Report on

Total Quality Management Practices in Labaid Properties Ltd

By

Abdur Rahman

22382014

An internship report submitted to the BRAC Institute of Governance & Development (BIGD), BRAC University; in partial fulfillment of the requirements for the degree of 'Masters in Procurement & Supply Management'

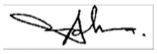
BRAC Institute of Governance and Development, Brac University

April 2024

Declaration

It is hereby declared that, the report submitted is my own original work while completing degree at BRAC University. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing. The report does not contain material that has been accepted, or submitted, for any other degree or diploma at a university or other institution. I have acknowledged all main sources of help.

Student's Full Name and Signature:



Abdur Rahman

22382014

Academic Supervisor's Full Name and Signature:

Mohammad Sirajul Islam

Sr. Academic Coordinator, BIGD, BRAC University

Letter of Transmittal

Mohammad Sirajul Islam

Sr. Academic Coordinator

BIGD, BRAC University

Subject: Submission of Practicum report (PSM665) titled “Total Quality Management Practices in Labaid Properties Ltd”

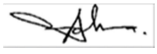
Dear Sir,

With due respect, I am grateful to submit herewith my report titled “Total Quality Management Practices in Labaid Properties Ltd” as a partial requirement to achieve the degree of Masters in Procurement and Supply Management. It is my proud privilege to work under your active supervision and guidance.

I have devoted a considerable time and best effort to complete the report with the essential information and data from senior officers of directorate, students and teachers in a comprehensive manner as much as possible to prevent dropout.

I believe that the findings and recommendations outlined in this report will be instrumental in construction quality management, will be a valuable lesson learned resource to contribute significantly in academic study and researches as desires.

Sincerely yours,



_____

Abdur Rahman

Student ID: 22382014

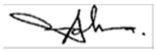
BIGD, BRAC University

Date: April 25, 2024

Non-Disclosure Agreement

This agreement is made and entered into by the undersigned Abdur Rahman at BRAC University and the labaid properties limited. As I avail the access to the organization's information system throughout the working period, I agree that I will keep all the information strictly confidential and will not share it with anyone outside of the organization.

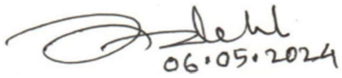
Student's Full Name and Signature:



Abdur Rahman

22382018

Workplace Supervisor's Full Name and Signature:



Brig. Gen. Tasaddek Hossain, psc (Retd.)

Chief Executive Officer

Labaid Limited.

Acknowledgement

I would like to express my heartiest gratitude to my Academic Supervisor honorable Mohammad Sirajul Islam, Senior Academic Coordinator, BIGD, BRAC University, Dhaka; and my workplace Supervisor honorable Brig. Gen. Tasaddek Hossain, psc (Retd.), Chief Executive Officer, Labaid Limited for sincerely guiding me to complete this report work. Without their continuous encouragement and caring attitudes towards me, it would have been difficult to accomplish my report.

I am grateful to those people who uploaded their valuable writings, research blogs and experiences in the websites which helped me very much to fulfill the contents and articulate this report.

Special thanks to my project teammates, colleagues, departmental managers, and other potential stakeholders to whom I have discussed in depth and helping me to bring the practical working scenario in my report. I am really grateful for their excellent cooperation, positive attitude and knowledge sharing privilege to me which made it possible to accomplish my report successfully.

Executive Summary

Labaid Properties Limited is an organization in construction sector that deals with real estate development. Here, works and procurement functions are vital to secure the supplies like materials, suppliers, labor and efficiency, goods and services. In accordance with current business and development policy, Labaid properties limited prioritize to deliver quality product in construction sector and goal is to ensure that the constructed projects are durable, safe, functional, and meets the expectations and requirements of end-users.

The report entitled 'Total Quality Management Practices in Labaid Properties Ltd. has been organized based on the author's hands-on work involvement at Labaid Properties Limited (LPL) during his practicum period. This report explored the problems existing with the organizational construction cycles against the quality and accordingly highlights the crucial role that TQM plays in enhancing organizational performance, improving supplies quality, and fostering a culture of continuous improvement within workplaces. The report displays an overview of Total Quality Management (TQM) and its comprehensive approaches to the quality management that involves the entire organization and focuses on continuous improvement as cultural shift.

The report is prepared based on both primary and secondary data analysis during the period of September 2023 to April 2024. It includes existing scenarios as examples to illustrate the importance of practical application of TQM and to prioritize the applicable principles of TQM to practices, to have the positive impact on organizational overall performance and competitiveness.

This report in first chapter has covered the overview of organization and scope of practicum, where the organizational overview, supply chain summary activities, basis and background of the practicum topic, practicum methodology, key objectives of the study, way of the study, sources of the information and the period of practicum.

The second chapter contains the supply chain management profile of labaid properties limited, includes its major procurement and supplies, processes, organizational structure, and other issues related to the overall SCM of Labaid group.

Chapter three covers the most important part of the practicum, where actual practicum works and findings are addresses in detail in regards of what the particular problems and its impacts are, why the problems are existing and how the TQM practices are relevant and works as the tools to handle the existing problems and to capitalize further improvement through indeed strategies and potential developments, captured as the practicum observations.

Finally, the report concludes in chapter four reaffirming as conclusion and recommendations where key messages as quality outputs through the practicum are summarized and a few recommendations are outlined to cultivate the quality culture successfully.

Keywords: TQM, Construction Sector, Supply Chain, Improvement, Employee Involvement, Team Commitment, Competitive advantage.

Table of Contents

List of Tables

List of Figures

List of Acronyms

ACI	American Concrete Institute
BIGD	BRAC Institute of Governance & Development
BNBC	Bangladesh National Building Code
CEO	Chief Executive Officer
CFO	Chief Finance Officer
GM	General Manager
HLS	High Level Specification
LPL	Labaid Properties Limited
MD	Managing Director
MPSM	Masters in Procurement and Supply Management
PM	Project Manager
PO	Purchase Order
PR	Purchase Requisition
RCC	Reinforced Cement Concrete
RFI	Request For Information
RFQ	Request For Quotation
SCM	Supply Chain Management
TQM	Total Quality Management

Chapter 1

Overview of Organization and Scope of Practicum

1.1 Overview of the Company LABAID

Labaid is one of the largest and most recognized private healthcare brands in Bangladesh. For its pioneering works, Labaid group is the most inspiring and fast-growing companies in Bangladesh. As a private organization, Labaid started rolling with the inception of Labaid Ltd in 1989 and has gradually grown one of the leading groups of companies in the country mainly in health care services. It is also pioneer in other arenas including pharmaceuticals, financial, education, agro farming and Real Estate development.

Labaid has diversified into construction sector to build modern homes and infrastructure through Labaid Properties limited (LPL). As a functional organization LPL mainly deals with real estate development where works and procurement functions are vital to secure the supplies like materials, suppliers, labor and efficiency, goods and services. In accordance with current business and development policy, labaid properties prioritize to deliver quality product in construction sector and the goal is to ensure that the constructed projects are durable, safe, functional, and meets the expectations and requirements of end-users.

1.1.1 Mission and Vision of LPL

LABAID Properties Ltd. is committed to provide value-added services to the customers and establish lifelong relationship by exceeding their expectations and gaining their trust through responsiveness, flexibility and communications.

LABAID Properties Ltd. envisions is to playing vital role in the construction and development sector of Bangladesh and being a pioneer through innovation that can bring excellence and add value to products and services to satisfy the customers accordingly.

The LPL is committed to accomplish their mission and vision by responding to the changing market conditions; building a performance driven culture that continues to provide the highest quality livings to the customers; maintaining a safe workplace and utilizing the latest technology; and by creating an environment that fosters continuous improvement.

1.1.2 Summary of activities related to LPL Supply Chain

Labaid Properties Limited (LPL) is a functional organization in construction sector in Bangladesh that deals with real estate development and other necessary construction projects where supply chain functions are vital to secure the supplies related with final product and deliver it to the customer. To establish a final product like a residential, diagnostic, or a hospital building, LPL deals with variety of supply chain functions involving the coordination of various processes and stakeholders to sourcing, acquiring and ensuring the timely and efficient delivery of materials, equipment, and services needed for the construction projects. All these activities are crucial for ensuring the smooth flow of resources and timely completion of the construction projects. Fig-01 displays LPL supply chain core activities, summarized based on the volume of activity performed by the supply chain team, measured as percentage in data Table-01.

