by an
enterprise. The brand image acts as leverage for selling the product. In essence it
makes the selling process for the enterprise easier due to the name it has earned
through the brand. It communicates a feeling of confidence to the customer and acts
as an important additional benefit. The observation of this resource would act as an
eye opener regarding the quality of the product produced presently by the enterprise.

**Core competency:** Core competencies are the collective learning across the
corporation. It can be defined as a harmonized combination of multiple resources and
skills that distinguish a firm in the marketplace (Schilling, M.A., 2013).
They are a specific skill set possessed by an enterprise that provides extra value to the
customer. In order to fully exploit business opportunities and resist environmental
threats, it is essential that firms should understand the portfolio of their core

**Domain capability:** This capability is the one that reveals the capacity of an
enterprise to perform certain unique business and manufacturing activities
successfully. This refers to specialized skills and capacity possessed by virtue of the
people, technology and/or resources of the enterprise. There needs to be a look out
for the presence or possession of a domain capability in the enterprise. This would
help in leveraging the business of the enterprise. These capabilities act as the building
blocks of the enterprise’s business. As they are very unique capabilities possessed by
that enterprise alone, and also independent from each other, they represent stable
business functions for the enterprise. They act as baits to capture the business interests of the enterprise.

3.6 Assess

3.6.1 Enterprise Assessment Defined

An enterprise assessment is a data gathering and diagnostic process in which we step back from the day to day details of life in the enterprise and try to see the bigger picture, the trends, patterns and dynamics that have made the enterprise what it is today. The review can be broad, scanning all aspects of the enterprise (programs/services, structure, staffing, personnel, finances, internal systems, leadership, culture, etc.); or it can focus on selected areas, depending on the needs of the enterprise. In many cases, the enterprise assessment is the first step in a broader planning, change, or improvement process.

The ultimate goal of an enterprise assessment is to obtain an accurate picture of the as is condition and situation of the enterprise. This includes an honest and real picture of the strengths, weaknesses, challenges and future needs and requirements along with a plan for betterment and growth of the enterprise.

The assessment of an enterprise is a reflection of the structure of the enterprise, measurement of outcomes, work flow processes, customer as well as supplier satisfaction, employee turnover etc. helping in creating an overview of the current reality of an enterprise. The enterprise gets to know where it stands and enables it to leverage the assets in hand and do things that are needed in order to maximize efficiency and effectiveness of the enterprise and thus achieve the vision and mission of the enterprise. It would review the performance, capacity and competence of the enterprise by looking into the entire operations, communications, service, productivity and everything that affects the functioning of the enterprise on a day to day basis.

Enterprise Assessment benchmarks an enterprise with the industry leader and established best practices and provides information on where exactly it stands in comparison with the best in class. This helps in the identification of steps that would
enable finding the next and right step towards better performance. The evaluation of the critical information obtained helps in understanding the as–is state of the enterprise along with the prospective growth areas to act as a spring board towards achieving excellence and beat competition through strategic planning.

3.6.2 Why Assess Enterprises?

The enterprise’s environment is dynamic in nature due to which we need to strive continuously for improvement and survival through adaptation, performance and influence. The results in terms of success may be positive or negative. The question that then arises is what should an enterprise do to adapt, change and improve to perform well and be successful?

Systematic diagnosis also known as enterprise assessment proves to be an important step toward this process of change. A systematic framework or approach needs to be developed or used from existing approaches to better understand enterprise performance and to identify those components that have a significant effect on performance.

Assessments have long been used for business and operations management. Assessing can act as a leading indicator for shifting performance and for identifying program strengths and/or weaknesses (Hallam, 2003). Assessment is important for an enterprise both internally and externally. They help in comparison/ benchmarking with competitors and standards which motivates the enterprise to reach better heights and at times to even get recognition and awards. It provides a thorough understanding of our real place, position and stand which in turn would indicate how smooth our production processes are and where there are troublesome spots in the process.

In addition, assessments are becoming an increasingly important tool in process and departmental improvement, and new tools offer enterprise-wide assessments that provide a holistic advantage for identifying the complex interactions across a broad enterprise. In order to design, execute and measure an enterprise transformation strategy, having assessments that evaluate multiple dimensions of performance is crucial, both in terms of understanding the current state and charting out the transformation plan. Increasingly, enterprises are trying to leverage the
multifaceted nature of performance in order to gain a competitive edge and maximize value delivery (Kueng 2000; Burton and Obel 2004).

Apart from the above early stage assessment helps in identifying performance gaps, focus areas, vision creation, investment decisions, process flow hiccups, performance bottleneck etc. During enterprise transformation, having a strong and useful assessment tool is crucial in identifying where an enterprise is, where it wants to go, its rate of progress, and how best to approach that future state (Nightingale and Mize 2002).

An enterprise assessment is an information gathering process in a systematic way about the enterprise’s performance and the factors that have an impact on the performance. It concentrates on the processes and how they perform as a whole. It focuses on the enterprise as the primary analysis unit.

Enterprises are not always successful in their quest to perform, survive, adapt, influence and excel. This is due to their inability to understand the requirements for performance. Thus comes the need for enterprise assessment for an enterprise to better understand what needs to be overcome and changed to increase or improve their performance ability. Assessments act as a diagnostic tool to help the enterprise to understand their performance and the reasons that improve or decrease the performance against its competitors.

Enterprise Assessment is a constructive step toward health and improved performance. It allows enterprises to step back and take stock of their development, their strengths and challenges, and the choices they face for future success. Assessment can help enterprises learn how they are performing compared to their peers. Assessment can be the launching point for a planned change effort. It can motivate sluggish enterprise owners, or help a funder make wise funding decisions.

However it's conducted, an enterprise assessment will have some impact on the enterprise and must be done wisely. The best approach to enterprise assessment for your enterprise and your community is the one that is uniquely tailored to fit your goals, resources, needs, and constraints. For assessment to have the greatest impact,
the process must be designed as a journey of learning and discovery rather than as a test or judgment (www.fieldstonealliance.org).

3.6.3 Need for Assessment

Assessment has long been an integral tool in business transformation. By performing assessment, businesses can understand their current state and use the results to help chart out a transformational path. During the transformation process, assessment provides feedback and a measurement of progress in achieving the desired transformation (L. Nathan Perkins, et al., 2010). The environment outside is dynamic in nature and is undergoing a continuous change. This forces every enterprise to change and adapt to the new environment to survive, else the result would be the option to choose to perish. The reasons for conducting an assessment include the following:

- Enterprise assessment acts as an improvement tool for both an existing enterprise as well as for an enterprise that has been acquired of late.
- It helps the enterprises’ management to know it’s as-is state and knowing the current state helps the management to decide where it needs to be and in what time span.
- When the management needs to know the strengths and weaknesses of the enterprise and plans to build upon the strengths and find the root causes for the weakness and eliminate them, an assessment comes handy.
- When an enterprise is entering into an alliance with another enterprise or when it is outsourcing a portion of its manufacturing to another, it does an assessment of the partner enterprise or the enterprise to which it plans to outsource to determine its capability.
- When an enterprise is having several problems, the problems may be the manifestations of some of the real problems. Hence to make sure that it is attacking the real problems and not the manifestations, assessments are done.
- If an enterprise is performing exceptionally well in a particular area, it may want to perform equally well in other areas too. Assessments can be done to determine how this can be replicated in other areas as well.
• To know the underlying reasons for enterprise problems or issues so that effective solutions can be implemented
• To identify underperforming areas and analyse the reasons for it and know what is hindering their performance
• To sustain at least the current momentum and not fall below the minimum standards
• To focus direction and identify next steps to be taken in future

3.6.4 Benefits of Enterprise Assessment

An assessment can help an enterprise to

• Generate an accurate picture of your enterprise’s capability, performance, resources etc.
• Provide feedback on how the enterprise is performing as a whole and in particular areas.
• Understand and improve the comparative position of an enterprise with reference to industry benchmarks.
• Provides a starting place for a detailed improvement plan.
• Builds commitment and buy-in to change.
• Identify successes and opportunities for improvement.
• Align your resources with your strategic objectives.
• Establish your enterprise’s readiness for transformation.
• Enterprise Assessment may act as a precursor to Strategic Planning for the future.
• Helps restructure decisions.
• Jump-start a change initiative and also energize current initiatives.
• Determine the main and major challenges facing your enterprise during improvement implementation.
• Identify the critical deliverables an enterprise can offer its clients and project partners.
• Focus the enterprise on common goals.
• Identify the enterprise protocols and workflows which should be developed.
• Identifies environmental risks or constraints.
• Assess the competitive performance of the enterprise.
• Energize the workforce.
• Deliver world-class results.

3.6.5 Types of Assessment

The assessments methods or types are broadly classified into three namely Internal/ self-assessment, Hybrid Managed and External assessment.

Internal / self-assessment: In this method of assessment, the employees of the enterprise themselves take part in the process. The people who work on the assembly line are the ones who know the process the best. Hence the biggest advantage called familiarity gives a hand to the assessment process and the results obtained shows consistency while recording data.

Case studies suggest self-assessments can be more time intensive, due to the added steps of coordinating and facilitating the assessment process, collecting feedback and reaching consensus among multiple participants (Abdimomunova 2010) Despite this time commitment, the process is often less costly than managed assessment or having a dedicated internal department, since there are less external personnel requirements. (L. Nathan Perkins et al 2010).

Hybrid managed: Enterprises need the assessment to be well performed for which they create an independent team. This team acts with authority without any pressure from anyone. This group would comprise of people who have a good familiarity of the processes and tools used in assessment along with the processes in the enterprise. This approach helps in better management of data, data tracking and in the comparison of assessments with respect to time. Such assessments results in a complete integration of the assessment process and blending with the natural frequency of the enterprise thereby resulting in the reduction of the negative impact of obstruction to assessment and divulging incorrect information and data.

External assessment: The involvement of a third party for the collection and compilation of the results of assessment of the enterprise is undertaken it is
considered to be an external assessment. This kind of assessment is carried out by experts in the field of assessment and they are hired for carrying out an assessment. This can result in objectivity, consistency and reliability (Van De Ven and Ferry 1980) because of the advantage in terms of tool knowledge. This knowledge helps make sure the assessment is performed in a manner consistent with its intent, and can even be used to tailor the assessment tool to the needs of the enterprise. External assessment provides opportunities for benchmarking across multiple companies or industries, which is sometimes worthwhile for enterprises interested in exploring best practices. Of course, the high familiarity with the tool comes with an important trade-off: the assessor may have limited knowledge of the enterprise being assessed. This internal enterprise knowledge can help guide the assessment process and ensure that all relevant information is reflected in the assessment. In addition, managed assessment can come with a high price tag. Due to the steep learning curve associated with some tools, managed assessments are beneficial for performing one-time assessments. Managed assessors can also play a role in introducing a new assessment tool, by customizing it, training relevant staff and assisting with the early implementation of the assessment (L. Nathan et al 2010).

3.6.6 Important Considerations for assessment

Self-assessment or external assessment? : When an enterprise decides to go in for an assessment, it needs to make a key decision. The decision would be to decide whether to go in for an internal self-assessment or for an assessment made by an external agency. At times it could be a need to have a combination of both. The advantages that need to be considered while going in for a self-assessment is that the ownership of the enterprise is in place in the minds of the employees which would result in the acceptance of the feedback and thus add commitment in implementing the recommendations provided by the evaluation committee. The cost involved in the assessment is also considerably low. However, there are drawbacks of the self-assessment approach as well. The correctness of the findings and validity of the assessment results create fear and hard feelings among employees and may result in issues not being tackled appropriately due to potential sensitivities within the enterprise.
On the other hand, in case of an external assessment of an enterprise, the external assessors bring with them a huge amount of experience. They generally tend to be unbiased and are devoid of internal politics and influence and are better positioned to be objective in their views. They also end up providing the needed support and capacity when internal people cannot spend their time on assessment and since they are external people, a higher credibility is attached to the results.

Assessment challenges: The benefits that we derive from the assessment of enterprises are large but when we need to assess an enterprise we will also be faced with several challenges. It’s practically very hard to find a single tool that suits the entire enterprises’ assessment requirements. Organizations may have unique challenges, but this does not stop an assessment from being useful; instead, the transformation plan and goals must be internally derived to reflect the unique nature of the business. (L. Nathan Perkins et al 2010). The assessment may not be in line with what the management expects but may reveal unnecessary elements which are likely to be faced with stiff resistance from the labour force of the organization. Unwanted fear would arise in the minds of the labour force while assessing the enterprise and its capabilities and resources, which is very likely to result in hiding information and a non-cooperation movement in a subtle way, is likely to take place. Commitment from the employees is hard to come through unless they are told the benefits of the assessment and until the fear of retrenchment is driven away from their minds. There is also a possibility of data rigging to happen to cover up certain undesirable things. One of the biggest challenges that the enterprise would face is the allocation of manpower and resources for the assessment as it is likely to make a dent in terms of production and productivity during the assessment period. At times they may prove to be expensive too when cost is allocated to the resources.

