CHAPTER 3

CONCEPTUAL FRAMEWORK FOR TECHNOLOGY MAPPING IN ERP FOR BUSINESS MANAGEMENT IN INDIAN PUBLISHING INDUSTRY

This chapter presents the conceptual framework for technology mapping in ERP for business management in Indian Publishing Industry.

3.1 INTRODUCTION

The need of ERP is growing in a rapid phase one side but more than half of the implementations result in failure on other side. Many companies passionately go for the ERP with huge expectations, facing lot of real time issues to make it as grand success. Very recently, a term called misfit is often used by the ERP Analysts and Organizations. Misfit is the terminology, representing the improper mapping of information technology with respect to business requirements. Misfit results as ERP is the most complicated system to handle. Hence, the solution for this concern has emerged over the years. Scholars from different parts of the world presented articles on the reasons for misfit and tried to sort out the issue. The management process, supportive process and operational process are the most important processes in the technology mapping and micro analysis of important elements is required. All the components of a Management process, Supportive process and Operational process separately which have to be mapped with technology to sort out misfit issues. This paper synergizes the various components viz., management process, operational process and supportive process of business by mapping with the technology paths via transactional database, business intelligence, web services, documentation and workflow management. The corporate governance and strategic management are considered as very critical implicational areas of ERP where the possibilities of Misfit
can occur. The SWOT matrix elucidates the compatibility and competency of the organizations to make the business solution a proper fit. The strategy formulated should have a split up in it as corporate level, business level and functional level then only the uniformity will be occurred in applying the technology. The strategy communication and its methods are sorted out by the researcher. To have successful implementation of the formulated strategy, this research emphasizes Scott Edinger three Cs (Clarify, Communicate and Cascade). To evaluate the strategy, the six step decision making process SISCIC has been discussed in this research. The Operational process comprises three important areas in it viz., Purchasing, Manufacturing and Sales and Marketing. The influential factors for each process have been explained and the impact in Organizational performance also pointed out. The supportive process includes Human Resources process, Accounting process and Technical support. The mapping of Technology for these processes is very important to have successful ERP implementation in the Indian Publishing Industry. This research describes the user group approach of ERP and its misfit issues.

3.2 BUSINESS

Business is an organization or economic system where goods and services are exchanged for one another or for money. Every business requires some form of investment and enough customers to whom its output can be sold on a consistent basis in order to make a profit. Businesses can be privately owned, not-for-profit or state-owned.

3.3 BUSINESS SOLUTION

Development of an end-to-end business solution mandates utilization of methodology that does not focus on departmental solutions or system (product) implementation. It needs to have a user-centric focus on implementing a manageable number of complementary technologies that support appropriate segments of the various key end-to-end business processes. These key business processes need to focus on adding value to the customers and incorporate a business strategy to expose
required processes and information to customers and business partners. This information needs to come from the effective planned operational systems.

3.4 ERP SYSTEM

Actually the success percentage of an ERP system is the percentage of mapping between business and business solution. All the business solutions may not require integration of all the departments but integration can be a part of business solution.

Researcher defined ERP system as a software system which has to provide complete business solution to an organization.

3.5 COMPONENTS OF BUSINESS SOLUTION

A good business solution is the mapping between business process and technology. Any business process in a publishing industry can be divided into three categories.

![ERP System Diagram](image-url)
1. Management Process
2. Operational Process
3. Supportive Process

3.6 MANAGEMENT PROCESS

Management process is a process of planning and controlling the performance or execution of any type of activity. Corporate governance, strategic management and the decision making are the key three components of Management process in the publishing Industry. The purpose of a management process is to ensure a disciplined and consistent approach to analysis and decision making. They facilitate the use of a logical thought process that is consistent with the objectives of the firm.

3.6.1 Corporate Governance

Goal of an ERP business solution; has to provide complete, accurate, timely information flow system and produce much standard information for inside and outside stakeholders, making the management and stakeholder levels more transparent. At the same time, ERP implementation provides accurate and timely guarantee of information that enterprises disclose (Zhang Jidong 2010)

3.6.1.1 The role of Corporate Governance in a Business solution in the publishing Industry

ERP solutions are actually business transformation projects, rather than straightforward large software development projects (Gowigati & Grenier 2001), (Holland & Light 1999) and their implementation has to change work processes and organizational structures, together with the daily activities of the majority of staff. Because the business transformational nature, their failure is more likely to be due organizational, social or even political reasons that than to technical or software based causes (Willcocks and Margetts 1994). Top management support is also important in each phase of development, from planning through project implementation and enhancement (Parr and Shanks 2000). Governance is about providing strategic
direction, planning and controlling projects and people, and is delegated to project leaders (project governance), those responsible for IT (IT governance) and senior executives (organizational governance) by the Board of Directors.

**Figure 3.2 Factors influencing Governance**

<table>
<thead>
<tr>
<th>Organizational</th>
<th>Information Technology</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Commitment to Change</td>
<td>2. Adequate visibility of the project</td>
<td>2. Request realistic and adequate budget</td>
</tr>
<tr>
<td>3. Organizational fit with ERP</td>
<td>3. set the standards of service</td>
<td>3. adequate visibility of the project</td>
</tr>
<tr>
<td>4. Development of Management control Structure (MCS)</td>
<td>4. project ownership and lines of authority for decision making</td>
<td>4. Small scope and scale project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. standardized specifications</td>
</tr>
</tbody>
</table>

### 3.6.2 Strategic Management

A strategy is integrating organizational activities and utilizing and allocating the resources within the organizational environment so as to meet the present objectives. While planning a strategy it is essential to consider that decisions are not taken in a vacuum and that any act taken by a firm is likely to be met by a reaction from those affected, competitors, customers, employees or suppliers.

Ben Tregoe and John Zimmerman define strategy as, **“the framework which guides those choices that determine the nature and direction of an organization”**.

Strategic management is an ongoing process to develop and revise future-oriented strategies that allow an organization to achieve its objectives, considering its capabilities, constraints, and the environment in which it operates (Formulation Rex C. Mitchell, 2003). A key function of strategy is to provide coherence to the organizational action.
3.6.2.1 SWOT Analysis

SWOT matrix is an analysis which is used to evaluate the strengths, weaknesses, opportunities and threats of an organization’s strategy. It is a structured planning method. Strength and weakness are the internal factors and opportunities and threats are the external factors. This is a tool for audit and analysis of the overall strategic position of a business environment.

![SWOT Matrix Diagram](image)

**Figure 3.4 SWOT MATRIX**

3.6.2.1.1 Strengths

This internal factor normally represents the organization’s capabilities. Strengths can be tangible or intangible such as product, service, man power, financial power and the like.
3.6.2.1.2 Weaknesses

This internal factor normally represents the organization’s obstacles towards achieving its objective. Example for weakness of an organization can be its quality, huge debts, insufficient man power, location and the like; but weakness of an organization can be controllable.

3.6.2.1.3 Opportunities

This external factor normally represents the planning and execution new strategies that can be more profitable to the organization presented by the environment. Opportunities may be from market, competition, demand, government and technology.

3.6.2.1.4 Threats

This is also an external factor that represents the condition which is hazardous to the organization’s reliability and profitability. These threats are uncontrollable. Examples for threats are increasing competition, market, unannounced power cuts, wars and the like.