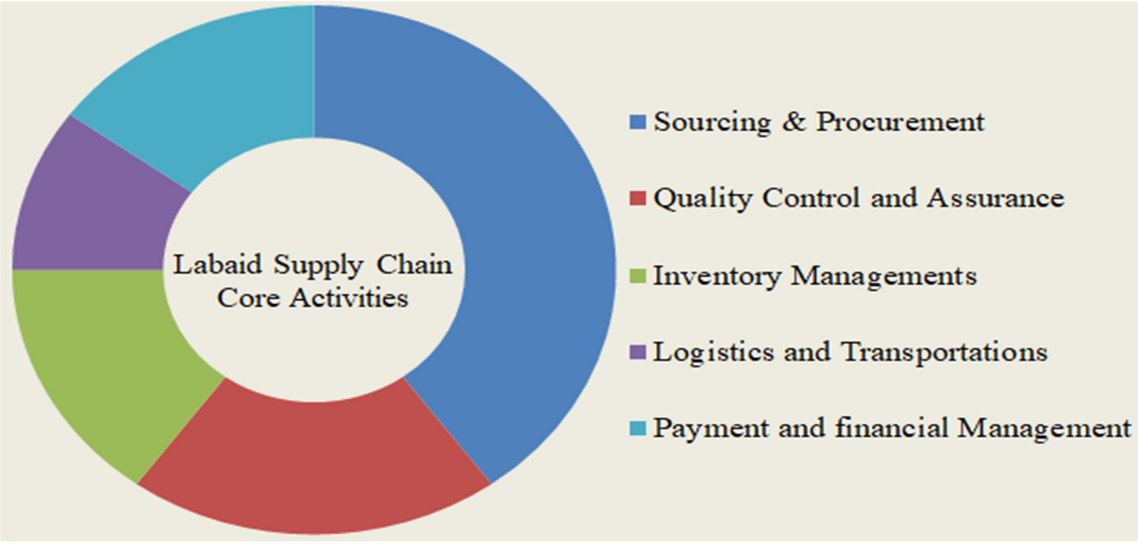


Fig-01: Core activities of LPL supply chain

LPL Supply Chain Core Activities	Activity Volume (Percentage)
Sourcing & Procurement	40%
Quality Control and Assurance	20%
Inventory Managements	15%
Logistics and Transportations	10%
Payment and financial Management	15%

Table-01: Supply chain core activity measured in percentage

Summarized core activities are outlined here in below as short descriptions:

- Sourcing and Procurement: This involves identifying and selecting suppliers, negotiating contracts, ensuring compliance with quality and safety standards and accordingly purchasing the materials, equipment, and services needed for construction projects. Suppliers may include manufacturers, wholesalers, and distributors relating with the requirements. The major purchase construction row materials and building materials, Tools, equipment's and services needed for the LPL construction projects are summarized here, respectively in Table-02 and Table-03 but not limited with.

Sl.	Item Name	Units	Sl.	Item Name	Units
A	**Construction Row Materials**		**B**	**Building Materials**	
1	Cement	beg	1	Door Frame	pcs
2	Bricks	nos	2	Door Shutter	pcs
3	Stone Chips	cft	3	Floor Tiles	sft
4	Brick Chips	cft	4	Wall Tiles	sft
5	Rebar	ton	5	Pavement Tiles	sft
6	Sylhet Sand	cft	6	Marbles	sft
7	Local Sand	cft	7	Granite	sft
8	Wood	cft	8	Sanitary Pipes	rft
9	Steel Profs	nos	9	Sanitary Fittings	nos
10	Sacffolding	sft	10	Putty	kg
11	MS Pipe	kg	11	Paints	ltr
12	Plain Sheet	kg	12	Electrical Pipes	rft
13	Corrogate Sheet	bundle	13	Electrical Switch-Sockets	pcs

Table-02: List of construction row materials and building materials (major items)

Sl.	Item Name	Unit	Sl.	Item Name	Unit
A	**Tools & Equipments**		**B**	**Services**	
1	Concrete Mixture Machine	no	1	Architectural Design Service	sft
2	Vibrator	no	2	Structural Design Service	sft
3	Sand Screen Machine	no	3	Electrical Design Service	sft
4	Hoist	no	4	Plumbing Design Service	sft
5	Sprit Level	no	5	Civil Construction Service	sft
6	Safety Tools	no	6	Carpainter Service	no
7	Wheel Barrow	no	7	Electrical wiring & Installation	sft
8	Roof Hoist	no	8	Plumbing & sanitery Installation	sft
9	Generator	no	9	Tiles Installation	sft
10	Substation	no	10	Painting	sft

Table-03: List of construction tools, equipment and services (major items)

- Inventory Managements: Construction projects require various materials and equipment, which need to be managed efficiently to avoid shortages or excess inventory. Inventory management involves tracking stock levels, replenishing supplies when necessary, and optimizing storage space. The items captured in upon Table-02, are the construction materials those are generally major items to maintain the stock levels & replenishing the supplies to optimizing the storage space and to keep maintain the quality storage.
- Logistics and Transportations: Efficient transportation of materials and equipment to the construction site is essential for project success. This includes coordinating deliveries, managing transportation routes, and ensuring timely arrival of goods.
- Quality Control and Assurance: Ensuring the quality of materials and equipment is critical to the safety and longevity of construction projects. Quality control involves inspecting incoming materials, conducting tests, and enforcing quality standards throughout the supply chain.
- Payment and financial Management: Managing payments to suppliers, contractors, and subcontractors is crucial for maintaining good relationships and ensuring financial

stability throughout the supply chain. This includes adhering to payment terms, tracking expenses, and resolving disputes in a timely manner.

Overall, effective management of supply chain activities is critical for the success of construction projects, helping to minimize delays, reduce costs, and ensure the quality and timely delivery of materials and services.

1.2 Scope of Practicum and Methodology

This practicum is the part of the MPSM under the course entitled "Supply Chain Management and Practice". This is designed to grow the students with a deeper understanding of supply chain theory and practice by examining how particular theories relate to real-world situations or how particular theories offer advantages over others. The practicum is project based and requires the submission a report on the project work during the practicum period. My practicum focuses on Total Quality Management Practices in Labaid Properties Ltd.

1.2.1 Background of the practicum Topic

As part of my profession, I have to deal with construction project planning, implementation and management to ensure a project delivery with quality. Quality is defined as meeting the specified standards, aesthetic and functional requirements of a project. Quality encompasses various dimensions and attributes that contribute to the overall excellence, reliability, and satisfaction associated with a particular project, product or services to meet its purpose.

Construction projects involved a variety of supply chain functions including the coordination of various processes and stakeholders to sourcing, acquiring and ensuring the timely and efficient delivery of materials, equipment, and services. Sourcing and procurement process, supplier management, inventory management, risk management, quality managements etc. all

are very vital to have the specific project successful which finally refers the satisfaction of customer through the achievement of defined goals and objectives within the budget and schedule.

To achieve the project goals and objectives within budget and schedule, quality management has significant impact especially on construction projects where several common problems are always exists to limiting the quality target achievement in the construction sector; few of them are detailed here in regards of global, national and organizational context.

- Global Problems: Various problems are allied to the quality in global construction industry which leads significant consequences, including structural failures, safety hazards, damaged brand reputation, increasing cost etc. Few of such problems are, Shortage of skilled labor, rapid Construction process, Changes in Project Scope, technological Integration Challenges, Global Supply Chain Challenges, Sustainability Considerations, and Complex Project Interfaces, lack of Innovation in Quality Management, Cultural and Ethical Issues etc.

Addressing these challenges requires a proactive and collaborative approach from all stakeholders involved in the construction process. Implementing robust quality management systems, fostering a culture of continuous improvement, and embracing technological advancements are crucial steps to enhancing the overall quality of construction globally.

- National Problems: National problems regarding the quality of construction industry can vary based on the economic, regulatory, and social contexts of each country. However, there are some common challenges that we generally faced in the construction sector as nation of developing country are Poor Workmanship, Regulatory Compliance, Lack of Accountability, Ethical and Corruption Issues, Subcontractor Management, Documentation and Record-Keeping, Inadequate Testing and Inspection, Weather and Environmental Conditions, Post-Construction Maintenance etc.