Assessment tools: There are innumerable tools to assess an enterprise but we shall restrict ourselves to the ones that are most relevant, simple and cost effective that can be implemented in small enterprises. We have to accept the fact that no single tool would suffice the requirement of assessing an enterprise in full. Hence we need to use two or more tools for the assessment. We shall ponder over a two such tools namely SWOT analysis and the Balanced Score Card. These would be most apt and easy to use for assessment.
SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities and Threats. The first two, namely strengths and weaknesses are more of internal factors over which we may have control while the rest namely opportunities and threats are considered to be dependent on external factors and hence we may not have control over them. Therefore the only option is to face them from inside and overcome the hurdles faced.

It is the most used tool for analyzing and assessing the overall strategic position of the enterprises’ business and its environment. This will help align the resources and capabilities of the enterprise to the requirements of the environment in which it operates. They also help in assessing environmental changes and provide proactive responses.

It acts as a foundation for assessing both the internal as well as external environment of any enterprise through the evaluation of all positive and negative factors both inside and outside the enterprise that will have an effect on the success of the firm. A constant and consistent study of the operational environment of the enterprise is very likely to throw light on the changes in terms of trends and help in the decision making process. It also enables proactive thinking. An overview of the four factors is given below.

**Strengths:** The qualities inherent in an enterprise which will help it accomplish its goals and objectives are called as strengths. That forms the basis on which there can be a sustainable success on a continuous basis. They arise out of things in which the enterprises’ employees are good at in terms of experience, expertise, traits, qualities, competency, capabilities etc. and these distinct features are what that give the enterprise the advantage of consistency in success. These features may be both tangible and intangible in nature. They are the capabilities that the enterprise possesses which can be used for the benefit of the enterprise. The capabilities can be in the form of human competencies, process capabilities, economic resources etc. The answers to the questions given below are very likely to throw light on the strengths of the enterprise.

- What are the advantages that your enterprise possesses?
- What and how can your enterprise do better than other enterprises?
What is so unique to your enterprise?
What can you do that other enterprises cannot?
What is your Unique Selling Proposition?
What is your biggest strength?
What is your competitive advantage?

**Weaknesses:** These refer to those constrains that pull back an enterprise from attaining its goals and accomplishing its mission. They act as blockades towards enterprises growth and success. Most weaknesses are controllable and can be eliminated over a period of time. By answering the following question we are very likely to identify our weaknesses.

- What do we need to improve in our enterprise?
- What should we not be doing in our enterprise?
- Why are we not able to grow?
- What are the things that are stopping us from making better profits?
- What are the complaints from our employees and customers as well?
- What is it that our business/enterprise lacks?

These are generally internal factors that could be overcome with sincere efforts to address the negativity of the problem. These weaknesses need to be eliminated by breaking down the constraints and overcoming the obstacles.

**Opportunities:** The benefits that an enterprise can derive out of its current operating environment are called opportunity. They provide chances to make plans and execute strategies to utilize the chances provided and benefit from the chances and take the enterprise to greater heights and become more profitable by gaining a competitive edge over others. This can be done by keeping all ears and eyes wide open to gain experience, knowledge and information that may prove to be useful for the improvement of the enterprise and pounce and seize the first and best ones. Such opportunities generally arise from competition, market, industry, Government policies, technology changes, and changes in laws, rules and, regulations, deregulations etc. Further changes in lifestyle of people, changes in social patterns, population profiles and even local events can lead to opportunities to be created. The
easy way to identify opportunities is to ascertain our strengths and find whether these can help us find any open opportunities.

**Threats:** Elements that can bring down the profitability and jeopardize the reliability and credibility of an enterprise are called threats. Certain internal and external environmental conditions make an enterprise vulnerable to losses, shake the very foundation of stability and put the survival at stake. Continuously changing technology, heavy competition, excess and unutilized capacity, price wars, decreasing profits etc. are some of the examples of threats. The following are likely to throw light on the threats.

- The obstacle that the enterprise faces.
- The practices followed by the competitors.
- The changes in the standards and specifications.
- The improvements in the quality of the products and services.
- Increase in the debts, decrease in the cash flow etc.

Serious weaknesses if left unattended or unheeded may threaten the very existence of the enterprise. Hence overcoming weaknesses, threats and obstacles need to done on a warfront basis to sustain and grow.

SWOT analysis is a strong tool for strategy formulation and selection purpose. Generally businesses add on to their strengths and overcome their weaknesses, thwart their threats and cash in on their opportunities to be successful. It also helps in the synchronization of the resources of the enterprises with the capabilities within the enterprise. SWOT analysis like any other tool is not free from limitations.

There is always the possibility of overlooking issues and not taking proper measures to handle inadvertent situations. The elements of the tool are subjective in nature and may not be good enough to handle all the uncertainties that exist in both the internal and external environment.

A SWOT analysis can be done in a simple way by beginning with a table being prepared to have the positives on one side and the negatives on the other side. The positives would be subdivided into two to contain the strengths and the
opportunities and the negatives would contain the weaknesses and threats as subdivisions. This exercise would be furthered by filling in accordance to the purpose of the SWOT analysis in a precise manner. This is succeeded by analyzing the data and chalking out the necessary strategies to extract the potential of the enterprise in full and thus become more competitive. This may not follow the theoretical model followed conventionally but the idea is to get the best and lose the worst out of the enterprise. This exercise is likely to open doors for better opportunities and approaches which we might have missed out on before. In short SWOT will help us identify strengths and use it to the advantage of the enterprise, spot weaknesses so that they can be rectified, stumble upon opportunities that we failed to see and prepare ourselves for the threats that we face.

**Measures to be taken during assessment using SWOT analysis:** The very need to discuss about the measures is that there would not be much acceptance from the employees of any organization to perform a SWOT analysis. It makes them feel vulnerable and gives them a feeling of insecurity. The end result being a change from the routine activities, it is very likely that the employees would resist such a move and results in high levels of dissatisfaction. To overcome the resistance at the initial stage it is necessary to involve the personnel into the decision making process. It allows decreasing the level of dissatisfaction and denial of existing changes (Ashmarina S.I., Khasaev G.R., Zotova A.S. 2014). The next important fear factor involved is while the change happens; the employees are very likely to get the fear of retrenchment. Hence while implementing the changes it is necessary to guarantee the staff their employment, to inform them about change performance and the achieved results, to establish comfortable environment and to motivate the staff to take active part in changes (Ashmarina S.I., Khasaev G.R., Zotova A.S., 2014). We should also look at providing incentives, motivation and concessions as inducements during the implementation period to lower resistance which may hamper the change process and these inducements need to help develop interest in achieving the aims of the changes made thereby making it conducive for improving readiness to change.

**The Balanced Score Card**

The balanced scorecard is a very useful and important strategic tool that finds extensive use in any production facility that can translate the vision of an enterprise
into reality by monitoring the enterprise in terms of organizational performance with the help of a set of Key Performance Indicators (KPIs). It was created by Dr. Robert Kaplan and David Norton (1992) as a performance measurement framework that brought together strategic non-financial performance measures and conventional financial metrics to give the management a balanced picture of the performance of an enterprise. Johnson C.C (2008) states that the balanced scorecard (BSC) is a strategic performance management tool - a semi-standard structured report supported by proven design methods and automation tools that can be used by managers to keep track of the execution of activities by staff within their control and monitor the consequences arising from these actions. The balanced score card was conceived originally as a performance measurement system but over a period of time it evolved to be a management system to implement strategy at all levels of the enterprise by facilitating the functions that are given below.

**Clarification of strategy:** A clear understanding of the strategy by the management is required for the management to agree for any implementation. The strategic objectives when translated into quantifiable measures clarify and helps develop a clear picture of the strategy to the management.

**Strategic objectives communication:** High level strategic objectives need to be translated into operational objectives and communicated such that they could be easily understood by everyone across the organization.

**Planning, target setting and strategic initiative alignment:** The enterprises need to aim ambitiously but at the same time need to have the aims scalable under each perspective and initiatives need to be developed keeping in mind the targets set and to align the efforts to reach the set target.

**Learning and strategic feedback:** A check needs to be done on a continuous basis to know the status of the implementation as to whether it is going as per plan and to check the success of the strategy itself.

Generally the balanced score card is used by large enterprises but it is a very well-known fact that the Balanced Scorecard is a very effective performance measurement system compared to many other systems and hence the same could be used for the small enterprises too with the acceptance that not all the parameters or
key performance indicators (KPIs) would be taken into consideration and only the required and relevant KPIs would be measured. The most important characteristic of the balanced score card is the representation of the performance measures in terms of both the financial as well as the non-financial measures, literally covering the entire enterprise. The balanced score card comprises of a four perspective approach towards what needs to be measured and the perspectives are mentioned below.

i) Financial

ii) Customer

iii) Internal business process

iv) Learning and growth

The financial perspective is meant to identify and measure those few very relevant so called high-level financial parameters or measurements. The customer perspective is meant to identify and measure parameters from the customer point of view especially how the customers see us. The internal business process perspective is meant to identify and measure those processes which are core to the business and their supporting processes at which the enterprise needs to excel and lastly the learning and growth perspective is to dwell on those activities which can help in the development of the enterprise in terms of products, services, processes, employees and resources etc., to help improve and create value and innovate. These elements are not just independent perspectives but are a set of perspectives that are interrelated and have a logical connection and interrelationship between them as shown in the figure below.
Fig. 3.4 The Balanced Score Card Framework

The financial perspective is on the top of the chart of any balanced scorecard and is a measure to indicate how the enterprise is performing the basic and prime objective of identifying the strategy, implementation processes and execution of the plans for making profits. All enterprises would want to initially survive, succeed and then grow. Survival is measured by the cash flow in the system, success is measured in terms of sales and growth in sales and growth is measured in terms of the market share captured. The enterprise needs to look at pertinent ways to make the enterprise cash abundant by chalking out ways and means to bring in more cash in the form of profits. They need to find where the opportunities to make money lies and the means to make money to flow into their coffers. This could be done by things like increased sales, decreased costs, diversified products, innovations in product and services etc.

The customer perspective is an important part of the balanced score card which includes several generic parameters with reference to the customer. This perspective dwells on what the expectations of the customers are, how the customers view the enterprise, what is their opinion on the products and services of the enterprise and how well they are being fulfilled. The level of customer satisfaction is a key parameter on which every business needs to concentrate on for the development of their businesses. The other parameters that need to be considered under this perspective are customer retention, customer profitability, new customer acquisition.
etc. These play a vital role in obtaining a considerable market and market share for the enterprise. In fact it is important for any enterprise to have a focus on the customer to know how the customer feels about doing business with the enterprise. Customer concerns tend to fall into four categories: time, quality, performance, service, and cost (Kaplan and Norton, 2005, Harvard Business Review). Hence it is imperative that enterprises make products and provide services that add and create value to the customers through improved quality, lower defects, better and timely service etc. all within a timeframe at a low cost. An insight into this perspective is sure to throw light on the gap between the customer expectations and the fulfilment of their expectations which would pave the way for filling the gaps that may exist and hence improve the business and retain the customer along with bringing in new customers.

The Internal Business Process perspective is a key factor to attain success in planning and implementation and this perspective is meant to find the most critical processes of the enterprise that contribute to excellence in production / manufacturing, reduce delays in product manufacture and deliveries and increase the productivity through increased engineering efficiency. While the above mentioned financial and customer perspectives are mere outcomes, the process perspective is the main driver towards success and excellence. It is through this that the enterprises understands how to ensure success in the long run and what needs to be done to maintain and improve the financial success of the firm as the processes are the core and heart of the enterprises which powers the enterprise engine. Enterprises need to identify their core competencies, strong points and critical technologies on which they are dependent to sustain and better their current position in the market. Excellence can be achieved through process measurement to produce consistently reliable and good quality products and services and the process measures gain so much of importance because of the fact that they provide the data needed to maintain the quality needed to retain the customers and reduce low quality products and services.

The Learning and Growth perspective is the last among the four perspectives and this concentrates on the people (employees) of the enterprise. Employees are the most important resource of any enterprise. This is a perspective that focuses on that critical and most valuable resource. The following are a few things to be analysed.
• How employee capabilities could be identified?
• How employee capabilities could be improved?
• How could employee capabilities be measured?
• How employees could be retained?
• How employees could be more productive and efficient?
• How employees could be rewarded and incentivized?
• What would make employees learn?
• What training needs to be imparted?

Ultimately it drills down to how the enterprise could keep the employees happy and satisfied and retain them so that they could contribute to the survival and growth of the enterprise.