3.6.2.2 Strategy Formulation

The appropriate steps are needed to realize organization’s mission and there by achieving the vision of the organization. There are three aspects or levels of strategy formulation, each with a different focus, need to be dealt with in the formulation phase of strategic management. The three sets of recommendations must be internally consistent and fit together in a mutually supportive manner that forms an integrated hierarchy of strategy. (Strategy Formulation Rex C. Mitchell, 2003).
Strategy Formulation

Corporate level  Business or competitive  Functional

Figure 3.5  Strategy Formulation

i) CORPORATE LEVEL STRATEGY

✓ Deals with broad decisions about the organization’s scope and direction.
✓ Directs achieving stability to varying degrees of growth.
✓ Directs portfolio of lines of business
✓ Directs allocation of resources and manage capabilities

ii) BUSINESS OR COMPETITIVE LEVEL STRATEGY

✓ Involves deciding how the company will compete within each line of business (LOB) or strategic business unit (SBU).

iii) FUNCTIONAL STRATEGY

✓ Refers localized and shorter horizon strategies which deal with how each functional area and unit will carry out its functional activities to be effective and maximize resource productivity

3.6.2.3 Strategy Implementation

The translation of formulated strategy in line with the organization’s mission and goals is the function of strategy implementation. The strategy implementation is only successful when there is stability between strategy and the organizational dimensions such as organizational structure, reward structure, resource-allocation process, etc.
To successfully execute an organization’s strategy, it must be the focus of every person in that organization (Forbes 2012). Scott Edinger, derived three Cs to implement a strategy successfully.

![Strategy Implementation Diagram](image)

**Figure 3.6   Strategy Implementation**

### 3.6.2.4 Strategy Clarification

First step of the implementation is making the people to understand what role they are playing in the process. If there is no clarification in the strategy, implementation will not meet out the organization’s expectation. Scott Edinger states that “All too often, strategies are expressed as high-level statements that resonate with board and executive levels but fall flat with mid-level and frontline personnel”.

![Strategy Clarification Diagram](image)

**Figure 3.7   Strategy Clarification**

(James Allen and Darrell Rigby (Harvard Business Review Feb 2009) on Strategy Clarification)

### 3.6.2.5 Strategy Communication

The key of implementation process is the most powerful communication of the essence of the strategy. Scott Edinger says, “Discussions need to occur at each
level, translating the organization’s strategy to understandable and contextualized sound bites, which connect to the work of individuals. In short, communicating the strategy provides the “connective tissue” throughout the organization that helps people understand the big picture”.

Table 3.1 Influencing factors in Strategy Communication

<table>
<thead>
<tr>
<th>Communication Methods</th>
<th>Influencing Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Simple but meaningful</td>
<td>Strategic oriented information to help employees connect their day to day efforts towards the organization’s mission and goal.</td>
</tr>
<tr>
<td>2. Build behavior on market and customer insights</td>
<td>Encourage the team to develop department specific responses and generate new ideas.</td>
</tr>
<tr>
<td>3. Inspire</td>
<td>The content should demonstrate progress against goals, showcase benefits to customers, and be presented in a way that gets attention and signals importance</td>
</tr>
<tr>
<td>4. Educate</td>
<td>To educate your teams most effectively on the validity of your strategy and their role in successful execution, make sure you provide job-specific tools with detailed data that they can customize and apply in their day-to-day responsibilities</td>
</tr>
<tr>
<td>5. Reinforce</td>
<td>Need to repeat the message in order to increase understanding, instill belief and lead to true change overtime. These reinforcing messages need to come in a variety of tactics, channels, and experiences and I've highlighted some approaches below. Ultimately, they serve to immerse employees in important content and give them the knowledge to confidently connect to the strategy</td>
</tr>
<tr>
<td>6. Integrate</td>
<td>Integrate regular communications into employee's daily routines through detailed planning against the messages mapped in Inspire/Educate/Reinforce framework.</td>
</tr>
</tbody>
</table>

(Eight Ways to Communicate Your Strategy More Effectively by Georgia Everse HBR Aug 2011)
3.6.2.6 Strategy Cascade

The bulk of the work in implementing strategy is done at this stage. It is the team meetings, the one-on-one coaching, the process improvements, the customer meetings, and the responses to the market that, in alignment with an organization’s strategy, can make a tremendous difference for an organization.

Jeroen De Flander states that “when cascade company’s strategy, break down the objectives into smaller chunks for the next organizational level. The process stops at the smallest unit level – often teams. In the end, the size of organization will define the size of the cascade”. (http://jeroen-de-flander.com).

1. Macro Alignment
2. Micro Alignment

3.6.2.6.1 Macro Alignment

Macro alignment is a process that everything from the level below (strategy, initiatives, objectives, etc.) should add up exactly to the level above, without any overlaps. (http://jeroen-de-flander.com) The challenges of macro alignment are the complex matrix of the responsibilities and the strategy execution accountabilities.

3.6.2.6.2 Micro Alignment

Micro alignment is the process that needs to balance goals and perspectives. The four most traditional perspectives are people, finance, internal process and the customer.

Apart from balancing the macro and micro levels, select key performance indicator (KPI) to track the objectives and define appropriate targets.

3.6.2.7 Strategy Evaluation

“Strategic evaluation is a way for businesses to evaluate the health and productivity of their company and their future endeavors. Typically, strategic
evaluations attempt to see past the obvious factors that influence short-term plans, and seek a more-dynamic study of the trends that will dictate the future success or failure of the company. Like a chess match, strategic evaluation succeeds when companies are able to accurately analyze and predict several moves ahead into the future, in order to best tailor their present policies” (Herbert Kanter http://www.ehow.com/info_7819558_strategic-evaluation.html). Strategic evaluation emphasizes that evaluation design decisions should be driven by the strategic value of the information they will provide for solving social problems.

The Anderson school of UCLA states four general principles of strategy evolution are Consistency, Consonance, competitive advantage, and feasibility. If the strategy fails to meet any one of the above criteria, there should be a change in the strategy.

3.6.2.7.1 Consistency

The strategy must not present inconsistent goals and policies. But in reality many strategies have been explicitly formulated but have evolved over a time lack of justification. Even strategies that the result of formal procedures may contain compromise between two power groups.

3.6.2.7.2 Consonance

An adoptive responsive to the external environment and to the critical changes occurring with the environment represent consonance of the strategy.

3.6.2.7.3 Competitive Advantage

The strategy must provide for the creation and maintenance of a competitive advantage in the selected area of the activity.
3.6.2.7.4 Feasibility

The strategies must neither over tax available resources nor create unsolvable sub problems.

3.6.2.7.5 Influencing Factors

<table>
<thead>
<tr>
<th>Principle</th>
<th>Influencing factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency</td>
<td>1. The problems in coordination and planning continue despite changes in personnel, due to inconsistencies of the strategy.</td>
</tr>
<tr>
<td></td>
<td>2. Organizational conflict and interdepartmental bickering are also indicate problems of inconsistency.</td>
</tr>
<tr>
<td></td>
<td>3. Strategy in between organizational goals and the value of management group. Though inconsistency in this area is more of a strategy formulation than in the evolution of the strategy. Still it can arise; then the future direction of the business requires changes in managerial values.</td>
</tr>
<tr>
<td>Consonance</td>
<td>1. The generic aspect of the strategy deals with the business adoptability with the environment. This represents the basic mission or the scope of the business. This analysis depends on the changing economic and social conditions over a time.</td>
</tr>
<tr>
<td></td>
<td>2. The competitive aspect of the strategy deals with the competition of the other firms who are also trying to adopt. This deals with the competitive edge. This analysis depends on the differences across the firm.</td>
</tr>
<tr>
<td></td>
<td>3. Sales Growth is the success indicator of the generic strategy and the increased corporate worth is the success indicator for the competitive strategy.</td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>1. Superior skills: The skills that compose advantages are organizational rather than individual skills. Coordination and collaboration of the individual specialist and are built through the interplay of investment, learning and work.</td>
</tr>
<tr>
<td></td>
<td>2. Superior Resources: The resources that include patents, trade mark rights, physical assets, working relationship with suppliers and distribution channels.</td>
</tr>
<tr>
<td></td>
<td>3. Superior Position: The best supply position involves supplying valuable products to the intensive buyers and the worst supply position involves supplying less valuable products to well informed price sensitive buyers.</td>
</tr>
<tr>
<td>Feasibility</td>
<td>1. This study assesses the problem solving abilities and or special competencies required by the strategy.</td>
</tr>
<tr>
<td></td>
<td>2. This study assesses the degree of coordinative and integrative</td>
</tr>
</tbody>
</table>
3. This study assesses “The strategy challenge and motivate key personnel and is it acceptable to those who must lend their support”.