Addressing these challenges requires a comprehensive and systemic approach that involves collaboration, education, technological advancements, and a commitment to ethical practices. As the construction industry continues to evolve, addressing these national quality issues will be crucial for delivering sustainable, safe, and high-quality construction projects.

- Organizational Problems: Lack of skilled resources, lack of employee commitment, low-quality materials supply, poor funding and payment process, lack of supplier evaluation and proper supervision, etc. are likely common organizational problems which are finally reflecting as variety of quality defects in overall construction.

Most problems even occur repeatedly in same project or project to other project that incurs both cost and time. Therefore, I have focused on the quality management tool of Total Quality Management (TQM) for my practicum work at Labaid Properties Limited and I believe that the application of TQM can bring about huge positive changes to LPL, as a whole in real estate and other construction development projects.

1.2.2 Key Objectives of the Practicum Work

The key objectives of the practicum work are stated below:

- Understand the practical problems, issues and difficulties that enforce the importance to practice/implement TQM in construction site.
- Understand the significance and impact of Total Quality Management practices in labaid properties limited that can help organizations enhance their operational efficiency, product/service quality, and overall competitiveness.
- Provide evidence-based insights to decision-makers, managers, and practitioners on the benefits of adopting and implementing TQM principles to the organization.
- Identify key TQM principles to practice, based on the organizational relevance.

- Enhance the management thought on TQM implementation throughout the company, the labaid group.
- Gain personal knowledge through comprehensive analysis and relate the academic theories and particular tools with real world situations.

1.2.3 Practicum Methodology

The practicum is based on data collections from colleagues, managers, other departmental stakeholders and analyzes them with proper guidance from workplace supervisor and academic supervisor. To collect data, I have discussed the aspects of quality delivery and relative supply chain activities with related officials and used their valued responses. Author's own data from his working period with the organization is also considered as the primary source of the report. Specially, Table-04 displays the list of projects those are visited, handled during the practicum period and are also sourced as data collection & necessary analysis.

12	12	12	12	12	0
Sl	Project Name	Project Type	Site Type	Summary Status	Remarks
1	Spring Rose	Residential Building Construction (3B+G+13)	New Construction	Under Construction Project	
2	Specialized Hospital Chattagram	RCC Building Construction (2B+G+9)	New Construction	Under Construction Project	
3	State University of Bangladesh	RCC dormitory building: (B+G+9)	New Construction	Under Construction Project	
4	Labaid Rajabari	Composit Steel Sructure (G+2)	New Construction	Under Construction Project	
5	Labaid Seerat	Residential Building (G+6)	Renovation	Handover Project	
6	Labaid Central Road	Composit Steel Structure (2B+G+5)	New Construction	New Starting Project	
7	Labaid Tangail	RCC Building Construction (B+G+6)	New Construction	Under Construction Project	
8	Labaid Magura	RCC Building Construction (B+G+2)	New Construction	Under Construction Project	
9	Labaid Dinajpur	RCC Building Construction (B+G+6)	New Construction	Under Construction Project	
10	Labaid Brahmanbaria	RCC Building Construction (B+G+7)	New Construction	Under Construction Project	
11	Labaid Rangpur-2	RCC Building Construction (B+G+8)	New Construction	Under Construction Project	
12	Labaid Naogaon	RCC Building Construction (B+G+3)	New Construction	Under Construction Project	

Table-04: List of the projects relating with practicum

In my academic period of MPSM, the courses PSM505 and PSM523 were dealt with TQM from where I have learnt in detail about the tools and techniques of TQM. The courses were in details, specially the 11 key principles of TQM (Focus on the customer, Quality chains, Quality culture, Total involvement, Quality through people, Team-based management, Get it right first time, Process alignment, Quality management systems and Continuous improvement or kaizen), its approaches, objectives, implementation and benefits are explained in detail during the classes, those all are helped me a lot to learn and understand about the TQM and its impact, worked as the source of knowledge to utilize during practicum.

1.3 Duration of the Practicum

The duration of practicum works covered two semesters, from September'2023 to April'2024 under the guidance of both workplace supervisor and academic supervisor. Workplace supervisor is related with practical guidance regarding the topic alignment and practice with day-to-day activities on the workplaces. Academic supervisor provided the guidance regarding the preparation and submission of the report in alignment with the Brac University guidelines during this period.

Chapter 2

Supply Chain Management in Labaid Properties Ltd.

2.1 Introductions

SCM is defined as the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular organization and across businesses within the supply chain, for improving the long-term performance of the individual organization and the supply chain as a whole.

Supply Chain Management (SCM) in LABAID Properties as a real estate development company is involving the co-ordination of people, properties, processes, vendors, information and other resources, displays in Fig-02 as the SCM relationship pyramid to deliver the products or services to the end customer. That involves managing complete activities for buying or renting land, apartments or buildings.

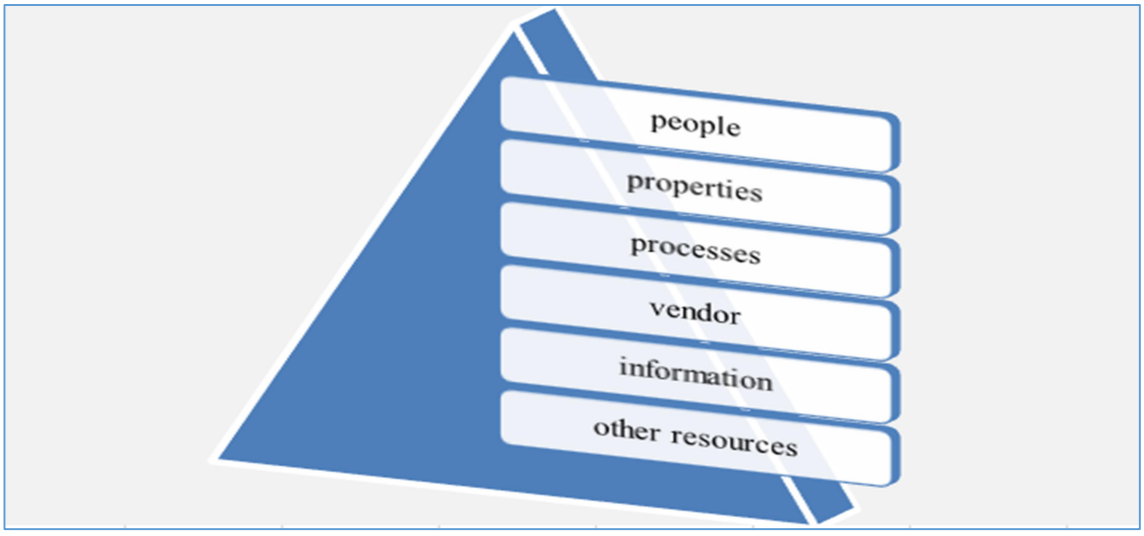


Fig-02: SCM relationship pyramid

LABAID implemented SCM process to create a more agile enterprise that can take decisions proactively to maximize business results with improved efficiency and collaboration, increased transparency and traceability, enhanced security and cost savings. From the

inception of LABAID Group, functions of supply chain like international procurement and local procurements had been functioning separately. In addition, some special purchase functions are executed by different department or persons in a disintegrated fashion like planning & sourcing directly by top management.

2.2 Major Procurement and Supplies Accomplished by LPL SCM

LPL supply cycle consists of all stages involved, directly or nationally, internationally; in fulfilling a project site requirement or the customer request. All the local supplies are accomplished through LPL SCM. Fig-03 displays the major procurement & supplies accomplish by the LPL SCM, and outlined here in below with short description.