In summary each perspective of the balanced score card comprises of certain objectives, measures, targets and initiatives resulting in the creation of a “to be achieved” list followed by measuring the parameters that contribute to the progress to reach the objectives. This in turn would be followed by specifying the targets towards the achievements to be made and the creation of a strategic action plan to achieve the objectives and targets.

The balanced score card is also used as a performance management strategy through the usage of performance measurement information to bring in a change in the culture, systems and processes of the enterprise in a positive way through the allocation and prioritization of resources to meet the stated goals. The balanced score card acts as a tool for improving the overall performance of the enterprise. It points out what measures need to be in place for the enterprise to be efficient. They also act as an effective means to communicate the disorders on the measures and the areas on which focus needs to be there. It serves the purpose of reflecting operational issues in the enterprise thus helping in directing attention to implementation of strategy and future direction. Further it helps in setting goals that are measurable and design an action plan to march towards the goal. It makes the enterprise to be proactive and helps to react to the requirements of success.
3.6.7 **Feasibility**

Feasibility is all about taking a judgemental call on whether a job could be done or not based on our capabilities and capacities. Several factors such as resources, technical expertise, knowledge, finance, legal issue, tax etc. are taken into consideration which are needed to evaluate the probability of success in the venture as people, time and money are involved. A feasibility study needs to be taken up before embarking on the transformation journey. We need to assess the technical feasibility as well as economic feasibility along with the operational, scheduled and legal feasibilities.

**Technical feasibility:** This is a study based on the technology related resources that are available with the enterprise. It revolves around the technical resources that can contribute to the successful completion of the transformation. It’s a means of assessing whether the technical team that is available with the organization is sufficient enough to convert the ideas and work given to them into working systems. It also refers to checking whether the software and hardware requirements are good enough to take care and accommodate the changes made in future and if we need any other technology to carry out the proposed changes.

**Economic feasibility:** This is basically a decision making tool that gives us insight into the cost versus profit ratio called cost-benefit analysis. It’s a means of making sure that the benefits reaped out of the transformation would be more than the costs incurred in the process. The financial feasibility study is a way to check the effectiveness of the proposed transformation and a positive result of the study enhances the transformation credibility which would also help the decision makers to evaluate and quantify the economic benefits that could be reaped in the long run and decide to go ahead or not.

**Operational feasibility:** This is a study that is concerned with certain issues such as the usefulness of the transformation, the resistance that we may be faced with from the employees, the possible benefits of application, the support from the employees, customers, suppliers, and the current situation of the current process. Further it would help find answers in terms of the benefits to be reaped by the transformation, the response and acceptance levels of the employees, the effect it would have on the customers and suppliers etc.
**Scheduling feasibility:** This is very important for the success of the transformation process as it is a study of the time it would take for the transformation process to be completed. It is an estimation of the timeframe for the completion of the transformation based on our technical skills and economic conditions and delays in the implementation will escalate costs substantially.

**Legal feasibility:** It is an investigation into checking whether the proposed changes could be incorporated without any legal hassles. It is a study to check if there are any legal conflicts, violations, liabilities, legal traps and legal bindings if the process is furthered.

In conclusion, the combined use of both the swot analysis and balanced scorecard along with feasibility studies would prove to be a worthwhile step towards analysing any small enterprise thoroughly to obtain a clear picture of the current state of the enterprise for the promoters of the enterprises to chalk out strategies and measures for the betterment of the enterprise through a structured approach for transformation to result in survival and growth.

### 3.7 Identify

#### 3.7.1 Introduction

The identification phase plays a vital role in the process of transformation of any small industry. The application of this phase is meant to bring out the hidden strengths of the enterprise. It also plays a crucial role in digging out the drawback and weaknesses of the enterprises so that we could act on it to nullify the weaknesses and drawbacks and their effects on the enterprise. This phase concerns what we need to identify, where we need to look into and how best we can find what needs to be done for transformation. The issues that need to be addressed, the factors that trigger transformation, the drivers that push forward the transformation, and the forces that ply to act on the transformation need to be taken up in this phase to take another step towards transforming the enterprise.

The basic elements of an enterprise comprising of people, process, technology and resources are taken into consideration and work has been done to identify several strengths and drawbacks and work on them to increase the strengths and decrease the
drawbacks of the enterprise. Alongside, what needs to be found/identified and done with these elements is also given below.

3.7.2 Identification of People and Skills

Loyal and satisfied employees are the foundation of any enterprise. They are the biggest and the best asset that an enterprise can have and are the fuel on which the enterprise engine runs. Without the employees the enterprise will cease to function and exist. It is said that human capital is the most important factor in today’s competitive world. Hence it is essential that we do the following.

**Identify the right people for the right job:** It is easier said than done, so how do we go about this process? Being a small industry is one of the drawbacks as it cannot afford the luxury of going through an elaborate assessment process to find the right person. Hence the process needs to be kept as simple and cost effective as possible. The process of identifying is as follows

**Perform Job Analysis:** This begins with the collection of all information related to the job to be performed. This will help in creating criteria of performance along with creation of performance standards. This would also help in the creation of requisites for the job in terms of knowledge, skills, experience, and qualifications.

**Perform Person Analysis:** To be true, there cannot be a complete and perfect assessment of anybody but it may be possible to identify the strengths, interests, competency areas etc. of the people and fit them to the right job. Hence it is advisable that a database of all the employees is created and their strengths and weaknesses be listed so that the right person is chosen for the right job for speedy and correct execution of jobs.

**Identify the strong areas of the employees:** One of the key factors for the success of any business is the effective utilization of the strengths of its employees as it is the first step towards increasing the efficiency at work. Everyone is not the same. Each one is different in his / her own way and they may not be used all at a time but once they are identified they may be used anytime. Some of the common strengths in the employees are hard work, loyalty, tech savvy, out of the box thinking, creativity, innovative ideas, excellent communication, knowledge, wide contacts, leadership etc. Hence it would help have a list of employees and a list of their strengths alongside
their names so as to utilize the strengths as and when needed. This could be followed by revising the job descriptions, adding responsibilities, changing responsibilities, switching employees etc., all for the purpose of placing employees in the best positions so that they can succeed by using their skills for the development of the enterprise.

**Identify the weaknesses of the employees:** Just like every coin has its flipside, so does every employee in an enterprise. Hence when we look at the strengths it is also necessary that we look at the weaknesses of the employees as well so that they do not become a blockade for the growth and development of the enterprise. Some of the examples of weaknesses in employees in small enterprises are lack of enthusiasm, lack of knowledge, lack of communication skills, lack of courage to point out mistakes, poor comprehension of working processes, lack of enthusiasm, motivation and drive, tardiness, being irresponsible etc.

**Identify the capabilities of the people:** The identification of employee capabilities gains a huge significance for the tailoring of development activities so that interested and capable employees could be prepared for crucial roles in the future through training and helping them acquire the required skills and capabilities. Their capabilities could be easily identified through casual and formal discussions with seniors and management, administration of surveys, soliciting interest in new activities, participation in newer and developmental activities of the enterprise, employee profile database etc. The feedback from subordinates, superiors, supervisors and managers are also effective to identify the capabilities of the employees. It is also important to consider the future requirements of the enterprise as they would play a prominent role in meeting business goals of the future. Further, this capability identification would help in deciding on the candidates suitable for key positions in the future. Apart from these it would also help in career planning, succession planning and staff planning.

**Identify the competency possessed by employees:** The most competent employees are said to be the ones who possess the right attitude that translates to the best behavior. Competencies in fact have become the elements for recruitment and selection, as they depict the skills and abilities possessed by the person and are looked
at as the means to achieving the ends. The most sought after competencies are classified as under

(i) Administrative competencies
(ii) Communication Competencies
(iii) Supervisory competencies and
(iv) Cognitive competencies

The following would be the most expected abilities given as under.

Administrative competencies: (a) Time management and prioritization
(b) Standardization and Goal setting
(c) Work Scheduling and work planning

Communication competencies: (a) Organizing and listening patiently
(b) Ability to communicate clearly
(c) Obtaining objective information

Supervisory competencies: (a) Mentoring and training
(b) Delegation of authority
(c) Employee and performance evaluation
(d) Advising and disciplining

Cognitive competencies: (a) Identifying problems, providing solution
(b) Risk assessment and decision making
(c) Analytical ability and clarity of thought

**Identify the drivers that motivate employees:** It has been observed that money is the general driver and motivator for a majority of the employees in small enterprises. This is closely followed by the position that they can achieve by performing a job. Perks and benefits that could be obtained are the next leading motivator and driver in small enterprises. These can be termed as the primary drivers and motivators while there are others too that could be termed as secondary drivers.
and motivators. It would be easier to run the enterprise smoothly and push it forward through identification of secondary drivers that motive the employees to stick on to the enterprise for long and propel it towards betterment.

**Identify innovation and creativity:** Identify innovative and creative people who would be willing to learn from previous mistakes not only done by them but from others mistakes too. We need to find people who can create intellectual resources such as designs, drawings, graphic content etc. We need to find people who are interested in creating new and innovative products, services, processes, new designs or new methods to do the present in a more efficient and less time consuming way. This would add value to the enterprise.

3.7.3 **Identification of Process Parameters**

A process is a set of steps and procedures to be followed to convert inputs into useful outputs. Every enterprise has some kind of a process of its own in every aspect of the enterprise.

**Identify critical/key processes:** Every enterprise, be it small or large is made of several processes and it is important that we determine the most important ones which contribute the most to the enterprise, known as key processes. In order to determine the key processes we need to identify the critical success factors (CSFs) of the processes. Side by side we also need to find the key performance indicators (KPIs) of the processes. The ones that meet up to the standards set by the enterprise to achieve the organizational objectives and the processes that surpass these standards are the ones that could be termed as the key processes.

**Identify the process metrics:** It is important that the key metrics of every process be identified. Since processes are designed to produce outputs, it’s important that we look at metrics that measure the outputs rather than the activities of the process. It could be done through the following steps

- Create a process map for the process and review the process maps
- Conduct a brainstorming session with the people working in the process and decide which outputs need to be measured
- Check usefulness of the data collected from the process
• Validate the process effectiveness with the data collected

• Select and prioritize the measures and choose the best metrics that serve the purpose

**Identify process inefficiencies:** From the management’s perspective it is said that the second most important criteria for process measurement is its efficiency. Inefficiencies are said to be built in a process over a period of time. It gains importance from the customer satisfaction point. Apart from that, inefficiencies lead to customer dissatisfaction, employee frustration, incomplete work, increased costs, wasted resources, missed deadlines etc. Hence in the interest of the enterprise, it is best that the process inefficiencies are identified at the earliest possible and eliminated. They can be identified using tools like, FMEA, RCA, Cause and effect analysis, 5 Whys etc.

**Identify process strengths:** The strengths of a process need to be identified so that the process could be strengthened and the enterprise can build upon the strengths of the process. Reliability of the process is an important strength we can work upon to keep the process going for a long time. So is the robustness of the process based on which we can keep the process going despite unexpected hurdles and problems. Maintainability is also an important strength on which we can build the process. Lower the maintenance and higher the maintainability, better is the process availability. The process flexibility gains huge importance as a strength of the process as it can accommodate changes to the products and help in meeting customer needs efficiently and effectively.

**Identify process improvement parameters:** Taking cue from the Six Sigma methodology, we need to look into the following

**Quality:** Features, Dimensions, Attributes, Functional characteristics of products, defect free production, low rework etc., are the best known parameters to find in terms of quality.

**Cost:** Financial requirement, Product price, Servicing cost, Depreciation, residual value etc. are important parameters to look up to in terms of cost.

**Delivery:** Lead time, turnaround time, Cycle time, machine availability, set up time etc. are delivery parameters to keep track of.
**Service:** Warranties, service, spare availability, product liability, after-purchase reliability etc.

**Safety:** Product safety, Service safety, employee safety are parameters to keep an eye on with respect to safety.

**Responsibility:** Regulatory compliance, legal compliance, environmental impact, business ethics etc. are relevant parameters to be identified.

**Identify the CTQs of the processes:** Every process is governed by a certain set of parameters and those parameters which are deterministic of the quality of the output of the process are termed as Critical-to Quality (CTQ) parameters or simply CTQs. The CTQs have a close association with the parameters that have a profound effect on the customers which are termed as Critical-to-Customers (CTCs). The CTQs are the ones that fulfill the CTCs. Further it the requirements of the customers also known as Voice of the Customers (VOCs) that are translated into CTQs.

**Identify the value additions required for the process:** Every process is made up of a set of activities to convert the inputs of a process into desired outputs. Any activity that takes us at least a step further towards meeting the needs of a customer is said to add value, else it is considered a non-value adding activity (Muda or waste). Value stream mapping (VSM) and Quality function deployment (QFD) are the easiest and best tools to identify the various operations that add value. The rest of the ones i.e. those that do not add any value need to be eliminated from the system. Further, these activities that need to be eliminated need to be examined to find the ones that are necessary for the process though they do not add value and the ones that do not add value and eliminate them. Thus we can obtain a completely lean process.