3.6.3 Decision Making

Decision making is ongoing process of evaluating situations and problems, considering alternatives, making choices and following them up with the necessary actions. The entire process is dependent upon the right information being available to the right people at the right times. According to Trewatha and Newport, “Decision making involves the selection of a course of action from among two or more possible alternatives in order to arrive at a solution to a given problem”.

Decision making is necessary in planning, organizing, directing, controlling and staffing. (Gaurav Akrani kalian-city blogspot.com June 2010). SISCIC is a six step decision making process which described as follow.
State the problem

Identification of controlling components

Study and evaluate alternatives

Choose the best

Implementation

Control and Evolution

Figure 3.8 SISCIC Process
Table 3.3  SISCIC process – steps and influencing factors

<table>
<thead>
<tr>
<th>Steps</th>
<th>Influencing factors/ Components</th>
</tr>
</thead>
</table>
| **State the problem**        | 1. Low profits** due to poor market research*  
                              | 2. High costs** due to poor design process*  
                              | 3. Low morale** due to lack of communication* between the management and the team  
                              | 4. High employee turnover** due to rate of pay to low*  
                              | 5. High rate of absentees** due to employees believe that they are not valued* |
| Identification of limiting components | 1. Information  
                              | 2. Time  
                              | 3. Equipment  
                              | 4. Supplies  
                              | 5. Personnel |
| Study and Evaluate alternatives | 1. Feasibility  
                              | 2. Realistic  
                              | 3. Effectiveness  
                              | 4. Consequences  
                              | 5. Cost – benefit*** |
| Choose the best               | 1. Cost  
                              | 2. Risk  
                              | 3. Probability of success |
| Implementation                | 1. Define the role of employees and make them to understand.  
                              | 2. Present the program and the procedures.  
                              | 3. Frame the rules and the policies. |
| Control and Evolution         | 1. Feedback  
                              | 2. Comparison of decision and action.  
                              | 3. Measure the deviation.  
                              | 4. Remove deviation. |

* denotes the problem

** denotes the cause

*** Cost benefit analysis is a systematic process for calculating and comparing benefits and costs of a project, decision

### 3.7 OPERATIONAL PROCESS

Operational process is the process to develop a believable, defensible business case that identifies critical metrics and includes each metric current
performance and planned future performance based on the changes resulting from the implementation. The basic aim of the operational process is to keep improvement targets and planned performance visible to the project team. The planned activities should be carrying forward the real time modules integration. There should be integration between the management, organization and the technology. In the organizing part, it is very important to concentrate on the three areas of the business enterprise where the business solution has its direct impact viz.,

- Purchasing
- Manufacturing
- Sales and marketing

### 3.7.1 Purchasing Process

Purchasing is the set of activities directing towards acquiring materials for organization at right time from right person in order to accomplish the specific end result of the organization. The major motive of purchasing is to make supply of goods at right time in right quality. The objectives of purchasing are

- Value maintenance
- Quality maintenance
- Minimize cash tie-up
- Inputs and outputs flow maintenance
- Strengthening Organization competitiveness
- Product specification review
- Order evaluation
- Inspection and control
- Stock maintenance

ERP streamlines the purchasing process by serving the objectives of it through its customized applications. The table furnished below exhibits the influencing factors of technology in attainment of each one of the above objectives.
<table>
<thead>
<tr>
<th>Purchasing Objectives</th>
<th>Implications</th>
<th>Influencing factors</th>
</tr>
</thead>
</table>
| Value Maintenance     | Manage all purchases effectively and procuring materials should be assessed with its importance in the Business Operation. | 1. Purchasing power  
2. Purchasing strategic choice  
3. Choosing the suitable one |
| Quality Maintenance   | The materials need to be maintained with effective fitness for its usage in where it is applying in the business operation. | 1. Ongoing checking for orders  
2. Fixation of standards for each inventory separately  
3. Integrating Production planning with execution of orders for inventories to vendors |
| Minimize cash tie-up  | The cash locked in the form of inventory has to be minimized. | 1. Inventory levels consolidation  
2. Inventory reports generation  
3. Impact on inventory maintenance. |
| Inputs and Outputs flow maintenance | The inventory flow in the stores department is considered as inputs and the inventory flows from stores to production is considered as outputs. The inputs and outputs are maintained with a proper way of requisitions and issues | 1. Maintaining Goods received note  
2. Issue register maintenance  
3. Date wise data entry |
| Strengthening Organization competitiveness | The competitive advantage of the company is vested with purchasing the right quantity of goods at right cost by overwhelming the competitors in the market | 1. Understanding availability of goods  
2. Supplier choice  
3. Market condition analysis |
| Product specification review | The purchase of raw materials is depending upon the type of finished product required by the production department. The product specifications need to be reviewed with production department to fix up the type of raw material required to stock in the store. | 1. Product design report  
2. Raw material specification |
| Order evaluation      | The order processing for each purchase indent has to be evaluated with its order processing cycle | 1. Purchase order report  
2. Order processing cycle |
| Inspection and control | The Inspection of materials helped to determine the quality of the materials. | 1. Quality standard to be known by employees and... |
finished product. The inspection should be done in receipt of raw materials and also in issue of raw materials to production department vendors
2. Acceptance sampling using statistical tools for loss avoidance
3. Product requirement report in nearby future need to be finalized

<table>
<thead>
<tr>
<th>Stock Maintenance</th>
<th>The stockings maintained in right quantity to avoid over stockings and under stockings of raw materials</th>
</tr>
</thead>
</table>
| 1. Stock register  | 2. Seasonal requirement of materials
3. Materials Requisition Planning (MRP) |

Purchasing comprises the key functional areas such as procurement, vendor management, contract management and materials management.

### 3.7.1.1 Procurement

Procurement is the predominant function that pronounces the accomplishments and methods to acquire goods and services. Procurement involves the activities involved in establishing fundamental requirements, sourcing activities such as market research and vendor evaluation and negotiation of contracts. It can also include the purchasing activities required to order and receive goods. The procurement has to be made with different methods for different types of inventories required such as raw materials, consumables, spares, sun-assemblies, assemblies, pipeline inventories, buffer inventory, packaging material, components, parts and stationeries. It systematizes the processes of identifying potential suppliers, Supplier Evaluation, Supplier Quote Evaluation, awarding purchase order to the supplier, and billing processes. Procurement is acting between inventory control and production planning.