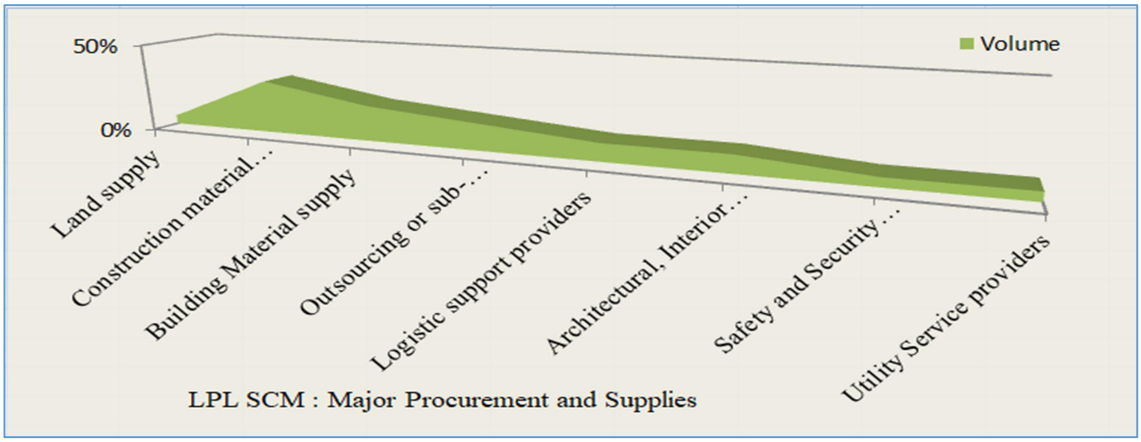


Fig-03: Major procurement and supplies accomplished by LPL SCM

- Land Supply: Raw land as the key feature to initiate the real estate construction cycle and thus land purchase functions are a part of LPL SCM though mostly it is handled by the higher management. There is also a trend to have the contract between the land owner and LPL as a developer company, with general terms general terms and conditions that LPL bears all expenditures of constructing the building with all modern facilities as necessary for apartment readiness and handover, while land owner shares the land proportionately.
- Construction Material Supply: Construction row materials procurement and supply functions are mostly wide range substances and continuous to accomplish by the LPL

SCM to use in the construction of building, road and other structures. Some common construction materials are sand, brick, stone chips, brick chips, steel, cement, ready mix concrete, wood, aluminum, glass, insulation etc. though these materials can varies significantly depending on the factors like construction type, local environmental conditions, and specific project requirements.

- Building Material Supply: Building materials are generally termed as construction finishing materials related with plumbing, electrical and esthetics widely to ensure the building facilities. Some common building materials are Door, Lock, Tiles, Marble, granite, commode, basin, light, fan, sanitary fitting and fixtures etc. with necessary accessories. Such materials procurement and supplies are widely requirements for a building project and accomplished through SCM.
- Outsourcing or sub-contracting of building and construction materials: Labaid generally outsourced the services related with the construction project completion, like civil, plumbing and electrical works, ready mix concrete supply, substation, generator, lift supply etc. done through sub-contracting process leaded by SCM, as a thim to gain profit, cost saving, greater productivity to the project.
- Logistic support providers: Labaid SCM accomplish the logistic support providers, either purchase or rent as part of project logistic supports management, includes pick up, small truck, van, power/diesel generators, service lift, roof hoist, wooden, bamboo and steel shutter; Profs, scaffolding etc.
- Architectural, Interior & Exterior Designers: Architectural, structural design, interior design, landscape architecture, plumbing, electrical, HVAC and Information Technologies designs are hired from third party experts or consultants.

- Safety and Security service providers: Building management system, fire safety system and security services also implement by third party arrangement especially for office, diagnostic and hospital building leaded by labaid.
- Utility service providers: No real estate company can ensure complete readiness of its apartment without the connection of water, gas, electricity, LPG facilities, solar system, etc., in the building indeed, without such connections the apartment will not be suitable for habitation or living. As per high the importance of the requirements, said utility service providers are sourced and procured by the SCM.

As a whole, LPL SCM Plays vital role regarding such services and materials arrival and distribution matching with the project schedule which all leads not only to reduces the inventory and inventory cost but also lead to reduce the wasted time and energy.

2.3 Major Procurement and Supplies Processes

LPL procurement and supply processes are involved in three common categories named as direct, indirect, and services procurement.

- Direct procurement process deals with the purchase of the direct inputs like raw materials those are required for build the building as the end product. The cost and efficiency of this type of procurement have a direct impact on the performance and profitability of the project, as a whole to the organization. Thus, strictly follows the process with keeping long term relationship with the parties involved.
- Indirect procurement process involves the purchase of input or services that are not directly related to the end product. Office supplies, maintenance and security services, utilities supplies are the part of indirect procurement. Indirect procurement process flow takes care of day-to-day operations and focuses on short-term relationships with the vendor.

- Services Procurement Process deals with procuring and managing the physical workforce and consulting services those are also directly related with the end product. Maintaining one-time, contractual relationships with suppliers is characteristic of the service procurement process.

2.4 Procurement and supply process by Labaid SCM

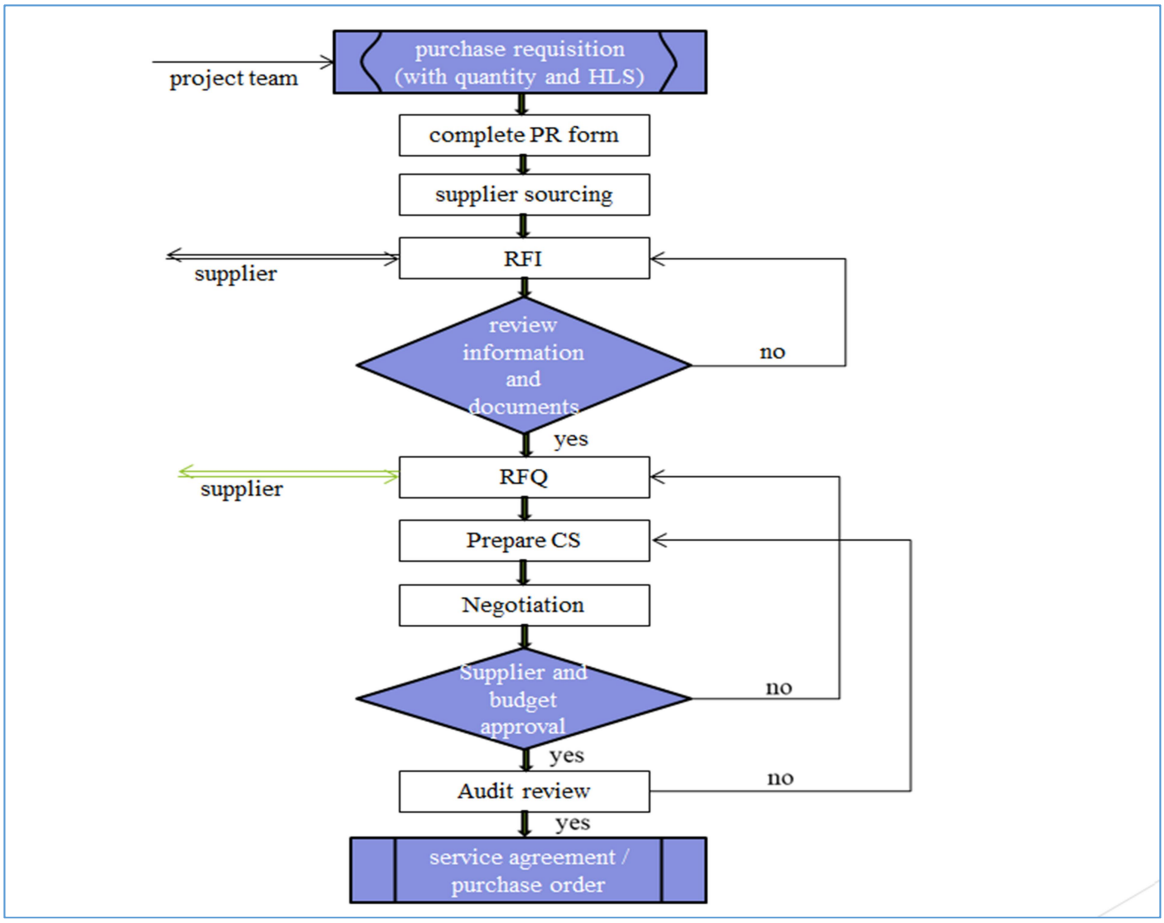


Fig-04: Procurement & supply process accomplished by LPL SCM

Fig-04 displays the accumulated procurement & supply process accomplished by LPL SCM, like LPL project technical team submit material or service purchases request to SCM with quantity and high level specification (HFL). SCM process the purchase requisition (PR) form, source for the item and list down the appropriate suppliers from existing supplier base or new sourcing from the current market and request for information (RFI) to the listed suppliers.

With receiving RFI, SCM process the information checking against the PR detailed materials or service specification. Based on RFI matching with the required PR, SCM process their own investigation through visit or market survey as necessary and request for quotation (RFQ) to the suppliers.