3.7.4 **Identification of Technology**

Technology is the information necessary to achieve a certain production outcome from a particular means of combining or processing selected inputs which include production processes, intra-firm organizational structures, management techniques, and means of finance, marketing method or any of its combination. Technology may be codified in formulas, blueprints, drawings, and patent applications or uncodified in the sense of requiring implicit know-how on the part of personnel (Maksus, 2003).
Technology, according to Kumar et. al (1999) consists of two primary components: (1) A physical component which comprises of items such as products, tooling, equipment, blueprints, techniques, and processes; and (2) the informational component which consists of know-how in management, marketing, production, quality control, reliability, skilled labour and functional areas. By scrutinizing the technology definition, there are two basic components that can be identified: (1) ‘knowledge’ or technique; and (2) ‘doing things’. Technology is always connected with obtaining certain result, resolving certain problems, completing certain tasks using particular skills, employing knowledge and exploiting assets (Lan and Young, 1996) Technology plays a vital role in the development and sustenance of an enterprise. There is the popular misconception that technology is a driver for transformation but it is in reality an enabler which enables and supports the transformational activities in an enterprise. Enterprise’s operations are influenced by the kind of technology the enterprise has adopted in manufacturing processes. Technology has the potential to improve the efficiency and effectiveness of a process and decrease the completion time of a process. Hence it is important that the right technologies are adopted by every enterprise to enable it to grow.

**Identify the right technology:** There are several technologies that are available for a single operation/process. Hence we need to identify the one that best suits the process, keeping in mind the present need and conditions as well as the future needs and conditions. The life expectancy of the technology needs to be taken into consideration to choose the right technology along with the platform on which it operates.

**Identify the best technology:** There may be several good and right technologies available for the enterprise but it is our need to choose the best among them to get the most optimal results out of the technology. Several factors such as the infrastructure required, the service support available etc. have to be taken into account before the best technology could be zeroed in on.

**Identify affordable technology:** Cost of any product/process/ technology plays a crucial role in choosing it. Hence the technology that is not only just right but also best and most suited for the enterprise needs to be identified keeping in mind the
price as it has to be economical to implement the technology for the enterprise to be profitable in the long run.

**Identify the value the technology can add:** Can the chosen technology add value to the enterprise? is a crucial question we need to ask ourselves before we decide on the technology. "Organisations can move faster in terms of innovation. This is bringing a new wave of opportunity beyond test and development into the production environment," said Poppleton of Accenture. An essential aspect of an enterprise is attaining value through good policies, procedures, rules etc. The stepping stones for value creation in an enterprise through good practices will make the enterprise easier to manage and produce better results. A wonderful enterprise could be created through leveraging technology and take it to great heights.

3.7.5 **Identification of Enterprise Resources**

Resource is "anything which could be thought of as a strength or weakness of a firm (Wernerfelt B., 1984). This “anything” may include physical resources (such as raw material, equipment, machines, tools, land, building, financial endowment etc.), human resources (such as training, experience, skills etc.) as well as organizational resources such as firm image, process, routines etc. (Barney J.B., 1991, Marino K.E., 1996).

A physical resource is an asset that is used by an enterprise to achieve the desired and state goals and objectives. The physical resources affect the investments made in the enterprise along with the lifetime and performance of the small industry. One of the most common reasons cited for the poor performance of an enterprise is the lack of good assets. This is in contrary to the fact that the enterprise functions well when started but performance goes down over a period of time. Thus comes the challenge of maintaining the physical resources. This can be done through identification of trained personnel, need based fulfillment of spare parts stocks, allocation of adequate funds for maintenance and depreciation and proper procedures for standard maintenance.

Human resource is considered to be the most important asset of any enterprise. They comprise of the employees of the enterprise who are equipped with skills, abilities and knowledge to utilize the skills and knowledge to create capabilities and
add value to an enterprise. Human resources help in designing newer components and products, creating newer and better products, add value to the enterprise and bring in more profits to the enterprise on the whole.

Resources play the most prominent role in building an enterprise. Welding together all the resources for fructification of the goals of the organization is the need of the hour which can be achieved through planning and effective and efficient utilization of the resources as and when needed and wherever needed. This essentially contributes to better utilization of resources, decreased waste and ultimately higher productivity. Identification of such resources which would enhance the value of the enterprise is what would contribute to the survival and growth of the enterprise. Identification of resources/assets that create capabilities is a vital component of the transformation process and there are several kinds of resources that can create capabilities for the enterprise as given below.

**Identify physical resources:** This has reference to the infrastructure on which an enterprise leans on. The presence of an asset in a strategically advantageous place adds great value to the enterprise in terms of sales, marketing, access etc. giving it a locational advantage. The buildings are very likely to add future value to the business and as possessions that will bring business benefits in the future. Similarly machines which form the heart of the enterprise are the ones that add and create value to the products that come in to the system as inputs and exit as outputs in the form of finished products. Tools and equipment add further value by helping machines, buildings etc. to be maintained well and maintains and even enhances the value of the physical assets. Hence the identification of these assets takes prominence.

**Identify intellectual resources:** The presence of knowledge resources such as patents, brand image, copyrights, trade secrets etc. are indeed a huge advantage as these can create wealth for the enterprise. They can add and even multiply the output of an enterprise and add to the production volumes. They can play a vital role in providing competitive advantage to the enterprise and enhance the value of other resources several times. The identification of these resources would result in value addition and value creation for the enterprise.
Identify cultural resources: These are assets such as ethics, rules, regulations; quality control programs, training etc. result in enhanced capabilities of the enterprise by providing a framework with respect to the employee behavior. Organizational culture can have both positive as well as negative effects on the organization. A strong and positive culture will promote work enjoyment and attract highly talented employees while it still retain the talented employees already present in the enterprise thereby improving the effectiveness and efficiency of the employees along with their performance. The culture presents a positive momentum and promotes energy towards the momentum to take the enterprise to higher levels. The enterprise culture acts a vital component that influences and evolves to create value to the enterprise and hence the need for identification of these resources.

Identify enterprise resources: These can be termed as capabilities and capabilities such as design capability and management capability which when possessed by an enterprise can do wonders to the enterprise. A vast majority of the small enterprises lack the capability to design products or components. Being managed mostly by a single person or just few partners, dependence and delays rule the enterprise. Chaos prevails over partnership firms due to which they lack some of the most needed capabilities such as finance, purchase, manufacturing, marketing, sales and the like. Identification and exploitation of these would turnaround the way the enterprise functions and would help in taking the enterprise to lofty heights.

Identify information technology resource: There is no doubt that any enterprise today cannot survive without information technology support. It has become the bloodline of every enterprise. Hence it is imperative that we identify the resources that contribute to the organizational information and data that would either create value or enhance the value and capabilities of the enterprise. Information technology acts as an enabler for competitive advantage by managing communication, data, inventory, production etc.

Identify research resources: Research is perceived to be an inherent part of any enterprise, be it small or big. But unfortunately research is almost non-existent in the small industries due to several reasons. The reality is that research capabilities are present but lie dormant due to lack of avenues to proceed further. Such capabilities need to be identified and awakened which could result in tremendous value addition.
to the small enterprise. The identification of these resources is a feather on the cap of the enterprise which could act as a propeller to propel the enterprise to the next level on to a different league.

A close relationship exists between enterprise resources, assets, capabilities, research and value as shown in the figure below.

![Diagram showing the relationship between Research, Resources and Value](image)

**Fig. 3.5** Relationship Between Research, Resources and Value

From the above it is evident that it is important for any enterprise to identify assets/ resources that create value to the enterprise. The physical resources form the base for value addition. The better the infrastructure, the more is the possibility to produce and more is the ability to add value to the enterprise. It is said that Knowledge is power!. Hence the availability of intellectual capabilities within the enterprise would be of great value in terms of new products, new processes, new procedures etc. thus increasing the value of the enterprise. The culture of an enterprise exerts an immense impact on the enterprise. The culture of an enterprise determines the way an enterprise functions. For example Toyota has revolutionized the automobile industry through its culture. Such is the influence. Similarly the info tech resource acts as an enabler and promoter of the enterprise. The availability of data and processing of data would reveal a host of things about the enterprise activities and
help in enterprise development thus adding value to it. There are various other resources which we call enterprise resources which can add value to the enterprise. All the above coupled with facilities for research would be a deadly value creator to the enterprise. Identification of these value creating resources would be a major step towards transformation.

**Identify core and key competencies of the enterprise:** Core competency is a concept in management theory introduced by C. K. Prahalad and Gary Hamel who defined it as "a harmonized combination of multiple resources and skills that distinguish a firm in the marketplace". Core competencies fulfill three criteria: Provides potential access to a wide variety of markets, Should make a significant contribution to the perceived customer benefits of the end product and difficult to imitate by competitors, according to Prahalad and Hamel. It is supposed to consist of a set of skills and knowledge possessed by an enterprise that could be used to stay ahead of market competition and be competitive. Job analysis is an approach that is internally oriented to explore the core competency needed by the company (Spencer and Spencer, 1993). It can be conducted via job description that clearly breaks down each task or job item. Based on job description, researchers make the judgment. The core competency can be clearly defined with a careful watch on the key positions (Rothwell and Lindholm, 1999). Another approach of identifying core competency is through collecting opinions from experts. This approach is conducted through in-depth interview, focus group discussion or cross examination to ask internal senior staffs or external professional people what is the requirement for each specific position or job (Rothwell and Kazanas, 1993). Identifying those capabilities that are crucial to the success of the business, called key competencies, is the first and foremost important step. The identification process may involve internal benchmarking of key business functions, such as general management, financial management, marketing, selling and market research, product Rand D, engineering, production and distribution, etc. (Khalid Hafeez, et al, 2002).
3.8 Focus

3.8.1 Introduction

Small industries are prone to fluctuations in business. The main reason being that they are mostly job order industries and these industries function like focused factories concentrating on a narrow range of products. And an insight into the history of small industries gives a clear indication that survival of industries is directly proportional to the age of the industry. In other words the industries which have been in business of a longer period of time are more likely to survive and overcome obstacles easily in the long run. The focus of an enterprise needs to be beyond the conventional things like competition, market, market demand etc. The enterprise needs to look at and focus on fundamentals to survive and grow in this turbulent and continuously changing competitive environment.

Given below is a list of attributes / areas etc. that an enterprise needs to focus on in terms of the elements of the enterprise namely people, process, technology and resources.

3.8.2 Focus on People Related Factors

Never has it been heard that an enterprise has grown singlehandedly by an entrepreneur. It always needs the support of its employees by his/her side. An enterprise’s biggest asset is said to be its employees. They are the pillars on which the enterprise rests and moves. Hence the focus of the enterprise should begin with its people. Unfortunately in most small enterprises the focus is on business and hence misses out on creating a competitive advantage through its people. It is a fact that enterprises are considered to be well run and successful only when they understand the need to nurture their internal talent to adapt to change and thrive better than their competitors. This can be achieved through capitalizing on the knowledge, talent, skills expertise, experience etc. of the enterprise workforce.

**Recruitment:** A standard formal recruitment process is almost non-existent in the small enterprises. Their appointments of manpower is done through an informal process which comes through internal references and request from friends and
acquaintances to provide employment to friends and relatives. Effective talent management begins with the intelligence of the employees. There needs to be a clear and deep understanding of the skills, behaviours and potential that may exist with the employees of the enterprise and most importantly their alignment with the business objective need to be looked into.

**Skills:** Identifying the skills of the employees, focusing on those skills and leveraging them for the improvement of the overall performance of the enterprise would make wonders for the enterprise. Some of the common skills of the employees may be in the form of good communication, ability to plan well, tenacity, problem solving skills, creativity, out of the box thinking, industry specific skills etc. These are just a few among the many that need to be identified and tapped and focussed on for the improvement of any enterprise.

**Capability:** This refers to the ability of an employee to perform a given job within the stipulated period of time. Focusing on the capabilities of the employees and working upon them and capitalizing on them for betterment of the enterprise is the need of the hour. Capabilities could be in the form of speed, agility, flexibility, preparedness and the like. Identifying and focusing on such capabilities is sure to add strength to the enterprise and elevate the enterprise to the next level.

**Weakness:** Strengths are generally what enterprises look for to enhance the performance of the enterprise and it is no doubt that these would help the enterprise but we also need to look at the cons i.e. the weaknesses of the employees too. Identification of the weaknesses of the employees such as lack/poor communication, lack of enthusiasm, lack of drive, tardiness, poor process comprehension, poor problem understanding etc. would help the enterprise to provide means and ways to eliminate such weaknesses through training programs, refresher programs and employee development programs.