The procurement process is described using the following cyclic process. The procurement is processed as a repeated cycle until it attains its specific result starts from selecting the vendors and ends with reviewing the process.
The procurement process with technology has to be checked with its traditional method followed in the company. The main focus for this paradigm shift to technology based application is to have a considerable impact on the speed of the process, competitive advantage, reduce manual work and systematic approach. In spite of these positive things, the roadblocks are also there in implementing the technology based Procurement process. The roadblocks need to be eliminated by concentrating on the tasks relative to that for better implementation of technology. The Roadblocks and the aids to remove the roadblocks in the procurement process are listed below:
Table 3.5  Procurement Process – Roadblocks – Aids to remove

<table>
<thead>
<tr>
<th>Procurement Process</th>
<th>Roadblocks</th>
<th>Aids to remove</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sourcing of vendors</td>
<td>Complex vendor landscape with wider area coverage</td>
<td>Multi Sourcing of vendors should be used</td>
</tr>
<tr>
<td>2. Evaluation of availability of materials</td>
<td>Market identification for materials supply</td>
<td>Generation of report matching the seasonal requirement for materials and market supply</td>
</tr>
<tr>
<td>3. Material Inspection</td>
<td>Inspection of samples is not sufficient in the current trend to avoid defectives in production</td>
<td>Criteria for inspecting the inventories and the control limits for acceptance of materials are to be installed in the system using technology and all the materials are allowed to pass on within no minutes of time wasted in the company</td>
</tr>
<tr>
<td>Negotiation with vendors</td>
<td>Collaboration problems with vendors</td>
<td>Vendor roles should be clearly defined and mutual understanding of procedures need to be confirmed</td>
</tr>
<tr>
<td>Arrangement of transportation</td>
<td>Proper mode for transporting the inventories from one place to another has high influence on quality of raw materials transported</td>
<td>The material handling system should be enabled for effective handling of inventories</td>
</tr>
<tr>
<td>Import arrangement</td>
<td>Import procedures are not visible</td>
<td>Importing materials should be followed with separate system management and the procedures should be installed in the system as simple task elements</td>
</tr>
<tr>
<td>Review of process</td>
<td>Feedback is not made properly to evaluate the procurement process</td>
<td>Reports should be generated for each procurement cycle to evaluate the pros and cons of it</td>
</tr>
</tbody>
</table>

3.7.1.2  Vendor Management

The business rationale for Vendor management is cost and time reduction in operational process. The Vendor is a person configured with the business operations of the companies in accordance with viability, functionality, scalability and compatibility of their process. It is very important to select the vendors and managing them with the intension of avoiding the valuable momentum of cost and time in building relationship with them by the companies. The vendor management can be streamlined by using technology as per the ways and means given in the table:
### Table 3.6  Vendor management – Aspects – Ways and means

<table>
<thead>
<tr>
<th>ASPECTS</th>
<th>WAYS AND MEANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTIMIZATION OF WORKFLOW- by integrating all the purchase requisitions and orders for reducing the cycle time</td>
<td>CONSOLIDATED INVOICING- makes the laborers to understand the purchase procedures</td>
</tr>
<tr>
<td>VENDOR RELATIONSHIP – not only in negotiating for the lowest quote but also to have mutual benefit for both the companies</td>
<td>INFORMATION SHARING – the employees are given with autonomy to share the information with vendors prioritized using accounting reports, consolidated order reports, etc.</td>
</tr>
<tr>
<td>STRATEGIZE BUSINESS – the strategic decisions which are having impact everlasting in the company has to be discussed with vendors for their full support and commitment</td>
<td>STRATEGIC VENDOR METRICS – the vendors are allowed to attend strategic meetings of the companies to make them to feel partnership relation with the companies by making them to be one among the well-wishers of the company</td>
</tr>
<tr>
<td>WIN-WIN STRATEGY - the business decisions taken by the companies should make the vendors and the companies also to get mutual benefits from the circumstances</td>
<td>CLOSED USER GROUP – vendors are allowed to share their points through online net workings and their points are also be given with due weightage by the companies to discuss about it</td>
</tr>
</tbody>
</table>

### 3.7.1.3  Contract Management

Contract Management is charged by providing information that enables more effective vendor negotiations, developing a variety of IT contract templates that use terms and conditions that are favorable to the companies and vendors, improving the efficiency and effectiveness of contract management processes, including expiration, renewal, and compliance audit and providing ready access to a repository
of in-force technology contracts. The contract management covers three basic areas in it. They are:

- Thoughtful process implementation
- Disciplined follow-through
- Realistic expectations

3.7.1.3.1 Thoughtful Process Implementation

The contractors have to be managed with an eagle’s eye view about the contract by the companies. Once if the contractors are selected then it is not possible to change them as it backed up with legal rules and regulations. It is very important to have mutual understanding about the expectations during the contract period by both the parties need to be discussed and everything should be recorded for future analysis and references. Managing the contractors throughout their contract life cycle is a critical task with more requirements on thoughtful process by not indulging any activities deliberately against the contractors. The willful thoughts of contractors should not be influenced by the system adopted by the companies. The technology adopted for the contract management need to be confined with process management of the contract.

3.7.1.3.2 Disciplined Follow-Through

The follow-up of the contract should be made with select group of specific functionalities. The functionalities are defined as elements considered uniquely for each and every companies based upon their requirement for enhanced integration and automatic approval routing systems. If it is happening like this, it will be easy to have a disciplined follow-through for better contract management.

3.7.1.3.3 Realistic Expectation

When everything is going on as per the planned order, then the contract is managed properly. Once deviations from the plans are identified, there comes issues about the contract. The deviations have to be analyzed with the realistic expectations
of the companies on the contract performers. The expectations are considered as realistic only if it is put up in quantifiable terms. The system is updated with materialized outcomes as expectations of the companies from the contractors.

3.7.1.4 Materials Management

Materials Management is a function that comprises of purchasing process of the companies responsible for the integration of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide materials at right time, at a pre-decided level at a minimum cost. One of the key objectives of MM is to maintain a high inventory turnover, by reducing excess storage, carrying costs and inventory losses occurring due to deterioration, obsolescence and pilferage. For good quality of materials management rigorous control and system need to be processed in the organizations. The major challenge that materials managers face is maintaining a consistent flow of materials for production. The materials supply base is an important issue for the materials managers in the organizations. Ineffective materials management for projects can result in significant cost blow-outs and delays in project completion. Such cost inefficiencies will negatively impact global competitiveness. The following questions have to be answered by the technology for the execution of effective materials management:

1. What to Stock?
   - What are the various materials maintained in the stores?
   - What are the materials readily available for production?
   - What are the materials maintained with minimum buffer stock always in the stores?
   - What are the seasonal variations influencing materials stockings?

2. When to stock?
   - When the materials kept in stock?
   - When to be issued to the production department?

3. How to stock?
   - How the materials are kept in the stores?
- How much should be stocked?
- How to store the various materials in stores?

4. Why to stock?
- Why to maintain the stock for the materials?
- Why to keep an eye on materials turnover?
- Why to track materials movements?

The answers to these questions are the solution for the effective materials management in the organization. The technology should give proper answers to these questions in which even a low level worker can be able to adopt the circumstances and convert the challenges of materials management into tasks.

3.7.2 Manufacturing Process in Publication Industry

Modern book production came about as a result of the invention of printing press. (http://www.madehow.com/Volume-1/Book.html). Manufacturing processes are the steps through which raw materials are transformed into a final product. This process begins with the creation of the materials from which the design is made. When the creation made, then the materials are then modified through manufacturing processes to become the required part.

3.7.2.1 Raw Materials

- Books are made from different types of coated and uncoated paper stocks which are different in size and weight. (http://www.encyclopedia.Com/topic/book.aspx)
- In addition, different color inks may be used.
- While front and back covers are generally made from a heavier stock of paper varies in terms of weight. Hardback books have a durable cardboard stock cover while paperback books are made from a thinner paper stock. Generally, cover stocks are coated with different colors or designs. (http://bisniswork.com/readall.php?id=49)
➢ Book production has involved the use of refined machinery, including typesetting machines, a sheet-fed or web printing press, and book binding machines.

3.7.2.2 Design

The process of designing a book is ongoing throughout the stages of production. Initially, the writer, in conjunction with an editor and representative, will consider elements of design that belong to the scope and purpose of the book, the preferred approach to the topic matter, whether illustrations should be used, and other factors such as chapter headings and their placement. In formative stages, the planned audience for the manuscript will be considered, along with accepted editorial standards. Other design attentions include whether a book should have a preface, Introduction, a foreword, a glossary to define specific terms, an index to refer key words and concepts, and an appendix of supplementary material.