After receiving quotation of different suppliers, SCM make a comparative statement (CS) with all quotations of different suppliers considering the same level of playing field and other justified criteria's like similar specification, product or service quality, supply capability, delivery options, payment terms, lead time etc. Based on prepared CS, SCM sit for negotiation with the suppliers and minimize the CS with best one or multiple suppliers with the negotiated budget. SCM then process the CS with negotiated budget for top management approval.

After approval the CS with budget, whole the file moves for the audit review and based on audit approval, the supplier is firmed as selected and turned into the agreement or purchase order with terms and conditions.

2.5 SCM Team Structure

From the inception of LABAID Group SCM perform as functional organizational structure; with resemble the traditional hierarchical structure. Labaid functions are divided in smaller departments that work for different fields operation. Each of the functional department has manager/executive who is responsible for reporting their departmental responsibilities to the Chief Executive Officer (CEO) and accordingly each CEO reporting to the Managing Director (MD). The organizational structure complies the chain of command from top with bottom down that displays in Fig-05 as the procurement and supplies organogram are part of whole organogram heading by the group MD.

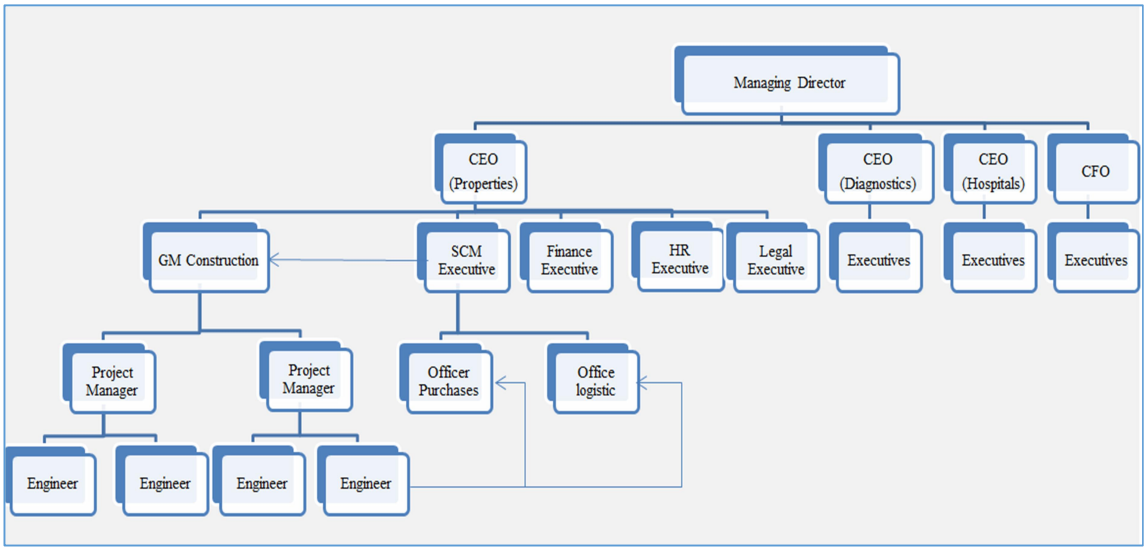


Fig-05: Procurement and supply chain organogram

2.6 Procurement and Supply Challenges

While working in LPL, I have attained few challenges faced by SCM are summarized here in below as personal view to this practicum work.

- LPL SCM day to day procurement activities are solely handled by Procurement Executive who had a wide variety of tasks. The leaders of procurement are constantly worried about controlling corporate spending rather enforcing appropriate procurement policies with including the resource for supplier lifecycle management, contract management, purchase request management, and more.
- The entire process is approved by the Managing Director, Labaid Group. That's why the approval process is too lengthy most of the time. For said lengthy process, construction project does not get their requirement as planed as accordingly SCM doesn't process the urgent item as forecasted.
- Transportation refers to the movement of product from one location to another as it makes its way from the beginning of a supply chain to the customer's handle. In Labaid group transportation in not under in SCM which it creates problem to ensure better service.

Mainly sourcing means to negotiate with different suppliers and purchase from the suitable one but sometimes a fixed vendor is advised from top management specially for finishing materials to procure, where the procurement process are not followed to accept the request which creates mistrust issues to the team and uncertainty about the quality delivery.

- Sometimes SCM faced fund shortage problems to purchase raw materials or to clear the supplier due payment due to the big investment on other projects lead by the groups, like diagnostics equipment, hospital equipment purchase etc.
- Supply Chain Management is the new concept in the business and thus sometimes management does not understand the importance of the supply chain concept.
- Most of the time, goods and services PR are bought on short notice and under stress. The technical requirements are not placed properly; procurement process lead times and schedules are not considered with request. Thus the actual lead times and procurement procedures typically take significantly longer period than the planned or anticipated.
- The management of suppliers is one of the biggest challenges in procurement. Selecting the best vendor, keeping track of that vendor's performance, and ensuring a steady supply of high-quality products are all challenging tasks.

As of, Labaid is not completely focused on SCM in effectively managing the requirement, yet there are gaps within the process and team structure. To mitigate this gap management has attempted to establish a complete SCM system to follow strictly though more research and effort is required to fill up, specially the knowledge gap to establish a proper SCM structure for the organization.

Chapter 3

Practicum Work, Findings, and Observations

Construction sector is a crucial component of the global economy and covering a broad variety of activities such as residential and commercial building construction, industrial construction, civil engineering projects like roads, bridges, tunnels and infrastructure development like water and sewage systems, airports, railways. This sector plays a vital role in shaping the living environment, supports a lot to the economic activities and enhances the quality of life.

Quality is a critical aspect and to achieve an acceptable level of quality especially in construction sector is long been a problem worldwide. The problems in construction quality are directly related to the product quality and process quality. Product quality in the construction refers to achieving quality in the row materials, equipment and services involved to building of a structure, whereas process quality refers to achieving quality in the way of construction project is organized and managed. A weighty overhead of time, money and resources, both human and material, are incurred each year against the inefficient and non-consistent quality management procedures that are unfortunately a trend in construction sector.

In order to have the improvement on construction sector, I intended to practice the TQM as quality improvements the tools and techniques especially in my organizational construction projects to reach the outlined objectives captured on section 1.2.2. As part of the practicum target, I have initiated visiting the construction projects, discussing with specific project managers, colleagues, clients and other supporting department managers and colleagues, primarily to explore the specific problems, issues and difficulties those are currently having

direct impact on quality, in depth what problems, what types of problems are raising, why those are raising and how those problems are getting mitigated at sites.

3.1 Problems limiting the Quality in LPL Construction Site

To really have the quality improvement in construction, I have visited the construction project intendant to understand and assess the problems first with practical findings and the root cause analysis on the problems captured during the visits.

Based on those practical visit findings and in-depth analysis during the practicum period a numerous problems/issues/difficulties are identified which are finally reflecting as variety of quality defects in overall construction like works stoppage, repeated corrections, roof cracks, water leaking, leaking plumbing, faulty electrical systems and many others, those leads the project completion delay and customer dis-satisfaction. Thus accordingly, all the identified problems/issues/difficulties are commonly linked and limiting the quality of construction target achievement, leading by LPL as an organization. Said common organizational problems and few other findings are outlined here in the report with its causes and impacts.

3.1.1 Lack of Skilled Resources

Based on the field visit observation and discussion with the existing team to the projects it is summarized that LPL construction team is facing the challenges mostly related to lack of skilled resources. Like, during the practicum visit on under construction project site XXX, it is found that lift core roof level correction and share wall surface level correction is urgently necessary to accurately installation the lift and its machine, whereas the lift core share wall and roof level are being constructed long early during the structural component construction. captured Fig-06 is placed here as an example of findings that displays the wrongly constructed lift core roof level and surface level corrections, mainly are raised due to non-

skilled resource involvement during the structural component implementation and finally it has significant impacts on project mile stone timelines, costs, and overall quality decay. Same few other defects are found like faulty fare face, roof top entry stair, verandah sillier construction, gas pipeline faulty termination, electric distribution board wrong location which all creates multiple rectification and reworks at sites. Based on discussion and organization trend analysis it is found that attractive working environment, visual career path, competitive pays and benefits are absent and might be the key reason to hire and retain the skilled resources to the pool.