**Competence:** Start looking for the competencies that are available with the employees. Focus on the necessary skills, experience, education etc. to complete the task given to employees. It is easy to identify and focus your attention in motivating such people who are passionate about what they are doing and provide the necessary things that are needed for them to complete their tasks.
Focus need to be on all the above so that all of these above could be succeeded with revised job descriptions, switched employee positions, added responsibilities, and revised and changed responsibilities so as to place the right people for the right job.

3.8.3 **Focus on Process Variables**

A process is a set of actions and activities performed in a particular environment to achieve a certain desired set of results. Processes are everywhere in an industry and they form the heart of the industrial system. Working on the processes of the enterprise would be the key to process transformation to take it to the desired state from its current state. It should basically begin with a process mapping which will give all the required details of the process and this need to be followed by a value stream mapping to figure out where value is being added in the process and where value is not being added. Further it would help in identifying and eliminating the wastes in the processes. The concept of 5Ws (why, what, when, where, who) could be used extensively to identify the elements of focus on the following.

**Process performance:** The performance of a process acts as an indicator of how well a process is working to get the desired output and how capable the process is to meet the requirements. The need for focusing on process performance stands on the need for improving the enterprise performance in a meaningful way. Analysis of processes and efforts put in by the management of an enterprise would go in as a waste if process performance is not taken care of. Process performance lets an enterprise have control over the meaningful things that matter to the enterprise. Measurement of process performance helps an enterprise to know whether the process improvements could be meaningful and if improvements could be accommodated. It is likely to provide insights into the value that has been delivered to the customers. It is said that process performance answers the question whether the process in use meets the requirements of the customer or not. Measurement of process performance is likely to provide a host of benefits to the enterprise as mentioned below

- Prioritizing process improvements based on data.
- Better operations alignment with strategy.
- Gives insight into cross-functional performance understanding.
- Data backed improvements and control over risks associated with the process.
- Knowing the process capability and range of process capability.
- Uncovering both actual problems occurring in the process as well as latent problems.
- Throws light on the customer satisfaction and service levels.

Hence the focus on process performance should be taken seriously and efforts focused on measuring and improving process performance would help the enterprise in a good way.

**Process efficiency:** How efficient a process in an enterprise is, is a measure of the effective execution of a process for which it is intended. Its gains importance as it has a bearing on the operational costs of the enterprise. It has a direct effect on the customer expectation and customer satisfaction. Process measurement throws light on the factors that are aiding or harming the process efficiency and it provides valuable insights through information related to process control and process improvement. It helps in getting results in terms of better performance and profits through optimum utilization and reduction of wastes in the process. Thus our focus when directed on process efficiency is likely to give better results.

**Process parameters:** These are also known as process variables, wherein the measurable factors that determine and define the process system and its conditions are known as process parameters. They are representative of the input and output data of processes and their elements. They act as an information exchange hub between various processes and also as a hub within. They gain extreme importance due to the fact that they are the ones that actually control a process through correct measurement and management through monitoring. Most parameters are generally dynamically changing in nature and gain a huge importance in terms of determining the output of the process. Hence the focus needs to be on the parameters of the process especially the critical parameters of the process.
Process optimization: This is a process of making minor or major adjustments to the activities of a process to make the existing resources work to its best in the most effective manner. It could be called a discipline consisting of making activity adjustments to refine and better the process through adjusting some parameters without the violation of any of the process constraints.

Process improvement: This may look like it has a lot of similarity with the above but there is a considerable difference between the two. Process improvement is the activity comprising of study, examination and analysis of processes that exist in an enterprise or department. The idea behind process improvement is to do a proactive task of identification and thorough analysis of the process that is in existence to better the quality standards. We need to understand that there may be some areas of the enterprise which may not be in a position to be improved to achieve best results. To attain the goal of improvement of the process, a part of the process could be subject to modification or could be complemented with the sub processes and in few cases even eliminate a few activities of the processes to achieve the ultimate goal of process improvement. Certain methodologies such as benchmarking, lean manufacturing, DRIVE and DMAIC of six sigma could be used to make remarkable improvements in the processes. Wherein DRIVE is a process improvement approach expanded as Define, Review, Identify, Verify and Execute where the process scope is defined, Review of current process is done through data identification and collection. Identification of process improvements and changes to sustain improvements take place, verification for goal improvements and prioritization of plan improvements are followed up wind up with execution of the change plan and get feedback.

The benefits of process improvements could be felt in the form of increased customer satisfaction, better product quality, more loyalty from customers, increase in productivity, efficiency and shorter time for return on investment thereby increasing overall profitability Hence focus on the improvements could be a necessity to transform processes which in turn would result in the enterprises’ transformation as a whole.
3.8.4 **Focus on Technology**

Technology has a broad meaning and has reference to our ability to adapt, control and change the enterprise’s working environment. Technology has permeated so deep into the heart of the enterprise system that it can determine the success or failure of the enterprise.

“Technology is a form of human cultural activity that applies the principles of science and mechanics to the solution of problems. It includes the resources, tools, processes, personnel, and systems developed to perform tasks and create immediate particular, and personal and/or competitive advantages in a given ecological, economic, and social context.” (Mc Omber, 1999)

Technology has brought in several changes in the manufacturing and service sectors. It has revolutionized the way mankind has been working and has had a huge impact on how enterprises have been operating. It has extended its influence over to several areas of the enterprise such as operations, management, supply chain, logistics, resource management, maintenance, accounts etc. sparing none of the departments. There is an increased dependence on equipment and nowadays technological factors have a huge influence on the success of an enterprise.

**Technology types**

**Evolutionary technology:** Evolutionary technology is that type of technology which has evolved over a period of time. They are need based changes that have been made as and when there has been a need that had to be addressed with the help of a small technological change. This is the most common type of technological change that is seen in the small enterprises and is a step by step adoption process which generally goes unnoticed.

**Revolutionary technology:** This refers to the kind of technology that has not been seen by the enterprise so far. It revolutionizes the way the enterprise is operating and brings in several changes to be accommodated. This requires meticulous planning and an efficient team to implement. Strategy takes the lead to help such technology to reap the benefits.
**Disruptive technology:** This is also the kind that is not seen often. This kind of technology takes the market by storm. It uproots the existing technology, shakes the foundation of the old technology, revamps it and ushers in a complete change that the enterprise has never seen before. It is in fact a fresh start of a process to accomplish the desired goals resulting in new processes and products also rendering several products and processes obsolete. Small industries generally do not opt for this kind of technology due to several constraints.

**Need to embrace technology:** Technology has become an integral part of every business these days. It’s a fact that industries that do not embrace technology will die very soon as they would be left behind in the race called competition. Technology needs to be embraced to survive and to sustain. It acts as a facilitator to provide access to a host of data and information. The rules of the game called challenge and competition are changing at a tremendous pace. The only way to be in the game and lead the game is to beat the competition and be ahead of the rest. This can happen only through continuous improvement and innovation and technology can help to scale up quickly for this requirement. Globally enterprises are looking at making more with less in a short span of time, safer than ever, securely and efficiently to level the competitive forces.

Today, technology happens to be the driving force behind several changes that we see. Technology plays a major and critical role in enhancing the productivity of an enterprise along with its competitiveness. They help in reducing defects, increasing quality and providing quicker responses thereby making processes more efficient and effective. Technology has led to automation, which is a crucial requirement for small industries these days, to offer products and services that are of better/high quality and at the same time of low cost. It further ensures the sustainability of the enterprises and also to remain competitive in a market that is surrounded by competition.

**Barriers to technology adoption:** The efficiency, performance, productivity, competitiveness, effectiveness and consistent growth of any enterprise depend on its willingness and ability to adapt to technical changes and adopt technology smoothly and effectively. Small enterprises are faced with many hurdles that pop up in the enterprise and are classified as internal and external hurdles. Further they are faced with issues that pop up due to factors related to technology, politics, economics,
social, socio-economics, cultural factors, infrastructure etc. Given below are a few of the important and most often cited reasons by the small enterprise fraternity that hinder the adoption of technology.

**Capital:** The most commonly cited reason for small enterprise’s inability to adopt technology is lack of capital to invest in acquiring the latest technology required. Most of the time the advanced technologies have to be imported from technologically advances countries and the cost of such technology is prohibitively expensive for small industries, rendering it to be very difficult to migrate to the better and advanced technologies available. There are very few small enterprises that can afford the cost of expensive technologies and even if they adopt the technologies the time taken for their return on investment is high.

**Reliability:** How reliable is the technology? Has it been implemented elsewhere? If so, who is / are using it and for how long? These are some of the questions fired out as soon as adoption of technology is suggested. The answers to the above question end up as the deciding factors for the adoption of technology. The answers for these questions are negative most of the time among the small enterprises. And these put a stop on the idea of technology adoption. How long will the technology be in place? Will it need constant upgrades? Can it become obsolete? What if it fails? etc. are other common questions asked which deter the adoption process.

**Fear and insecurity:** The most commonly cited reason for unwillingness to adopt newer technologies is the fear of failure, which leads to insecurity. The common questions raised are, What if the technology is not as good as expected? What if the technology is not suitable to our requirement? What if the technology cannot be used for a long time? What if the technology does not sync with the existing technologies? And so on. These thoughts and assumptions deter the management of the small enterprises to take up new technology as they think that it is not worth testing new waters.

**Lack of awareness:** On the other front, one of the common reasons attributed to the lack of adoption of technology is the lack of awareness of the presence of a suitable technology or technologies that would be suitable for the enterprise. “We don’t know what kind of technology exists that could be adopted by us” was a
A common statement obtained from several enterprises. The knowledge of the presence of suitable technologies would be the first step towards adoption of technology but not knowing what is there and what is not is the blockade towards technology adoptability.

**Lack of training:** Training has always been the backbone of every successful technological implementation. If an enterprise is unable to get the required training adequately, the very purpose of bringing in the desired technology stands defeated. Generally the technology providers provide training while implementing the technology and the enterprises send just a very few for the training. The enterprises generally do not take the steps to train multiple employees due to several constraints from their side. This results in complete chaos when the employee trained on the technology leaves the organization as it is faced with the crisis due to lack of training.

**Lack of service backup:** The remote location of small enterprises acts as a deterrent for the technology service providers to provide service backup on time. Access to infrastructural and other technological facilities are cited as major reasons for the inability to provide service backup in case of technological glitches. Personnel from far away locations have to come down to provide service due to which many a times the small enterprises are given a step motherly treatment.

**Lack of skilled/qualified people:** Most of the small industries are set up in the villages or remote areas to lower down the cost of land, which is considered to be a dead investment. Hence the availability of qualified personnel for the required technology in the surrounding vicinity is less, unlike the cities and town where qualified and skilled personnel are available in plenty. Secondly such qualified personnel generally do not prefer to stay with small industries and rural areas. This reason acts as a deterrent to the small enterprises to invest in the available latest technologies keeping in view the long term problems that are likely to pop up in the future.

**Lack of time:** Though it looked like an excuse to hear that the lack of time by the enterprises to think about adopting technology suitable was one of the major reasons cited for the inability to adopt technology, it was found to be true. The small enterprises are usually run as a single man show and in few cases it’s a partnership deal that runs the industry. They are the decision taking authorities and also the ones
who run the show due to which they are burdened with the responsibility of managing
the unit from top to bottom all by themselves. Dictated by such heavy responsibility
and schedules they seldom find time to ponder over new technology and keep on the
lookout for the same. The effect is a lack of time for searching for new and advanced
technology and the lack of time to evaluate the suitability of the technology for the
enterprise.

Focus on solutions to technology adoption: Some of the solutions for the
adoption of technology in its simplest means are by focusing on the barriers to
technology adoption and removal of the barriers to the maximum possible extent. This
has to be done as a team wherein the champions of the processes need to be roped in
as the team leaders and given training after briefing them on the advantages and
effects the incoming technology would have on the enterprise and the employees. The
employees need to be sold the benefits that it would bestow on the employees. The
responsibility of implementing the technology must be given to the process
champions. They should be provided with adequate incentives for the same. Given
below is the easiest and simplest solution for the common barriers cited above. These
solutions were derived from a brain storming session with the employees and
management of a few small enterprises situated at Ranipet.

Capital barrier: This gains prime importance which contributes to more than
fifty percent of the reason for inability to adopt technology. A small “technology
fund” of 5 to 10 percent of the net profit when allocated on a monthly basis towards
upgradation or implementation of new technology would prove to be a boon to the
capital constraint faced by small enterprises often. The practical difficulty faced was
that majority of the enterprise diverted the funds for other purpose during emergencies
or they failed to create such a fund. This could be overcome through strict adherence
to creating a fund pool and not using it for any purpose other than technology
implementation.

Reliability barrier: Choosing good brands of technology providers is one of
the best solutions to overcome the reliability barrier. These brands have gained a
name for itself only through positive feedback and good work. Reputation does not
come easily. They have constant inspections and quality checks to retain their brand
image and market share. Reliable technology can be chosen through past
performance, a little research and clear information from the technology suppliers, market, employees and fellow entrepreneurs who have implemented the technology.