Once the book manuscript is written, Authors and Editors must refine the manuscript to attain a final edited version prior to the production process. In most Occasions, this involves a process of Reviewing, Editing, Proof-reading, revising and final approval of the Manuscript. After such manuscript design factors are completed, editors and artists will determine the following features:

➢ The type and weight of paper for the text and cover
➢ Page size and style
➢ Typeface size and style
➢ Use of color
➢ Presentation of visuals/illustrations in the text, if needed
➢ cover art/illustrations
3.7.2.3 The Manufacturing Process

After the book is written and appropriate design elements are agreed upon, book production will begin.

Figure 3.10 Book Manufacturing Process

The first step in book production is typesetting, which is being done with desktop computer programs. With a laptop or a computer, the relevant software, and a laser printer, manuscript can be typeset that has the same quality as that produced by traditional typesetting methods. Once typeset, the mechanical or "camera-ready copy" of the manuscript is sent to a printer. This Printer then photographs the pages to produce page negatives. Then, these negatives are stripped by hand onto large flat sheets known as 'goldenrods,' and the goldenrods are exposed with ultraviolet light.
This results in 'blueprints," a positive reproduction of the book that is then checked for accuracy.

The actual text is converted into the appropriate Font typeface style (*font*) and size (*point size*). Then the typeset version of the book has been reviewed and any corrections made, it is ready for printing and binding, in which the actual pages are printed and bound together with the cover, resulting in a finished book. The typesetting and printing ("Printing" consists of filming and all subsequent steps) are mostly done not by the publisher but by specialized vendors.

### 3.7.2.3.1 Type Setting

- First, the manuscript is converted into the desired font and point size. If the manuscript has not been completed on a computer, it must be typed into a computer by the type-setter. If it is already in electronic form, however, the typesetter simply has to make programming changes to convert the manuscript into the proper style. The result is generally (but not always) a *galley* of the text. A galley form of manuscript consists of long pages of text in a single column. The galley includes the proper typeface, but the proper pagination still must be worked out.

- Galleys are then proofread and edited for errors by the publisher. This stage is particularly important if the manuscript has been typeset (typed) from a hard copy of the text. If the manuscript was typeset from a computer disk, most of the errors should have already been corrected during a review of the manuscript. The single-column format of galleys facilitates the proofreading.

### 3.7.2.3.2 Pages and Mechanical

After galleys are thoroughly proofed and edited, pages (or lasers) are produced. An exact layout of typeset pages but usually printed on standard typing paper, pages are also reviewed for accuracy by the publisher. Some books skip the
galley stage and proceed directly to pages. Once any necessary changes have been made, the typesetter then produces a mechanical of the typeset pages. Also called camera copy, the mechanical is printed on high-quality paper that is suitable for filming, the first stage in the printing process. The work of the typesetting vendor - if different from the publisher is now done.

3.7.2.3.3 Filming

The typeset mechanical now goes to the printing and binding vendor. First, each text page, including line drawings, is photographed (or shot) using a large camera to produce page negatives. These negatives are the opposite of what will actually print. In other words, the text and photos will appear backward in negative form. Negatives are then checked to make sure there are no blemishes present. While printed words and line drawings are all one shade of black, photographs have many shades from palest gray to deepest black and must be filmed using a special process to maintain these shades. The process converts the shades into black and white dots—very light areas have many dots, while darker areas have fewer dots. The converted photographs are known as halftones. If the book will have more than one color of ink, a separate negative for each color is made. For color photos, for instance, four negatives are generally used: cyan, magenta, yellow, and black. For this reason, books with color will have negative overlays (one negative overlay for each color). Because of the added overlays, a book printed in more than one color involves additional preparation and cost.

3.7.2.3.4 Striping

The negatives are then taped or "stripped" into their proper place onto a large sheet called a goldenrod or a flat. Each flat holds 32 or 64 pages, and enough flats are used to equal the number of pages in the book. Strippers examine each finished flat on a lineup table to ensure that text and illustrations are properly lined up and in sequence. (The book pages are not lined up in consecutive order on the flat, and in fact some of the pages are placed upside down. Such placing is necessary because
the finished paper version of each flat will be folded several times; once the flat is folded, the 32 or 64 pages will be in the proper order. This placement method is known as *imposition.* To make this examination process easier, the lineup tables are equipped with a fluorescent light that shines up through the negatives, so it is easier for the stripper to read and align the text.

### 3.7.2.3.5 Blueprints

To make sure the book is progressing properly, a proof of each flat is made by shining ultraviolet light through the negatives to expose their images onto a special light-sensitive paper. The resulting pages are called *blueprints* (or silver prints, blue lines, or deluxe) because the paper and ink are blue or silver in appearance. The blueprints are then checked carefully by the publisher. If an editor or artist finds an error on a blueprint or decides to make a change, the page in question has to be re-photographed. The new negative will then be stripped onto the flat.

### 3.7.2.3.6 Plate Making

After final approval, each flat is photographed, with the negatives being exposed onto (or "burned" onto) a thin sheet of aluminum called a *plate.* The sections of the plates that contain text and illustrations are then treated with a chemical that attracts ink, thereby ensuring that the text and illustrations will print when on press.

### 3.7.2.3.7 Printing

- The plates are then sent to press. If printing in only one color, each plate will require only one pass through the press. If printing more than one color, an additional pass will be required for each color. For example, if two colors are used, the paper is fed through the press twice.
- There are three main printing processes used in book production: *offset lithography,* *letter-press,* and *gravure.* The process used depends less on quality differences than on economic factors.
Printing is often done on an offset lithography printing press, in which the paper is fed through rolls that are exposed to the proper ink. If colored ink is necessary, either for text or for photographs, each of the four major colors is offset onto its own set of rollers.

Figure 3.11  Printing Process
(source: VIU Guidelines for Publishing, Printing and copying)

- Machines, number of books being printed (the print run), and the speed of delivery. Presses are either *sheet-fed* (single sheets of paper are fed through) or *web-fed* (huge rolls of paper are unwound and run through).

### 3.7.2.3.8  Binding

- After the sheets are printed and dry, they are delivered to the bindery. While many large printing companies have their own binderies, other smaller printers must send the printed sheets to a outside bindery. At the bindery, the flats are folded and collated into book *signatures* properly
folded 32- or 64-page sections that are then bound in proper sequence. All of these functions are automated.

- Book binding also involves sewing the signatures together, gluing the spine, and inserting lining and trimming the edges. The amount and type of binding depends on the type of book (paperback or hardback) and its size. In the final step, the book is "cased in," or enclosed in a cover.

### 3.7.2.3.9 Quality Control

To help ensure that a quality product is produced, print shops conduct a number of periodic checks. In addition to checking blueprints for accuracy, printers will pull a press proof, or sample, before the print run is begun. If certain areas of the proof are too light or too dark, adjustments to the press may be required.

After the book signatures are sewn together, the print shop will spot-check them to make sure they have been folded and sewn correctly. They will also check to see if the book covers are properly bound to prevent the books from deteriorating with use.

Some of the instruments used to control quality include densitometer and colorimeters, both of which are used to evaluate color printing processes; paper hygrometers, which measure the moisture balance of paper against the relative humidity of printing rooms; and ink meters, which measure the quality of the ink to be used in printing.