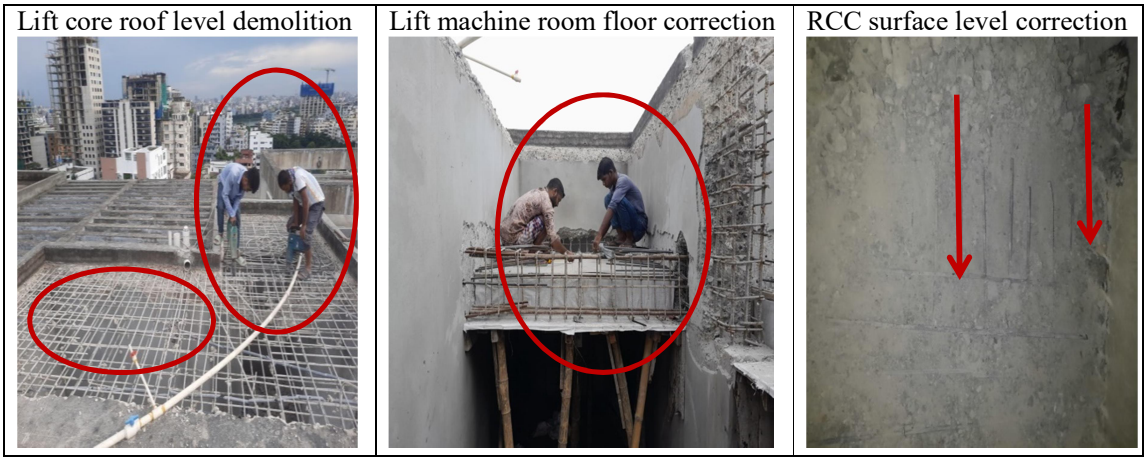


Fig-06: Wrong construction, demolish and rework issues at delay incurred project

3.1.2 Inadequate Resource Allocation

Based on the field and resource allocation statement to the site, it observed that the involved resources are inadequate considering the project volume, including the manpower, time, tools and technology which are boosting to compromise the quality of works. In a boarder scale, inadequate resources against the volume of tasks and targets are creating overburdened teams, tight schedules, lead to rushed work, non-standard workflows, rules violations, errors and increased likelihood of defects which all causes to compromise the construction quality. Fig-07 captured from the visit at site YYY and placed here as an example that displays the

quality compromise with doors height and width mismatch, substandard shed works and unauthorized extension works to meet the site immediate requirements within a stressed schedule, but with no sufficient supervision due to the shortage of resources and with budget constrains considering other many finishing works are running within same schedule and target to meet on the site. Such quality compromising with inadequate budgeting & time being cost cutting measures might make short term financial gain but at the end its un-worthy expectations and damage the reputation of the organization in the long run.

Quality issues on door height/width	Sub-standard shed installation	Extension as per site demand
		

Fig-07: Quality compromise issues captured at construction finishing stage site

3.1.3 Low-quality materials

The uses of substandard or inadequate quality of materials are key source those lead to compromise the consistency of quality standards and safety in construction projects. A variety of substandard construction materials like bricks, brick chips, stone chips and substandard supplies like fabricated grills, fencing net etc. are found at projects visits and in audit multiple reports, captured here in the Fig-08 as an example of findings that displays poor quality construction materials, substandard fabrication and fencing net supplies at several site. Poor quality materials and supplies are either with poorly sourced or with suppliers poor supplied materials which do not meet required standards of supply. Such usage of low-quality materials in construction site are limiting proper installation, durability of structure, causing to deterioration and potential structural failures. Somewhere, inferior

building materials like cement with grouts, under graded aggregates, Irony water are used during the construction and create the problems such as leakages, concrete cracks, sudden dropping of ceilings and inadequately functioning structures including toxic environments to the building, like surface damp, water leaking, sewage blocking and drainage leaking.

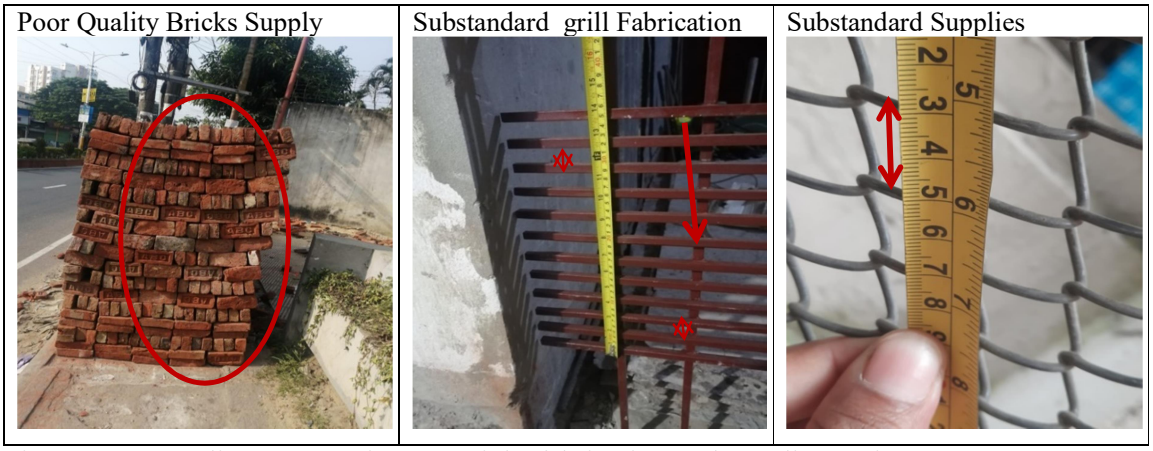


Fig-08: Poor quality construction materials, fabrication and supplies at site

3.1.4 Poor Funding and Payment Process

Poor funding and payment process a common challenge that traditionally belongs in the organizational construction projects which have significant impact on project outcomes, relationships between stakeholders, and finally on the overall quality of the construction. During the practicum period, I realized that time being funding, delayed payments process to subcontractors and suppliers, complex payment structures and lengthy payment cycles, delays in approvals and change orders are leading to strain the smooth construction in place. As a result, construction sites are having repeated works stoppage within the planned project period, thus creating uncertainty stream to the project team, having idle resources, materials surplus, materials quality decay, wastage and finally time and cost over runs to the construction sites. Fig-09 captured from under construction project ZZZ and placed here as an example that displays used and surplus materials quality decay due to running work stoppage with fund shortage & delay payment process.

Fig-09: Material quality decay issues at construction work stoppage site

Same like scenarios are mostly facing on each construction projects running by the LPL as per the visit and discussions findings. Though funding issues are generally available in all construction projects but here in LPL it is repeated issues and impacting much with long payment process starting from payment invoice submission to payment approval and fund release, which is causing significant challenges for contractors, subcontractors, and suppliers involved to the project and ultimately the impact is facing by LPL as the organization with affecting project timelines and profitability.

Contractor : XXX Enterprise
Invoice Status

Update On: 11 Dec 2023

Sl	Construction Works Invoice Summary	Progress Status		Bill Amount (Tk.)			Remarks	Delay (days)
		% Worked	% billed	Submitted	Paid	Due		
1	Invoice Approved: Upto 37 R/A	100%	95%	(confedential)				
2	Invoice Approved: 38 R/A bill	100%	95%				approved, waiting payment	67
3	Invoice in Process: 39 R/A bill	100%	95%				approval on process on process	62
4	Invoice in Process: Non Schedule: Staging Works	100%	100%				approval on process on process	105
5	Invoice in Process: Non Schedule: Civil Works	100%	100%				approval on process on process	105
6	Invoice in Process: Non Schedule: CC Works	100%	100%				approval on process on process	85
Works Completion vs. Estimated **Due in Total**								

Note:
** **Construction works related with invoice are** completed by the Civil Contractor. Other finishing touch works & Non-Schedule Pattent Stone works for Vinyl flooring at Level 12 & 13 are getting delay due to submitted invoice approavl and payment delay. Possibility to complete the works by 2/3 months but mainly depending on construction materials availability and contractors remaining Payment (Tk. XXXXXXX) to pay.
** **Contractor's Construction Tools** (Roof Hoist, Mixture Machine, Profs etc) could be release based on Pending Finishing Tuch Works & Patent Stone Works completion, as otherwise more difficulties will raise to lifting the Construction materials.

Table-05: Contractor invoice approval delay analysis

By addressing the root cause of payment related problems, the construction projects can become more efficient, transparent, and consistent that ultimately will have positive impact on overall quality. Timely and fair payments with available funding will not only improve the financial health of contractors, subcontractors, and suppliers, but also boost productivity, foster innovation with team motivation by project smooth operation, and finally will stimulate the organizational growth.