**Fear and insecurity barrier:** Entrepreneurs / Management need to be informed about the fruits that technology would bear in the long run. The need for occasional upgrades has to be conveyed clearly enumerating the benefits of the upgrades. The fears of loss of job, over burdening etc. which are common fears that arise in the minds of employees have to be dispelled. And this can be done by selling the benefits of the technology to the employees. They need to be informed about the advantages they would get and also need to be told why they need not fear loss of job or burden of job and would actually reduce their work if used appropriately.

**Awareness barrier:** Lack of awareness of the available technologies is something that is common among the small enterprise management. The search needs to be in the form of a constant outlook for technologies. This can be tackled by searching for available technologies keeping in mind the requirements of the enterprise. Talking to fellow entrepreneurs is another good source of learning about technologies. Their experiences when shared, act as a good means of learning from others. Further, searching online and the feedbacks act as an awareness provider for available technologies.

**Training barrier:** Training for the new technologies is an important factor that plays a major role in the decision taken to adopt technology. The fear of improper or non-availability of training from the technology developers acts as a deterrent for adopting technology. This can be overcome by choosing the right technology providers who provide hands on training and it is important to see that enough and good quality training material along with training sessions are provided. This would remove the fear both in the minds of the employees as well as employers.

**Service barrier:** Lack of good service is a huge deterrent in terms of adoption of technology. Managements fear to adopt technology when good service is not available for the technology they wish to buy. Hence the need for good service back-up increases the possibility of technology adoption. The best way to overcome this barrier is by focusing on identifying other good private service providers in the local or nearby areas, who can provide good and reliable service as and when required.
**Skill barrier:** Possession of required skill set for the adoption of technology is of prime importance and a necessity for the technology to yield fruits. Hence there needs to be a focus on imparting skills to crucial employees to act as master trainers. These skills need to be taught to all other employees involved in the utilization of the technology so that there is never a shortage of skills for the technology.

**Time barrier:** The non-availability of time is a huge issue faced by the management of small enterprise who are generally proprietors or partners of the firm. They need to find time and the focus needs to be on allocating time for the development of the enterprise. One of the best solutions arrived at is to shift focus to delegation of authority to competent employees rather than handling all issues by themselves. This would lead to employee empowerment and availability of time thereby increasing job satisfaction to employees while instilling a sense of pride in them and at the same time help owners to have time to think of developmental activities through adoption of technology and automation.

A word of caution is to check out on the following before taking the leap as technology can prove to be an advantage if implemented keeping in mind the following or it can collapse the system if underestimated or overdone.

- Readiness for technology implementation.
- Assessment of current levels of technological automation.
- Desired levels of technological automation.

In conclusion the focus on implementation of technology, adoption of technology and putting it to its best use would play a major role in helping the enterprises to surge ahead in the competitive race. Technology has a huge effect on both the market as well as the enterprise. If used correctly and effectively it would prove a boon to any industry.

3.8.5 **Focus on Enterprise Resources**

Resource can be termed as a source or supply from which desired outputs can be produced. While the outputs are obtained, the resources are consumed to create the output. Resources are utilized to create efficient and effective systems. With reference to enterprises, they are characterized by availability and utility, where both are limited.
in nature. Resources are of many types and we have listed below the types of resources with reference to industry alone.

Eisenhardt and Martin (2000), Harrison, Hitt, Hoskisson, and Ireland (2001), Hoopes, Madsen, and Walker (2003), Ireland, Hitt, and Sirmon (2003), Mills et al. (2003) and Morgan et al. (2004), following Wernerfelt (1984; 1995) and Barney (1986; 1991), examined resources and categorized them as tangible resources, (namely human, physical, organizational and financial), and intangible resources, (namely reputational, regulatory, positional, functional, social and cultural).

Out of the categories of resources cited above, human resources (Adner and Helfat, (2003); Datta, Guthrie, and Wright, (2005); Abdullah, Rose, and Kumar, (2007a); (2007b); Rose and Kumar, (2007)) and intangible resources (Oliver, 1997; Makadok, 2001) are deemed to be the more important and critical ones in attaining and sustaining a competitive advantage position because of their natures, which are not only valuable but also hard-to-copy relative to the other types of tangible resources (namely physical and financial).

Physical resources such as the plant, machinery, equipment, production technology and capacity contribute positively towards organizational competitive advantage and eventually result in superior organizational performance (Morgan et al., 2004; Ainuddin et al., 2007). In addition, financial resources such as cash-in-hand, bank deposits and/or savings and financial capital (e.g., stocks and shares) also help explain the level of organizational competitive advantage and performance (Morgan et al., 2004; Ainuddin et al., 2007). Furthermore, experiential resources such as product reputation, manufacturing experience and brand name can account for the variation in organizational competitive advantage and performance (Morgan et al., 2004; Ainuddin et al., 2007).

From the above it can be inferred that resources are classified broadly as tangible and intangible wherein the physical resources such as land, building, machinery, equipment including IT, tools and tackles, power, materials, consumables, furniture, planned maintenance, emergency provision, insurance, security etc. come under tangible resources and resources such as patents, copyrights, exclusive licenses, software licenses, employee skills, employee experience along with skills and experience possessed by management people, other intellectual property, etc.
come under intangible resources. Apart from these resources such as goodwill, brand name, reputation, knowledge, research capability etc. are special resources that can help an enterprise greatly.

In the current industrial scenario, it is well known through experience that “Competitive advantage” and “Unique selling proposition” (USP- a factor that differentiates an enterprise’s products from others, specifically competitors) are needed the most by enterprises to survive and grow. And these can be achieved only through effective utilization of the above mentioned resources to its advantage and to its fullest.

Hence the focus of the small enterprises needs to be on

- Creating base for resource development
- Putting to use the available resources to its fullest potential
- Improving the existing resources
- Mobilizing the needed resources

How can the above be achieved? This is a question that needs to be answered to overcome the constraints in terms of resource development, improvement etc. The enterprise is constantly faced with constraints and challenges which need to be overcome. Sustainability is the key to grow and thrive, wherein sustainability is the ability of an enterprise to weather constraints and face challenges and provide quality products and services and maintain overall stability of the enterprise by creating a solid foundation for the future enterprise.

The enterprise should work on development of resources and focus on improving existing resources and create new resources needed. This should be done through proper planning that is intentional of having both short and long-term targets and goals and mobilising the required resources. The presence of a resource development plan offers a roadmap of enterprise stability. This begins with identifying and listing out the various resources available with the enterprise and also listing out the resources that are required by the enterprise for sustainability and growth of the enterprise. A perfect workable and executable plan must be drawn with the help of peers and employees to take the necessary action for the development of resources. Firms must improve their research and development and product promotion
capabilities and also enhance their work systems, specifically the manufacturing process and standard operating procedures (Alimin Ismadi Ismai, 2012).

The focus of the enterprise must be on effective utilization of the available resources to get the most out of them. The various resources that are presently available must be identified and listed out and grouped as per their capability to contribute to the improvement in production, productivity, efficiency etc.

The enterprise needs to look at pertinent ways to improve the existing resources. It needs to think and chart out ways and means to have value addition to the existing resources such that the current resources can be used to its fullest advantage to get the maximum output with minimum inputs. The enterprise needs to identify the resources that are lying unused along with the capabilities that are lying untapped and put them to effective use.

Further the enterprises need to focus their efforts on mobilising required resources where resource mobilization refers to an activity of developing strategies to secure new and additional resources, bettering the existing resources and maximizing the present resources, to improve the scaling up of products and improve services. It needs to be noted that the efforts that go into mobilization of resources should align with the goals, mission and objectives of the enterprise; else it may prove to be a costly dead investment.

Hence it is important that the enterprises concentrate on focusing on overall improvement of people specific parameters that can contribute to the enterprise followed by focus on process parameters to improve the efficiency and effectiveness of the process. The enterprises also need to focus on utilizing the available technology effectively and acquire newer and better technologies that would help the enterprise to produce more and lower cost and higher quality. Further, it needs to be noted that improvement of the enterprise can happen only through effective utilization of existing resources and mobilization of newer resources suitable for the accomplishment of the goals of the enterprise.
3.9 Overcome

3.9.1 Introduction

Attempts to introduce new systems, processes, procedures etc. have never been easy as they are always met with challenges, obstacles and resistance. In fact the failure rate of such transformational efforts is huge. The process is difficult as there are serious defenses and obstacles arising from employees while implementing the transformation. Similarly the current processes may not pave the way for the transformation intended and the technology may not be good enough to undergo the transformation due to reasons such as obsolete technology, inefficient technology etc. Further, the non-availability of resources is very likely to add fuel to fire to hamper the transformation process. Hence we need to look into the above mentioned elements and remove the obstacles in the way of transformation. This topic is a discussion about how to remove the obstacles and overcome the hurdles of enterprise transformation and pave the way for a smooth transition from the current state to the desired state. The reasons for the need to overcome hurdles on the way to transformation are for the small enterprises to survive and grow in the long run. Beating the competition arising from present competitors and the competition from new entrants is a critical reason. Providing quality products to customers at a competitive price stands as one of the important causes for the need to overcome various obstacles and barriers and excel in their businesses.

3.9.2 Constraints Related to People

The process of enterprise transformation is an activity that needs to be done with the help of the employees in any enterprise as they are the backbone of any enterprise. It is said that people make things work and transformation is basically about changing the way people work and approach their work for an enterprise to be transformed. Resistance to change has been the most feared challenge in terms of enterprise transformation as it is people driven and it takes a lot of effort to convince people to adapt to newer ways of working. Attitudes, opinions and blind spots are major contributors for resistance to transformation. Alongside, the reasons behind resistance are many such as fear of loss of job, fear of overburden, unwillingness to learn newer things, inability to adapt to new processes and technology or way of working, lack of
trust, fear of unknown, bad communication for change, inappropriate timing, lack of clarity on the change process and its benefits to the employees etc.

Keeping the above in mind we need to look at pertinent ways to overcome this resistance from the employees. There are several ways to overcome resistance and a host of possible ways to overcome resistance to change has been developed, tried and implemented which has been discovered from various sources is as follows.

**Communication:** The initial process needs to begin with proper communication informing employees about what is being planned and why it is being planned to do so. The Lack of proper communication results in confusion among employees. Each employee understands what is said in their own way and hence the goal and discourse is lost. This also results in lack of connection and credibility and creates demotivation, mistrust between the employees and management, and working environment deterioration. Hence proper communication is very likely to bring down the resistance if not eliminating it as it acts as a kind of education to dispel their unwarranted fears.

**Get feedback from employees:** The basic reason behind obtaining feedback from the employees regarding transformation is to get an idea of their opinion and fears about the process. This is very likely to throw light on the exact reason for their fears harboured by them regarding transformation. When the employer knows the reason behind their fears, it is easy to convince them that there is not much rationale in their thought and it will help both the organization as well as the employees.

**Sell the benefits of change:** The first question arising at the start of the transformation process is “why this change and what is the need?” hence it is the responsibility of the management of the enterprise to keep their people informed as to why the initiative is in place, the effects if we do not transform, plus the results of the transformation process, and the benefits of the process. When the benefits of the transformation is sold to the employees, the resistance level comes down and acceptance levels go up which creates an environment that is conducive for the process to take place.
Create a reward system: The idea is to make sure that the employees who embrace transformation be rewarded for helping the enterprise evolve to a better state. A proper transparent reward system is sure to help move one step further toward transformation. Everyone looks for self-benefits and thinks “what is there in it for me?” hence a reward system is very likely to promote indulgence, participation and self-motivation to achieve the goals of transformation easily.

Deploy a change agent: It is well known that transformation needs guidance from a leader who would act as the change agent. The change agent needs to be one among the employees who can take responsibility for leading and implementing the transformation process. He should act as a bridge between the management and the employees. This would reduce the resistance because any act of change brought by the management directly is looked upon with suspicion and met with resistance. But when said and done by a fellow employee, it is taken easily. Thus a change agent plays a crucial role in bringing about the transformation in the enterprise without too much effort and resistance.

Help employees to contribute to the transformation process: Transformers, who could also be called managers, need to bring in a climate wherein employees are encouraged to participate in the transformation process and give them a feeling that the transformation has happened because of them and not forced upon them.

3.9.3 Constraints Related to the Process
It may be defined as a set of actions and procedures followed to get a desired result (which may be a product or a service). It is not uncommon for an enterprise to have a number of processes running simultaneously to get the desired results. These processes are prone to mistakes and reformed processes are sure to have gaps for improvement and the changes that need to be carried out in the processes are very likely to be faced with several hurdles and challenges in terms of implementation, transformation etc. Some of the key process parameters where problems and limitations arise in small industries are as follows.