### 3.7.3 Sales and Marketing Process in Publishing Industry

Sales and marketing process is a set of steps aimed at initiating and supporting the identification and evaluation of Prospective customers, sales presentation, and successful conclusion of sales activities. It requires a close coordination of people, equipment, tools, and techniques, and includes advertising and promotion.
The four major steps involved in the Sales and Marketing process of Publishing Industry are

1. Sales
2. Marketing
3. Research
4. Customer Relationship Management

3.7.3.1 The Factors influencing Sales process in a Publishing Industry

Table 3.7 Influencing factors in Sales process

<table>
<thead>
<tr>
<th>Sno</th>
<th>Process</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sales</td>
<td>1. Local Representation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Multilingual Outreach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Lead Generation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Customer Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Regional Account Management</td>
</tr>
<tr>
<td>2</td>
<td>Marketing</td>
<td>1. Promotional Campaigns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Collateral Materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Conference Exhibits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Library Relations</td>
</tr>
<tr>
<td>3</td>
<td>Research</td>
<td>1. Gap Analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Focus Groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Strategic Consultation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Customized Market Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Library and Publishing Market Reports</td>
</tr>
<tr>
<td>4</td>
<td>Customer Relationship Management</td>
<td>1. Contact Management Database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Pricing Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. E-mail and Social Media Outfit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Sales Forecast</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Track Conversion</td>
</tr>
</tbody>
</table>

3.7.3.2 Five steps Sales process and Marketing in a Publishing Industry

The five steps of effective sales and Marketing are

1. Customer Need Analysis
2. Develop a plan
3. Implement the Plan
4. Analyze the Results
5. Follow up

Table 3.8 Five step Sales process and influencing factors

<table>
<thead>
<tr>
<th>Sno</th>
<th>Steps</th>
<th>Influencing Factors</th>
</tr>
</thead>
</table>
| 1   | Customer Needs Analysis| 1. Gap Analysis  
2. Library Visits  
3. Focus Groups |
| 2   | Develop a Plan         | 1. Marketing Strategy  
2. Sales Projections  
3. SWOT analysis |
| 3   | Implement The Plan     | 1. Sales Program  
2. Email Marketing  
3. Lead Generation |
| 4   | Analyze the Results    | 1. Purchasing Trends  
2. Customer Profiles  
3. Market Segmentation |
| 5   | Follow-up              | 1. Measure the Return of Investment  
2. Set Priorities  
3. Develop Tactics |

3.8 SUPPORTIVE PROCESS OF PUBLISHING INDUSTRY

Supportive process is a process of assisting and supporting the organization to achieve its goal. Human Resource Management, Accounting and Technical support are the key three components of supportive process in a publishing industry. The purpose of a supportive process is to ensure a disciplined and consistent approach to analysis and decision making. They facilitate the use of a logical thought process that is consistent with the objectives of the firm.

3.8.1 Human Resource Process in a Publishing Industry

Human Resource used to be a service organization," Schwarz told Business News Daily. Today, it's strategic. HR can use data analytics to ask and answer strategic questions about the future of that organization outsourcing, cost management, succession planning, performance management, etc."
Human resources planning are a process that identifies current and future human resources needs for an organization to achieve its goals. Human resources planning should serve as a link between human resources management and the overall strategic plan of an organization.

Human Resource Process and Technology mapping is challenging, both for publishers and consultants. Publishers must strive to think holistically in this area. HR Process considerations are fundamental to a successful implementation. Often Publishers are focusing on solely on the technology and not thinking about how the technology will support internal processes. Hence the elements to be mapped with Technology in a Human resource process is been discussed thoroughly in this section.

3.8.1.1 Work Design

The HR organization is only becoming more complex as it strives to serve the wide range of business needs inherent in publishing company today. In order to manage this internal complexity, and keep it from being visible to the client, HR leaders need multiple mechanisms to drive collaboration and coordination. To Map Work Design with the Technology we need to follow the mechanisms described as below.

3.8.1.1.1 Integration

In Publishing Industry, Human Resource process is moving from traditional roll up of the line of business needs to Multiyear Human Capital Strategies.

Traditional New Human Resource work Design is following project based work design than functional based Work Design. Its Key capability is how quickly an HR assembles teams around according to the needs and opportunities.
3.8.1.1.2 Distributed Leadership

- Due to Distributed Leadership, the employees become more independent and invested in one another’s Success
- The distributed responsibility helps to synchronize the line of business and enterprise views.
- To make Distributed leadership as success, the reward system must be also realigned to nurture shared success.
- By forcing interdependence, it can be used to build a more combined leadership group.

3.8.1.1.3 Leadership Team Design

- Leadership Design should be headed very strong knowledge and Experience in the operational activities and have gone through similar transitions than very strong HR Knowledge.
- In this Process, the quality of the leadership team’s dialogue and decision-making regarding what people are working on and how resources are utilized is integral to the function’s success.
Creative and thoughtful governance is yet another way to knit the organization together and ensure that the right perspectives are in the room to balance competing objectives and determine priorities.

3.8.1.4 Job Rotation

- Job rotation is a very effective technique to break down barriers and create better relationships among HR managers and their teams (Lawler, et al., 2006, 44).
- Job Rotation is an effective way to build general management skills among the HR leadership cadre, and it will create more responsiveness and better relationships among the senior staff.
- This process is also helping HR Managers to develop a sense of a shared talent pool.

3.8.1.5 HR Governance

- Many publishing Companies in India associated with very weak Governance Model. Even small issues land on the HR’s Leader Desks.
- In a Complex Organization such as Publishing Industry, Leaders are not only addressing all the issues. Councils and steering committees that involve second- and third level managers are a way to govern such decisions as standards, commonality vs. customization, staffing of special project teams, allocation of scarce resources such as OD staff, and HR development and training.

Creative and thoughtful governance is yet another way to knit the organization together and ensure that the right perspectives are in the room to balance competing objectives and determine priorities.
3.8.1.6 Communication

- Communication process overcomes the long time issue of disconnecting mid – lower level staff from the top.
- It enables employees work together across the organizational boundaries rather than assigned works.

- This model brings HR towards multiple dimensions in which a majority of the employees align with Horizontal and vertical teams.

3.8.1.7 Decision Science

- In the same way that marketing is the decision science of sales, and finance is the decision science of accounting, HR can be thought of as having two components: a professional practice and a decision science centered on talent management and organization capability (Boudreau & Ramstad, 2005).
- Information Technology has been has been made part of the HR Strategy group to build capability for front-end decision support, as well as the smooth running of back-end administrative systems.

3.8.1.2 Recruitment Process

A Recruitment Process is an organization-specific model of how the sourcing of new employees is undertaken. Typically the ownership of the recruitment process resides within the Human Resources function, although again this may differ
depending on the specific organizational structure. The following table illustrates all the internal and external factors influencing the recruitment Process

**Table 3.9 Recruitment process and influencing factors**

<table>
<thead>
<tr>
<th>Types of Factors</th>
<th>Influencing Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal Factors</td>
<td>1. Need of the Organization</td>
</tr>
<tr>
<td></td>
<td>2. Organizational Objectives</td>
</tr>
<tr>
<td></td>
<td>3. Size of the Firm</td>
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<tr>
<td></td>
<td>4. Growth and Expansion</td>
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<td></td>
<td>5. Recruitment Costs</td>
</tr>
<tr>
<td></td>
<td>6. Financial Implications</td>
</tr>
<tr>
<td></td>
<td>7. Sources of the Recruitment</td>
</tr>
<tr>
<td>2. External Factors</td>
<td>1. Labor Market</td>
</tr>
<tr>
<td></td>
<td>2. Supply and Demand</td>
</tr>
<tr>
<td></td>
<td>3. Unemployment Rate</td>
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<td></td>
<td>4. Competitors</td>
</tr>
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<td></td>
<td>5. Political Social Legal Environment</td>
</tr>
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<td></td>
<td>6. Changes Occurring in the Publishing Market</td>
</tr>
<tr>
<td></td>
<td>7. Image of the Organization</td>
</tr>
</tbody>
</table>