3.1.5 Lack of contractor evaluation and proper supervision of the work

Contractor plays significantly a vital role on quality of works. In alignment with the completion the task, their main job is to ensure that everything falls into place according to the overall project quality plan. In a nut shell, contractor makes sure that the project is finished on time with quality and no wastage of materials and resources. Against the importance, value the contractor is really missing in the LPL organization culture which I feel throughout my working period with LPL and I deeply realized during the practicum works when I analyzed the contractor and their team involvement with the activities. Most of the cases, it is found that contractor does not own the awarded works at site. They are just doing the works based on the instructions given by the LPL Engineers, where as to have the proper workmanship quality contractor ownership is very vital as they are directly involved with physical works and supplies. Several site activities and supplies are limited with few selected contractors and suppliers, and most of them are demotivated with current organizational culture where there is no regular evaluation process, no proper guidance, and no inspiration with faster payment process and with reasonable payment terms. Finally, their inspiration to work is getting decay day by day immediate after starting the projects works and having badly impacted the project quality outcomes. Thus, continuous evaluation process and proper supervision is actively necessary to secure the project's quality as well as the safety against any construction defect.

3.1.6 Lack of Quality Management System

Throughout the practicum visit and observations it is also a vital finding that LPL construction projects are governing with no established quality management system and that is the worst source of various defects and issues, including poor workmanship at different phases of the project, increased instances of rework, compromised project outcomes, cost overruns, safety hazards and challenges in meeting regulatory and client requirements. Each and every project is mostly running as quality standard set and followed by the individual project in charge. Even the changes on completion activities are getting in place as clients demand but with no proper evidence, approval and documentations to reimburse the cost incurs for the change request. Fig-10 captured from the site XXY and placed here as an example that displays materials & time wastage with constructed wall demolish & reworks just to obey the clients' request at site.

To satisfy the clients, changes might be necessary but the changes should be with proper authorization and documentations that must be comply the established quality management system, which does not exists with current construction culture and thus materials and time wastage is mostly common on construction site with demolish and repeated reworks. In parallel with the wastage, demolish and reworks are also having badly impact on involved working-supplies team demotivated to works and supplies.

Brick wall demolish and rework

Brick wastage stock from demolish works

Fig-10: Materials & time wastage issues with demolish and rework at complete works

3.1.7 Lack of Employee & Team Commitment

To make my practicum works more elaborate and collaborative, I have also visited LPL completed projects, communicate with clients those are end user of the LPL product and with the completed project employees those shifted to other projects. My intension was to explore and understand both, the employee involvement with their works and the client's feedback on the LPL Product, as I acknowledged from the study and experience that employee involvement and commitment, client's feedback plays vital role to achieve the quality target. Find is that most of the employees are not fully involved with their own service, not really committed to pay attention on own responsibility and thus not maintaining the quality standards on works. A motivated and engaged team work environment is not established within the organization which are very essential to adopt the changes and accordingly to overcome the quality challenges. It is a clear finding based on the overall discussions that employee ownership & commitment is completely absent even to the routine works and thus, construction sites are getting series of quality issues, even raising complaints from clients immediate after the site handover and getting decay the brand reputation. Fig-11 is captured during the handover project XYY visit and placed here as example that displays the numerous quality complaints from the clients at completed site. This is raised due to the poor quality finishing works where LPL employee supervision was there but with no ownership/involvement/commitment to quality service.

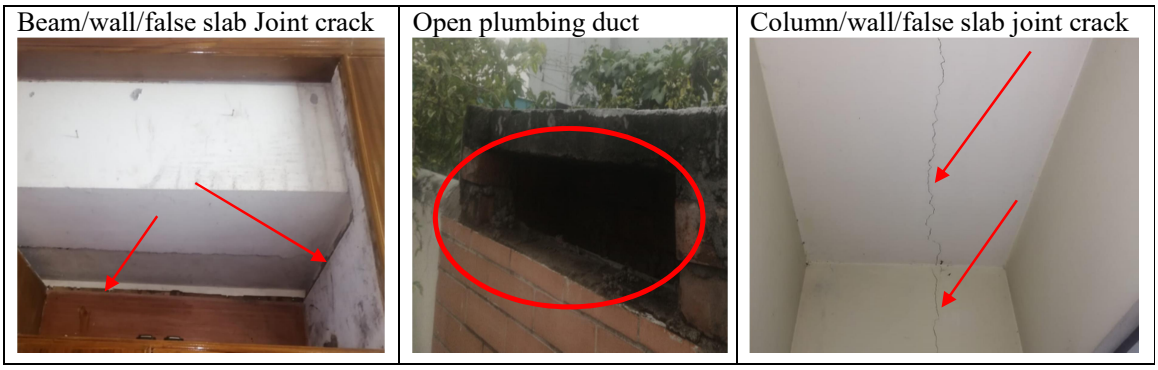


Fig-11: Quality issues at construction completed and handover project site

3.1.8 Poor Communication and Collaboration

As Labaid as a whole is a group of company and LPL is a functional organization within the group, thus LPL is required to extended construction support where it is needed to facilitate the construction, like LPL construction team plays an active role to other departmental construction under the labaid group. Thus, I have also visited and communicated with the construction project financed by the group but construction project oversees by the LPL, where I find ineffective communication and collaboration among project teams, functional department and related stakeholders those are involved with the project as end user. Poor communication and collaboration are leading misunderstandings, violations, construction errors, demolish, monetary penalties and work stoppage in the projects. Fig-12 captured from the site-XXZ and placed here as an example that displays the work stoppage with authority approval issues at site.

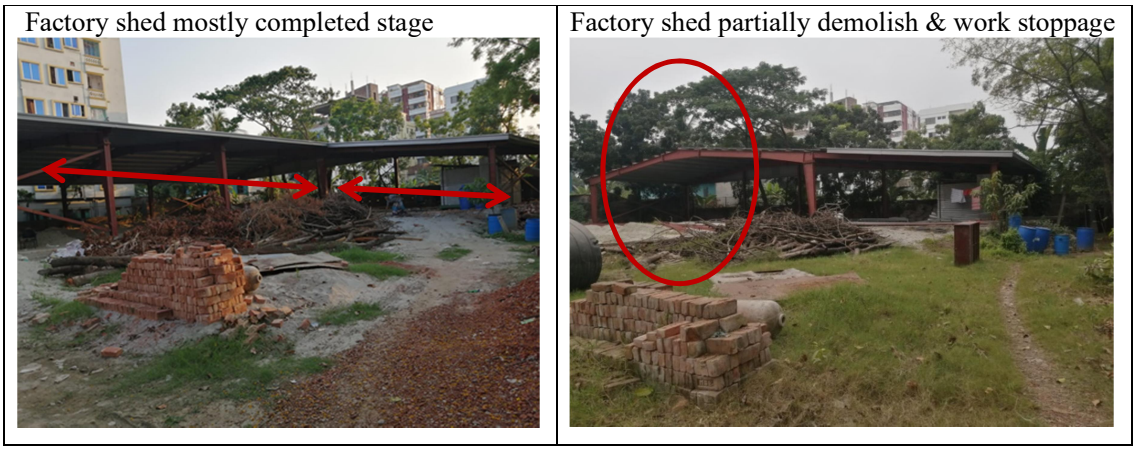


Fig-12: Work stoppage and structure demolish issue at authority approval awaited site.

Upon detailed problems are bold line issues exists with LPL and explored to let understand the management about its impact that to enforce the implementation the TQM and its principle as the tools and techniques to eliminate the existing issues and to set quality as culture throughout the organization.

Accordingly, to understand the significance and long term impact of TQM practices in labaid properties limited, that can help organizations enhance their operational efficiency, product/service quality, and overall competitiveness, I placed a sum-up on TQM and its principals in a nutshell to the management that i realize from my MPSM study through the courses PSM505 and PSM523.

3.2 TQM and its Principles

TQM stands for Total Quality Management, is rooted from Japan in the 1950s and widely get popularity in the 1980 and 1990s. TQM is not a specific set of rules but a management philosophy and approach that focuses on continuous improvement, customer satisfaction, and the involvement of all employees in comprehensive quality process.