Process capacity: The capacity of the process to perform would be limited as most industries have processes with limited capacities leaving not much scope for
changes in capacities. The main reason attributed is lack of finance or limited finance while the enterprise was established. It has also been noticed that most small enterprises restrict their working hours to the day starting at 8.00 a.m. or 9.00 a.m. and ending by 5.00 p.m. This leaves a huge potential for increasing capacities by putting in working hours during other times that are available through overtime and extra shifts. The most neglected or the thing that small enterprises do not think of often is outsourcing. This can be an effective and probably the easiest solution for increasing capacities. The secondary means are to improve efficiencies and spend on buying additional machinery and create infrastructure to add capacity.

**Process capability:** The capability of a process is defined as a comparison of the process output with specifications provided by the customer. The determination and analysis of the capability of the process helps to compare the specification of the process to the output of the process and check if the process can meet the specification of the customer from a statistical point. A capable process is generally stable and does not keep changing and can fit with the specification of the customer with some extra room to accommodate needs. In other words it means that there is less variation in the process and hence more capable.

**Production loss:** This is considered to be one of the biggest losses in terms of production and hence we need to look at the “six big losses” in production terms. These losses have their origins at Total Productive Maintenance (TPM). Seiichi Nakajima identified the six big losses in 1971 when he was with the Japanese Institute of Plant Maintenance. He stressed that the responsibility of maintenance needs to be with every single employee and propagated the concept that maintenance is best done in small groups as activities with the goal of maximizing equipment effectiveness. In the six big losses, productivity loss is categorized from the equipment perspective and they align directly with Overall Equipment Effectiveness (OEE) and intricate details about OEE losses.
The categorization of the six big losses is given as under in figure 3.6.

<table>
<thead>
<tr>
<th>Overall Equipment Effectiveness</th>
<th>Recommended Six Big Losses</th>
<th>Traditional Six Big Losses</th>
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<tbody>
<tr>
<td>Availability Loss</td>
<td>Unplanned Stops</td>
<td>Equipment Failure</td>
</tr>
<tr>
<td></td>
<td>Planned Stops</td>
<td>Setup and Adjustments</td>
</tr>
<tr>
<td>Performance Loss</td>
<td>Small Stops</td>
<td>Idling and Minor Stops</td>
</tr>
<tr>
<td></td>
<td>Slow Cycles</td>
<td>Reduced Speed</td>
</tr>
<tr>
<td>Quality Loss</td>
<td>Production Rejects</td>
<td>Process Defects</td>
</tr>
<tr>
<td></td>
<td>Startup Rejects</td>
<td>Reduced Yield</td>
</tr>
<tr>
<td>OEE</td>
<td>Fully Productive Time</td>
<td>Valuable Operating Time</td>
</tr>
</tbody>
</table>

**Fig. 3.6** Six Big Losses (source: www.oee.com)

With the availability of information of the above it would be helpful for the enterprise to align with improvement initiatives and assist in easy identification of countermeasures that are effective in reducing the equipment based losses.

### 3.9.4 Constraints Related to Technology

Technology in a manufacturing scenario may be defined as the collection and application of scientific knowledge with the help of tools, techniques, skills, methods and processes for working in an enterprise to produce goods and provide services to fulfill the objectives of the enterprise in an easy and effective manner. Small enterprise need to adopt technology and overcome the difficulties faced by them to stay abreast of competition, survive and grow in the long run, improve their quality of products and production and provide their services and products in a cost effective manner. There are several variables that have an effect on the adoption of technology such as e-commerce, computerization, inter organizational systems, automation etc. The quote “it is easier said than done” holds true very much for the small industries. The concept of advanced technology or upgradation is almost nonexistent in the small industry sector. Every small industry would want to use the latest technology but not many do it and the reasons cited are as follows.
**Lack of finance:** Small industries run on small budgets and the access to large sums of money is very less compared to the large industries. A study concluded that SMEs in India are more likely to have debt burdens as compared with their large counterparts (Bandari, L. and Bajpai, P., 2005). For decades, the most dominant constraint facing the small enterprise sector has remained access to loan finance, adequately and timely (Das, K., 2008). As per the opinion of Giovanni and Maria (2013) cost is mostly related to technological factors such as training, maintenance costs, information systems and software. Small enterprises find it hard to cope with such costs and prefer not to go ahead with technological advancements (Giovanni, F., and Mario, A., 2013). According to Ritchie and Brindley (2010) there are three barriers in adoption and the use of technology by SMEs. They are external pressures such as requirements by partners and competitiveness from other players. The next barrier is organizational readiness and the last is perceived benefits of the technology (Ritchie, B., and Brindley, C. 2010). The point is clear from the words of Iacovou et al. (2009), according to whom, SMEs need more financial support than big companies because of their structural characteristics such as: weakness of market power, lack of experience, etc. (Iacovou, C., and Benbasat, D. 2009). The lack of finance stands as a hindrance to adoption of new technology and it is evident from the statement of Dixon et al. (2012) who observed that cost of technology is an important influencing factor in the adoption and use of technology by many SMEs. The authors argue that SMEs will less likely adopt and use technology when its initial set-up cost is high (Dixon, T, et al., 2012).

**Lack of awareness:** The awareness of the availability of technology is posing to be one of the biggest barriers to the implementation of technology. On a general note, many small enterprises seem to be unfamiliar with the latest available technology. Lack of awareness and cost are critical elements in the general adoption and use of technology for SMEs (Vilaseca, J. (2013). Lack of awareness contains numerous factors, which includes uncertainty of technology benefits, lack of guidance and unfamiliarity of technologies (Premkumar and Roberts, 2010). Further the external environment surrounding the enterprise which includes customers, suppliers, government, market etc. are factors that bear a huge influence on the adoption and use of the latest technology. The lack of awareness about existing technologies acts as a deterrent towards adopting latest and advanced technologies. A study by Mingaine
(2013) founded that there is limited number of employees with appropriate technical knowledge to adopt and use new technologies.

**Lack of support:** One among the most common reasons identified is the lack of support which results in lack of effective adoption of new technologies by small enterprises. Lack of capital support from banks and lending agencies, unreliable electricity supply, lack of technical support, lack of proper infrastructural facilities, lack of technical knowhow, negative attitude towards technology, non-availability of proper after sales service from equipment providers and lack and delays in governmental support and subsidies to encourage the adoption of technologies are some of the hurdles that need to be overcome. These can be overcome by establishing proper governmental policies, use of captive and alternative power, better infrastructural facilities by the government and industry associations etc.

**Inability to hire trained personnel:** Another reason is the non-availability of qualified personnel to use the technology or the inability of the enterprise to hire people who can work on the advanced technology machines. The obvious reason cited for inability to hire talent is the inability to generate enough funds to pay them the expected salary which in turn is attributed to the size and the turnover of the enterprise. Another factor that hinders the process is that it has been found that the enterprises have been able to identify employees who could be trained on the technology or even hire fresh talent who could be trained for the new technology. But these people who are trained reach out for better prospects and leave the enterprise as soon as they have learnt the use of the new technology.

**Fear of failure of new technologies:** Huge sums of money are at stake while the enterprises invest in new technologies and they can never take a chance. Given below are some of the few questions that arise in the minds of the small entrepreneurs.

- What if the technology fails?
- What if the enterprise cannot repay loans for the investment on new technology?
- What if the enterprise does not get trained personnel to use the technology?
- What if the person who has been trained leaves the organization?
• What if the enterprise does not get the return on the investment on the technology?
• How effective and remunerative would the new technology be?
• How long would it take for the technology to get obsolete? or Would it need upgradation often?

These questions give rise to fear of implementing the technology especially when money is required to be invested in the technologies.

3.9.5 **Constraints Related to Enterprise Resource**

Resource may be defined as a source of supply of requirements of an enterprise that support in accomplishing the stated goals of the enterprise. Resources play a critical role in the survival, growth and development of an enterprise and several authors and entrepreneurs have mentioned that resources play an important role in maintaining a competitive edge and developing specific competencies to overcome the obstacles on the way to growth of the enterprise.

Resources act as the foundation to achieve the enterprise goals and also act as the basis for survival, growth and profitability. The capabilities of an enterprise are judged by the resources of the enterprise and the capabilities determine the competitive advantage of the enterprise. Resources play a major role in the improvement of businesses in terms of performance. The resources can be in the form of employees and their skills, capital, electricity, infrastructure, machines, tools, equipment, brand name, patents and a host of other things that support in providing a service or manufacturing a product. Strong resources support successful strategies and strategies help in the creation of competitive advantage, while competitive advantages results in survival and growth of an enterprise.

**Types of resources:** Resources are varied across an enterprise assuming several forms. Hence, in order to overcome the limitations of the resources, it is important that we know the different types of resources. They are broadly classified as tangible and intangible resources. A general list of tangible and intangible resources is given below.
General list of tangible resources:

- Financial / capital resources
- Physical infrastructural resources (Land, building, electricity, water source etc.)
- Production resources (Machines, equipment, tools, tackles, raw material etc.)
- Organizational abilities (Structure, processes etc.)

General list of intangible resources:

- Intellectual resources (Patents, trademarks, copyrights etc.)
- Innovation resources (Employee skills in areas of research, creativity, etc.)
- People skills (Skills, knowledge, experience, attitude, Marketing, selling, communication etc.)
- Reputational resources (Brand image, Brand name, Customer perceptions, supplier perceptions etc.)

**Effect of resources on an enterprise:** Resources of an enterprise are meant to add value to the existing value possesses by it. The resources must be used to add further value and processed to help the enterprise grow. The resources act as inputs for improving the capabilities of an enterprise which in turn lead to enhanced competitive advantage of the enterprise. Resources have a huge impact on the success of any business and approach of operations and the key to business success lies in managing and utilizing the strengths of the internal operations. Financial resource takes prime importance because it is considered to be the enabler of opportunities. It can help buy all that is required for the successful running of the enterprise and also help buy supplementary resources required for the growth and sustenance of the enterprise. Growth of an enterprise is attributed to additional locations, better market capitalization, more products, more services, more employee hiring etc. and all these require financial backup.

Physical infrastructural resources take the second place in terms of importance with reference to an enterprise. These comprise of physical resources such as land, building, road access, nearness to bus stops, rail access, airways, waterways, nearness
to electric power source, availability of water and so on. These resources when available in abundance are sure to promote and help in the transformation initiatives taken up by the enterprise. They stand up to help in activities such as capacity addition, product changes, growth, expansions, diversifications etc.

Production resources occupy the next immediate place which comprises of machines, equipment, tools, tackles, raw material etc. and play a significant role in the production activities of the enterprise. The non-availability of such resources would result in decreased production, inability to cater to customer demands, defective products, increased defects, reduced flexibility and many more.

Organizational abilities stand next in the line which comprise of the organization structure, general as well as unique processes, employee culture, trainings undergone etc. These resources play a vital role in increased productivity, survival, good employee morale, reaching the organizational goals quickly; quicker and easier execution of strategies strengthens the enterprise and increases the efficiency of the plant.

Intellectual resources which comprises of unique intellectual property such as patents, trademarks, copyrights etc. that help the enterprise is creating a monopolistic market until competitors come in with similar products. They help in creating a demand for the products in the market and result in generation of revenue from various areas which will take the enterprise to greater heights.

Innovation resources stand next to the above. These comprise of employee skills in areas of research, creativity, etc. The presence of employees with extra or special skills is a boon to any enterprise which is very likely to help in increased production, better productivity, increased efficiency and superior problem solving capabilities. Further the creativity in an employees could result is better processes, better products, better services and new products, processes and services which could add to the bottom line of an enterprise.

People skills comprise of acquired set of skills, knowledge and experience coupled with positive attitude and communication aided with marketing skills, selling skills etc. These skills help in the growth and sustenance of the enterprises through the
application of the skills, knowledge and experience to develop new products and processes and create demand for the new products developed.

Reputational resources such as brand image, brand name, customer perceptions, supplier perceptions etc. help the enterprise to market products easily and create rapport with both customers and suppliers as well. These are intangible resources that add value to the products produced as well as the enterprise enabling easier access to financial resources and infrastructure contributing to the growth of the enterprise.

The non-availability or lack of access to the above mentioned resources is very likely to hamper the growth of the organization. The process of entering new markets would be faced with hardships. And the sustenance of the organization would be a herculean task. Further it would be marked with hurdles in the transformation process. Hence there is a dire need to overcome the constraints posed by these resources. On a general note as compared to larger firms small and medium enterprises (SMEs) are typically regarded as resource-constrained (Fujita, M., 1995). The lack of resources is a sure setback for enterprises preventing it to transform, grow, prosper and sustain in the due course. Therefore it needs to be understood that the resource have to be overcome in an effective and efficient way for the transformation and development of an enterprise aspiring to grow and sustain.

Tangible resources and intangible resources play a major part in the transformation process and the battle of overcoming the lack of resources is relentless. It is well known that with limited resources, it is going to be hard and difficult to move ahead but we also need to understand that it is not impossible. Hence possible ways to overcome the resource constraints are mentioned below.