### 3.8.1.3 Performance Management

Performance management is the systematic process by which an agency involves its employees, as individuals and members of a group, in improving organizational effectiveness in the accomplishment of agency mission and goals. The following table illustrates influencing factors of Performance Management Process.
Table 3.10 Performance Management process and Influencing factors

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Process</th>
<th>Influencing Factors</th>
</tr>
</thead>
</table>
| 1     | Commitment from the Top        | 1. Accountability starts from the senior Team  
2. Regular Auditing  
3. Include Performance Management as one of the core objectives of Senior Management. |
| 2     | Clear Objectives               | 1. Specific Objectives.  
2. Measurable in terms of Quality or Quantity or Cost.  
3. Achievable.  
4. Relevant with respect to business Goals  
5. Time Bound |
| 3     | Feedback                       | 1. Trusted Environment.  
2. Reinforcing Good Behavior. |
| 4     | Project Reviews                | 1. Progress against objectives  
2. Feedback (positive and developmental)  
3. Adjustment of objectives in line with changes in the business priorities  
4. Review of the development plan  
5. Support required moving forward. |
| 5     | Development Plans              | 1. Shortfalls in performance  
2. Plans to equip employees with the skills to complete their objectives effectively  
3. Long term development goals |
| 6     | Capability requirements for assessment | 1. Active listening  
2. Clarifying (open questions)  
3. Summarizing  
4. Encouraging  
5. Respectfully challenge wrong thought processes  
6. Manage expectations  
7. Coaching - asking the right questions so that the employee finds their own solutions  
8. Encourage involvement in the building of objectives and development plans without removing responsibility |

3.8.1.4 Training and Career Development

Training and Career development is a function of human resource management concerned with organizational activity aimed at bettering the performance of individuals and groups in organizational settings. This table illustrates four stages of Training and Development and influencing factors of Training and career Development process.
### Table 3.11  Training and Career Development Stages and Influencing factors

<table>
<thead>
<tr>
<th>Sno</th>
<th>Training and Career Development Stages</th>
<th>Influencing Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establishing Training Needs</td>
<td>1. The need of Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. The Type of Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. The Time of Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. The Place of Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. The person attending the Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. The Person conducting the Training</td>
</tr>
<tr>
<td>2</td>
<td>Developing Training Programs and Manuals</td>
<td>1. Current Job Description</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Job Standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Job Procedures</td>
</tr>
<tr>
<td>3</td>
<td>Delivery of Training Program</td>
<td>1. Controlled Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Training Methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Trainee Participation</td>
</tr>
<tr>
<td>4</td>
<td>Evaluate The Training Program</td>
<td>1. Trainer’s Performance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Cost Effectiveness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Guideline for Future Trainings</td>
</tr>
</tbody>
</table>

#### 3.8.1.5  Appraisal, Rewards and Recognition

Zhou Jiang defined “Reward is the compensation which an employee receives from an organization (mainly refer to enterprises) for his or her service. It not simply contains direct currencies and other forms which can convert to currencies, but also a comfortable office, favorable interpersonal relationship inside the organization, having access to decision-making involvement, the challenge and sense of achievement, preferable growth opportunities and so forth these kinds of forms which is difficult to measure in various currencies”.
3.8.1.6 Organizational Development

The Operation Development Process is based on a research model which begins with an identified problem or need for change. The process proceeds through assessment, planning of an intervention, implementing the intervention, gathering data to evaluate the intervention, and determining if satisfactory progress has been made or if there is need for further intervention. The process is cyclical and ends when the desired developmental result is obtained.

Organization development (OD) is a data-driven process for change, and as a result, the successful application of OD interventions and tools has become increasingly dependent on the use of information technology. In a publishing Industry, following four factors are influencing organizational design process. These four elements play the vital part in the Technology Mapping (TM).

1. Organizational Size
2. Organization life cycle
3. Strategy
4. Environment

3.8.1.7 Compensation Process

The ideal compensation management policy ensures that the best talent will remain with the organization while attracting new talent and minimizing turnover. The ultimate aim is to reward the right people to the greatest extent for the most relevant reasons. This research reveals that in the Publishing Industry, following factors are influencing the compensation process. We can categorize the factors as Internal and External factors.

Table 3.12 Compensation types and Influencing factors

<table>
<thead>
<tr>
<th>Sno</th>
<th>Type</th>
<th>Influencing Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internal</td>
<td>1. Ability to Pay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Employee Performance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Employee Experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Employee Potential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Job Requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Job Evolution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Organization’s Strategy</td>
</tr>
<tr>
<td>2</td>
<td>External</td>
<td>1. Minimum Wages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Over Time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Compulsory bonus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Work hours and Time off</td>
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<td>5. The cost of Living Adjustment (COLA)</td>
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<td>6. Average wage Rate</td>
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<td>9. Inflation</td>
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<td>10. Academic Institutions</td>
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3.8.1.8 Human Resource Information Management

A Human Resource Information System, which is also known as a human resource management system (HRMS), is basically an intersection of human resources...
and information technology through HR software. This allows HR activities and processes to occur electronically.

Table 3.13  Functions of HRMS and Influencing factors

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<th>Sno</th>
<th>Function of HRMS</th>
<th>Influencing Factors</th>
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</table>
| 1   | Operational        | 1. Attendance  
             | 2. Paid time    
             | 3. Pay Scale History 
             | 4. Pay Grade    
             | 5. Position     
             | 6. Personal Information 
             | 7. Staff Evolution |
| 2   | Managerial         | 1. Staff Key Data 
             | 2. Vacant Positions 
             | 3. Cost to Hire  
             | 4. Compensation Analysis 
             | 5. Recruiting Analysis |
| 3   | Executive          | 1. Employee Skill Assessment 
             | 2. Staff Skill Assessment 
             | 3. Forecasting   
             | 4. Staff Needs Assessment |
| 4   | Office Automation  | 1. Daily Transactions 
             | 2. Track Employee Training and Recognition 
             | 3. Planning and Strategy aligned with Organization Goal |

3.8.2  Accounting Process

Information technology has contributed accounting processes in a very big way. It is difficult to find anybody doing manual accounting with paper and pencil these days. Since accounting is about dealing with information-- business information--any advances in this area will have a positive impact in the accounting department, from the old days of the battery operated calculator to the fast computers of today. It is obvious that the improper handling of technology is not because of its wrongful usage instead it is of not knowing the purpose of its applications. The technology updated in the organization should not be followed just like its past accounting applications by not updating with present need and applications of the accounting system. The accounting functions are transformed from mere keeping up of records and statements
in the company to managing the finance for future financial needs. The traditional accounting cycle has been exhibited below:

![Figure 3.13 Accounting Process](image)

**Figure 3.13 Accounting Process**

This traditional accounting process is extended with financial process in each step involved in the accounting cycle.

3.8.2.1 Business Transaction and Events identification

The day to day business transactions and daily events that are taken place in the business related to money need to be identified. This identification of business transactions and events should be backed up with the purpose of the transactions and
events. The purpose should also be noted for future reference. This is considered as finance process and the technology must be adopted with this provision in its application.

3.8.2.2 Recording of all Business Transactions and Events

The identified business transactions and events are recorded in the journal book. This traditional way of book keeping need to be changed with modern system using technology by grouping up of the business transactions and events on the basis of homogeneity of its purpose and separately maintained in the journal books.

3.8.2.3 Posting of all Business Transactions and Events

The posting of all the recorded transactions in the journal books are then posted in the ledger accounts of the individual account. This traditional way of posting the ledger should be made with offsetting of the transactions. Offsetting should be carried by the technology updated by means of consolidating daily transactions of paying and receiving in a single account only the net amount outstanding as payable or receivable alone as single entry entered in the individual account where the rest offsetted with each other through corresponding payables and receivables in the same individual account to avoid too much of clerical operations. This offsetting facility must be there in the technology to reduce time and resources utilization.

3.8.2.4 Balancing the Account Entries

All the credit and debit entries are balanced in this step. This step helps to avoid unbalanced nature of the accounting entries. In traditional accounting system, the balancing of figures alone is considered. But, it is very important not to balance the figures alone but the purpose of the accounts should be balanced. Every asset account (either current or capital account) should be matched with liability account (either current or capital). This type of accounts balancing should be facilitated by the technology of today.
3.8.2.5 Adding adjustments for balancing the Entries

The balancing of the debit and credit entries is focused upon the money value in the accounting process. In financial process, the balancing of the business deal with the individual account is to be focused. The adjustments are to be summed up with qualitative data about the individual account along with quantitative data. The technology should be capable of being analyze the qualitative information updated in the system of the publishing industry.

3.8.2.6 Financial Statements Preparation

The financial statements prepared for the current financial year in the accounting cycle helps to generate the reports for the top management under various criteria. Those criteria should be clearly disclosed to the accounting person in the publishing company, to serve additional information at the end of the statements as qualitative forms should be added by the technical supportive system in the company. This will be considered as a new provision to streamline the purpose of report generation and the decisions can also be taken objectively.

3.8.2.7 Closing the financial year

The summary of the statements of the financial year is considered for the next financial year in the accounting process. This summary can be furnished with reports generated on the basis of each work of the publishing company, area wise segregation, investment wise segregation, etc. this will help the publishing to make an effective plan for their future financial year. All the pitfalls can be identified by generating customized way of report generations using technology.

3.8.2.8 Repeating the first step

The first process of identifying the business transactions and events has to be repeated again for the next financial year. By using technology, the publishing
company has to make a feedback system to strive hard always through benchmarking techniques.

3.8.3 Technical Support Process

The technical support process is the mainstay of the publishing companies to make the complexities of business functions aligned in a path providing collaborative functionality, foster innovation, quick decision making, faster response for competitive advances and business strategy support. The technical support should provide optimized business performance across the value network. The tangible and intangible benefits of the technical support process can be measured by deploying the functional elements into performable small task units and the best attainment each task unit will be added together to find out the total core benefits and competencies of the business. The technical support process can be classified into two broader areas as given below on the basis of internal and external environment of business:

1. Inbound technical support
2. Outbound technical support

Within this broader classification, we can make any kind of subgroups based on necessities of the publishing companies.

3.8.3.1 Inbound Technical Support Process

The inbound technical support insists the infrastructure facilities and systems for the employees to work in an organization. It is not been given as word of mouth about the technical support given by the top management to the employees but should be provided to them as per their need. The Inbound technical support process should comprise the following areas in it:

- Fixing up of operational performance expected from the department
- Deploying the operations into achievable target units
- Providing customized technical support to each operations based upon target achievement
Training the users of the technology in the required aspect for their better understanding

Make the users feel comfortable to work with the systems by defining the complexity nature of the operations into easy deployed units for the users to carry forward the target tasks

Availability of user manual and make it to be easily accessible for the users any time at any number of times for their doubts clarifications

For each and every upgradation in the technical process, supportive training should be given to the users with regular interval of time

3.8.3.2 Outbound Technical Support Process

The Outbound technical support process facilitates the business functions extended for the external environment. The external users encompass Customers, Authors, vendors, etc. The technical support should be extended the outside the publishing company to enable the external users also feel free to get details about the stock availability, materials requirements, official financial records, sales and sales forecasting, etc. The outbound technical support should be carried by the company through business evaluation and coordination extracted from the external users. Once if any comment negatively received from the external users that needs to focus first through technology upgradation and user friendly approach immediately. How fast the company is doing its external user service, that much name and fame the company can gain the economy. The influencing factors for outbound technical support process are stated below:

Understanding of External users

Coinciding the purpose of technology with the expectation of the external users

Readily available information at any time for retrieval

Proper connectivity between different business functions to make the accessibility of information and gathering of data as easy for the external users
Segregation of confidential reports from official disclosed reports

3.9 TECHNOLOGY

It is a multidimensional challenging task to have a 24/7 fully updated technology in the publishing companies. It entails many enhancements in its versions, dealing with a diversity of users, for different assortments and external environmental influences. There are many innovations come up with technology applicable for publishing industry. A glimpse of those innovative applications of technology is listed below:

3.9.1 New Distribution Platforms

The contemporary way of marketing is now enriched with new technology of distribution platforms to make it readily available for the readers at any time for their sophistication.

3.9.2 Digitalization

The Digitization concept has made a drastic change in the publishing industry. Digitization often enables a process to be fundamentally reconfigured like, by combining automated decision making with self-service can eliminate manual processes. Successful digitization efforts start by designing the future state for each process without regard for current constraints The Digitization is made in the form of the following concepts in the publishing industry:

- Blog
- Collaborative software
- Digital publication app
- File sharing
- Mobile apps
- Podcast
- Enhanced publication
3.9.3 Agile Technologies Support

Agile technologies support a specific workflow need for the time being. The publishing industries must choose technologies that are scale-able and modular while supporting a variety of applications. They must be built on open systems standards, so they all speak the same language, allowing their adopters to modularly build digital workflows that make sense for their specific digital output needs.

3.9.4 Cloud Computing

Cloud computing focused on software as a service (SaaS) applications and some companies focus on streaming content delivery while others focus on content creation/management. The cloud changes everything in terms of piracy and copyright. Cloud adoption may also represent an important moment in publishing industry’s digital transition.

3.10 TECHNOLOGY MAPPING

The technology is the most embracing one in which there is likely to be a lot of back office work at publishing houses to really get their system in necessary order. In order to manage data effectively, the technology must be successfully visualized and made into a consumable, usable format. In the present trend, it is needed a kick for the publishing industry for a surge of fresh thinking and new energy. As things start looking up, as publishers start to pull their socks up and get stuck into the challenges they face the stakes are getting higher. As the industry becomes more exciting, there is more to play for and when there is more to play for – there is more to step ahead. The technology mapping plays a vital role in interlocking the system with functions. The following facts should be kept in mind by the publishing companies in India to get better results of technology mapping:
3.10.1 Unique Training Programs

The training programs conducted by experts in the specialized field should be organized for the employees as per their requirement and each and every training program should be unique in its nature serve exactly the purpose of its training to the needy employees.

3.10.2 New Technical Skills Requirement

The technology should be introduced in the organization as an opportunity and not as a solution to a problem. This opinion about the technology would bring out drastic changes in the mindset of the people and insists them to acquire new set of skills technically to work and to adopt with that technology applied in their work area.

3.10.3 Two way Information Flow

The technology should ensure two way flows of real time data with continuous feedback. The communication should be in two way mode to ensure the purpose fulfillment of the needy person.

3.10.4 Adaptive Learning Environment

The organization should provide an environment which must be conducive for the employees to learn and to experiment that learned percepts in their work flow.

3.10.5 Technology shouldn’t limit the Creativity

It should be clearly enforced in the midst of employees that the technology does not limit the thoughts provoking of employees. It is a supportive facility to induce their creativity and initiatives. Since technology is introduced in their work field, it won’t limit their creativity.
3.11 CONCLUSION

The conceptual framework focuses on proactive approach which enables organization to grasp every opportunity that is available in the market. Hence this component framework implementation could be supporting business processes and ensuring business continuity, therefore from an organizational perspective, as a replacement system it has not failed totally. Proper insights on critical areas to concentrate for better controlling are given with micro viewpoint. It ensures furtherance of technology adoption with enhanced mapping in the Indian Publishing Industry.