Finding suitable alternatives: Finding an alternative to the constrained resource seems to be the most logical and easiest way to overcome the limitation. Financial resource is the scarcest resource for any SME. While the SMEs do not have the ability to garner finance, it would be easier for them to rent out or lease resources such as land, building machines, equipment etc. as an alternative to buying the resources. The lack of other resources like water and electricity could be tackled by
buying water from outside, through use of generators or erecting solar panels, windmills etc.

**Outsourcing:** Probably the most commonly used methodology to overcome limitations of resources by many industries is outsourcing, where we can offload our work to others and get things done quicker, easier and cheaper. This can be a great way to solve a problematic constraint. This comes with the added advantage of the experts in the domain to take care of the situation by focusing on the solutions that too at a relatively lower cost.

**Cope with resource constraints:** Many a times we may have found that overcoming the constraint may not be possible at the moment hence the best available way is to adjust and cope with the situation for the time being until we gain the time or the resource to overcome the phase. The inabilities are likely to align themselves and fall in place over a period of time as the process progresses.

**Strategic planning:** The design of an action plan to overcome becomes a necessity to get rid of the limitations posed by resources. Strategic planning can help organizations develop organizational adaptability to environmental changes, improve organizational decision making, set up organizational development priorities, and develop and enhance relationships with key stakeholders (Allison, M., and Kaye, J., 2005). Hence strategic planning would help in overcoming the shortcomings of resources.

**Creativity:** It is said that “Necessity is the mother of inventions” and the dire need for resources have many a times led to discoveries and inventions. Creativity plays a key role in such activities. Out of the box thinking and a completely out of the way thinking are key to overcoming the constraints posed by resources.

**Effective resource management:** Bad or inefficient management of resources is a prime reason for the depletion or lack of resource. Hence effective planning and execution through effective management of resources would play a pivotal role is sustaining the resource before it gets depleted.
**Forecasting:** With the available past data if the enterprise could predict the shortage of resource, there could be no better boon to the enterprise. The forecast would help the enterprise to anticipate shortfalls and make arrangements to overcome them or make alternate arrangements to overcome the limitations posed by the resource unavailability. Hence it needs to be understood that overcoming obstacles, limitations and constraints with reference to people, process, technology and resources plays a vital role in the transformation activity.

3.10 Transform

3.10.1 Introduction

Enterprise transformation concerns change, not just routine change but fundamental change that substantially alters an organization’s relationships with one or more key constituencies, for example, customers, employees, suppliers, and investors (W.B. Rouse, 2005). In understandable words, it is the process of taking an enterprise from its current state (may be dilapidated) to a desired future state based on the goals, vision and mission of the enterprise. Transformation is the mantra to surge ahead of competition in the market. Enterprise transformation is driven by the voids, hollows and blanks created by the current process. These needs to be filled and necessary changes are required to create out the deficiencies and voids present in the system. The” sentramet” is a methodology that has been created for the small enterprises to take the small enterprise to its desired future state. The transformation phase is the actual implementation phase that involves three major components namely prepare, plan and implement to transform. These components are explained below.

3.10.2 Prepare for Transformation

The transformation process cannot take off just like that. There needs to be a setting up of the foundation to build upon the transformation activity. At this stage we need to ask ourselves how ready are we to begin the transformation process? After making a thorough assessment of our readiness for the execution we can begin the transformation planning and execution process. The formulation of a strategy for the transformation is critical of any transformation program which involves a set of activities to be done systematically which would support both the enterprise and the
employees alike to prepare and plan for the transformation and accept and benefit from the transformation activity.

Preparation for transformation is one of the major elements of a transformation effort. Since it is the management of the enterprise which happens to be a single person, the proprietor or just a few who are partners who decide to go ahead with the transformation process. Here is a list of things at the preparatory phase to be done for the transformation to happen smoothly

- Garner support form employees for the transformation to happen
- Assess the feasibility and financial viability of the transformation process.
- Identify priorities related to the transition
- Initially the process would begin with the selection of the people who would be involved in the transformation process
- A process owner who would have the authority to make changes in the processes for their betterment would be selected and appointed
- Decide on the processes that need transformation
- Decide on the time frame within which the transformation process needs to be executed and completed
- Set up the infrastructure to adopt and adapt to the technological changes and requirements of the activity.
- Create the information technology requirements to enable enterprise transformation
- Allocate funds which is the financial resource needed for the process
- Reserve and allocate all the tangible and intangible resources that would be required for the enterprise transform process
- Provide required and adequate training for the people handling the enterprise transformation process
- Educate all the employees about the process and market the benefits that the enterprise would attain through it
• Sell the benefits of the transition to the employees
• Also explain to the employees how the transition would happen and when it would happen and when it would be completed
• Make arrangements to dispel the fears that are likely to arise in the minds of the employees
• Expect resistance from a section of the employees and make arrangements to overcome resistance from the employees

3.10.3 Plan for Transformation

This is considered to be the most important phase of transformation which is the pre-execution phase of the activity. It is said that well planned is half done. Hence planning for the transformation activity gains critical importance in the transformation project. This phase is not just a set of activities proposed to be carried out but is a phase where we have to strengthen our base and lay a strong foundation for carrying out the transformation. The enterprise needs to be competent to cater to the demands of the market, be ahead of their competitors and also fulfill the demands and expectations of their employees. Further, the transformation would need to follow a certain set of rules and abide by certain regulations which would mean that boundaries are set and how to behave inside the enterprise to have a successful transformation, are also decided. The expectation of the transformation is that it needs to be a long lasting and sustainable transformation. For this, a strategic action plan needs to be in place. The enterprise need to be revitalized to fulfill both the present and future demands entrusted upon it. Enterprises must have competent people, competent processes, the latest competent technology and all the resources required to complete and execute the transformation process.

The enterprise needs to invest in human capital development and invest in skills that are required not just for the present but also for the future and uplift the enterprise’s performance abreast of the current status. A note of the lessons learnt all along would be of great help and benefit the enterprise in not reinventing the wheel in many cases. This is a time of unprecedented challenges and at the same time opportunities too. The enterprise needs to chalk out strategies to enhance the
transformational efforts. The transformation plan acts as a critical tool for a broader transformational strategy keeping in mind the feasibility of the transformation goals in the long run and also to implement initiatives strategically to reach the envisaged goals. It needs to be noted that the transformational plan should help set goals and have expectations that are realistic and goals that are feasible to achieve within specified timelines.

The transformation plan refers to a document created that contains a set of actions that would serve as a guide to implement the proposed actions to achieve the goals to reach the desired future state from its current state. Towards the end, the enterprise transformation plan would serve as a reference and ready reckoner to transform the enterprise.

**Create objectives of the transformation:** The objective set the operational transformational standards for the enterprise. These objectives need to be SMART-Specific, Measurable, Attainable, Realistic and Tangible and agreeable to the employees who are involved in the transformation process. Further set clear, concise and realistic targets and indicators that will keep the transformation process and progress on track to achieve them. Also communicate clearly the targets and the objectives to create a good understanding of the same and the end result that the transformation process is likely to yield.

**Resource planning:** A comprehensive list of all the resources that would be required to carry out the transformation process needs to be listed out and arranged for. Further they need to be grouped and a team headed by a team lead need to be identified to gather and provide the resources as and when required without any hassles while the transformation takes place.

**Creation of transformation team:** Once the resources have been identified and responsibility given to the team lead, we need to create a team that comprises of members who will take responsibility and represent a line of system or operation and be capable of seeing the transformation process right from planning to completion. They should also act as the links between the employees and the management.
**Documentation:** Data is like God for transformation; hence a team needs to be created for documenting the transformation process. This process will include the objective of the process, the various problems encountered during the transformation, risk assessment and mitigation and this process needs to be accompanied with a feedback and reporting mechanism to know the various problems faced while implementation takes place.

**Safety planning:** A team for the safety of the employees and resources need to be created to take care of the welfare of everything and every being in the enterprise. Various hazards have to be identified and methods to tackle the hazards need to be in place. Plans must be in place for all types of hazards viz.: predictive, proactive and reactive.

**Setting the stage:** The enterprise has to give heed to the entire environment in which it operates to establish a relationship with various departments of the enterprise as a whole. The enterprise must be in a position to gain the ability to resolve conflict at all levels. It needs to make an assessment of itself and provide knowledge about the transformation process and training to the employees who take part in the process of transformation. The process needs to include participation in formal training, studying a variety of books/articles, and visits to enterprises which have transformed.

**Conducting the sessions:** The planning sessions are generally plagued by several logistical issues. A lot of thought needs to go into answering the following questions.

- Who has to attend the trainings?
- Who will take the leadership for the process?
- Who will be the facilitator?
- Where will this happen?

Once the answers are obtained, everyone who is involved in the transformation process need to be given their responsibilities, preferably in written so that they are clear in understanding what they need to look and ask for from their colleagues, seniors and subordinates.
Top level executives need to ensure the progress and also that the changes that need to be implemented are communicated clearly and on time to the people who are involve in the process and at the same time keep all the employees informed of supposedly changes and the enterprise's long and short term strategic planning efforts.

Planning takes the front seat for transformational efforts as it is critical to integrate the change process into daily work for which right strategies need to be chalked out. It will also force the top management to sit back and make an assessment of what the current scenario of the enterprise is as of today and where it needs to be in the near future which will force them to decide the timeframe too. It will also help them in analyzing the various tools and processes and resources that would be required to carry out the transformation process. Over a period of time it will make them revamp and reexamine their strategies, policies, systems, procedures and identify and reinforce the necessities required for the success of the transformational efforts.

3.10.4 Implementation of the Sentramet

This is almost the last phase of transformation and it plays a vital role. Not all the transformational efforts yield results to become successful. In fact a majority of the efforts either fail after implementation or stop half way through due to various factors and reasons. Some processes may be implemented all at once while some may need to be implemented in stages. The processes implemented in stages are a little hard and slow to implement as they require several steps pre and post implementation such as testing, evaluation, analysis, adjustments, refining, changes etc. and then standardized to be expanded to other areas. Further it should be seen to it that the process does not go too fast to eat up the resources and planning times as it would result in lack of boundaries and scope during the period of transition and result in failure of implementation.

**Case for transformation:** No one would be interested in changing or mending their way of working without having a reason for the transformation behind them. Hence it becomes important that we have a case for the transformation. It could attributed to several factors such as data report on defect rates, customer satisfaction, employee satisfaction survey, variation, financial loss etc. Usage of data is the best means to achieve the improvements in transformation projects.
Considerations during implementation: Implementation of transformation across the enterprise is not an easy task to accomplish. The implementation team needs to ensure that the plan, resources, and key personnel are all prepared well to execute the implementation. Robust communication would enhance the sharing of information between all departments as the transformation process begins and it is sure to reveal a better and efficient process.

Success measurement: It is important for us to know the amount of progress that we have made towards achieving our goals and targets that we desired and planned for. If we do not have a system in place to measure our progress, we would not know where we stand and we would not know where and what to improve, thus limiting our transformational progress. Given below is a list of ways to acquire the required information.

- Create awareness among employees, the presence of a feedback system.
- Create awareness among employees the presence of a reporting system.
- Collect data with reference to the transformation plan
- Ensure that training programs provided the required information, quality and capabilities to the employees.
- Assess communication capabilities, accuracy and timeliness of the information
- Assess the accomplishment of objectives
- Assess the level of achievement of intent of transformation
- Conduct surveys and interviews to check the employee comfort levels, employee attitudes and gather information about the physical, mental and emotional health of the employees involved in the process an also the employees undergoing the transformation process

Performance evaluation of transformation process: we need to have an eye on the entire transformation process to be able to measure the impact it has had on the enterprise and to evaluate its success. The employees and the management need to be informed about how well the transformation process is progressing, the results
obtained so far and which objectives have been met. Once it is understood where they are standing it would be easy for them to know if any further work needs to be done.

**Barrier removal:** While implementing the transformation process, employees are sure to encounter problems and barriers which may be due to resources or other employees, lack of training, non-availability of machines, equipment etc. Hence it is to be seen that such small limitations and hurdles be removed and cleared for the successful and smooth transformation.

**Follow up:** It is advisable to have a good follow-up after the implementation has taken place and make an assessment of how the transformation is doing and if the transformation process gave the results that were expected of it. In rare cases the transformation may even exceed the desired target but generally they fall short of the desired results hence it would be necessary to accept it and make arrangements to further it to reach the desired levels of transformation.

**Celebrate:** Once the desires results are achieved it would be time to celebrate after all the hardships undergone all along. Celebrating even small transformations would result in building momentum for larger transformations and that would make the employees to want to take part in the transition process.

When everybody in the enterprise gets to know why the transformation was needed and what the transformation has yielded, they would feel good and proud to have been a part of the implementation and that would allow for better chances for successful transformation process implementations in the near future.