TQM aims to integrate quality principles and practices into every aspect of an organization's activities. It allows the input of ideas from all project participants to decreasing the tendency of error during the completion of projects. Key elements and principles associated with TQM are as followings:

- Customer Focus: Total Quality Management (TQM) focuses on understanding and meeting or exceeding the customer expectations. Organizations adopting TQM seek to deliver products and services that consistently satisfy customer needs and requirements.
- Continuous Improvement (Kaizen): TQM places a strong emphasis on continuous improvement of processes, products, and services. This involves an on-going effort to identify opportunities for enhancement, eliminate defects, and optimize efficiency.
- Employee Involvement: TQM recognizes that employees are integral to the success of quality management. All members of the organization, from top management to frontline workers, are encouraged to actively participate in identifying problems, suggesting solutions, and contributing to the overall improvement of quality.

- Process-Oriented Approach: TQM adopts a process-oriented perspective, focusing on understanding, managing, and improving key processes within the organization. This approach helps in achieving consistency, reducing variation, and enhancing overall efficiency.
- Supplier Relationships: TQM extends the scope of quality management beyond the organization to include suppliers. Establishing strong relationships with suppliers and collaborating to ensure the quality of inputs is essential to TQM.
- Leadership Commitment: Successful implementation of TQM requires strong leadership commitment. Leaders set the vision for quality, create a culture of continuous improvement, and allocate resources to support quality initiatives.
- Training and Development: TQM recognizes the importance of employee training and development to build the skills necessary for quality management. Continuous learning is considered vital for adapting to changing conditions.
- Benchmarking: TQM encourages organizations to compare their performance with industry benchmarks and best practices. Benchmarking helps identify areas for improvement and promotes learning from successful practices in other organizations.
- Prevention vs. Inspection: TQM emphasizes preventing defects and errors rather than relying solely on inspection and correction. The goal is to build quality into processes from the outset rather than identifying and correcting problems after they occur.

Based on the sum-up placement to the management about explored problems and TQM as the proposed tools to implement, it is discussed and worked as evidence-based insights to decision-makers, managers, and practitioners on the benefits of adopting and implementing TQM principles to the organization. Thus advised to proceed with related principals those are appropriate to practice with the construction cycles. My organization supervisor advised and guided me a lot to have the motivated decision taken by the management.

3.3 Key TQM Principals to Practice relevance with LPL Construction

LPL management is very much aware about the quality improvement in the construction projects as it is highly potential in today's competitive market. The term 'quality' and its concepts are vital for the construction industry everywhere as there is not much time or resources to waste by any means. Summarised explored problems in section 3.1 and even the simple reworks and delays are not expected and acceptable in any stage of construction considering the current sustainable trends. Thus, the management and LPL as organization feels that the construction project needs to focus on the improvement of quality through active application of tools and process. Like, TQM and its principles relevance with LPL construction processes are to be practice to ensure the quality, improved efficiency and better outcomes as a whole for the organization.

Accordingly, the implementation of TQM & its key principles is initiated to the organizational construction cycle further discussion with workplace supervisor, colleagues, departmental Managers, and other potential stakeholders, to realize and understand the captured poor area, the needs and expectations, to analyse and find relevant key principals of TQM, those are viable to practice into various aspects of LPL construction project planning, execution and management.

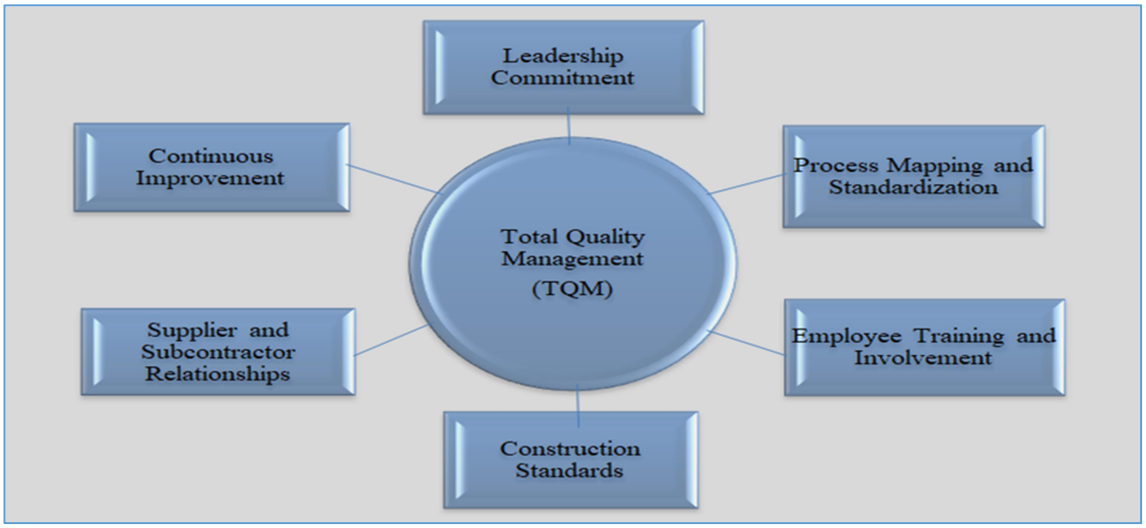


Fig-13: Viable TQM elements to implement with LPL construction cycles

Fig-13 displays the accumulated findings of TQM Principles those are initiated to implement and actively practice them in existing and new construction cycles to ensure the quality based projects as a whole, and create an immense competitive advantage to the organization.

3.3.1 Leadership Commitment

As per the findings on section 3.1, quality problems are observed mostly on each construction site. Root cause of few common issues relates that contractor, supplier & even employees are not much aware and serious about the project quality objectives. In this regards, series of brief discussion carried with the work place supervisor about the importance and applicable way out of the quality improvement from existing trend of construction. Summary finding is, the clear message about the quality to be communicated as a goal to the organization top-down, and accordingly following necessary action points are outlined as part of leadership commitment to quality and establish as organization culture.

- Demonstrate strong commitment from top management to hold TQM principles.
- Set clear quality objectives and communicate them throughout the organization
- Establish a quality policy that aligns with the organization's objectives.
- Lead by example and promote a culture of accountability and responsibility.

3.3.2 Continuous Improvement

Based the findings on section 3.1, repeated quality issues are facing mostly on each construction site. Involved supplier & employee attitude seems habituate with current trends and thus no improvement with learning from the fact is acting. To eliminate the repeated errors, continuous improvement culture is highly essential to practice throughout the organization. Thus, it is prioritizing to adopt and practice the fundamental concept of quality management involving following efforts along with ongoing construction phases.

- Implement a culture of continuous improvement, where all employees are encouraged to identify and suggest improvements.
- Implement improving tools like quality circles, brainstorming sessions, and feedback mechanisms to address specific issues and get ideas for improvement.
- Implement regular assessment on construction processes and workflows to identify and eliminate the errors.

3.3.3 Employee Training and Involvement

As per the findings detailed in section 3.3.1, numerous issues are rising as quality management system, process development and technological changes are not adopted by the existing employee those are involved with construction processes. Necessary training with the global changes and modern facilities are not available but, these are much important to strengthen their involvement in aligned with organizational goals. Skilled, motivated and engaged workforces are always key assets for an evolving construction organization. Thus, it is prioritized to practice following actions related to employee training & development parallel with construction process to ensure the quality improvement & long term success.

- Provide training on TQM principles and methodologies for all levels of employees to empower them with improving their skills. Like Fig-14 displays employee training visits on certified green building project as part of the practicum.

Fig-14: Field visit as a part of employee training on green building.

- Encourage teamwork, team-building activities to strengthen relationship and collaboration to enhance problem-solving capabilities.
- Encourage active participation and involvement of employees in decision making process and quality improvement initiatives.
- Foster a culture of continuous learning and improvement in pursuing further education or specialized training.

3.3.4 Strengthen Supplier and Subcontractor relationship:

Building strong relationships with suppliers and subcontractors is essential to ensure the successful and timely completion of construction projects with quality inputs and thus following effort and strategies are prioritized to practice.

- Clearly communicate quality requirements to suppliers and subcontractors.
- Identify and establish long-term relationships with reliable suppliers who can ensure the consistency and quality materials supply on time.
- Collaborate with suppliers to improve the quality of materials and services to achieve mutual benefits.
- Evaluate and select suppliers based on their ability to meet quality standards and deadlines, Fig-15 captured the supplier performance evaluation as part of the practicum.

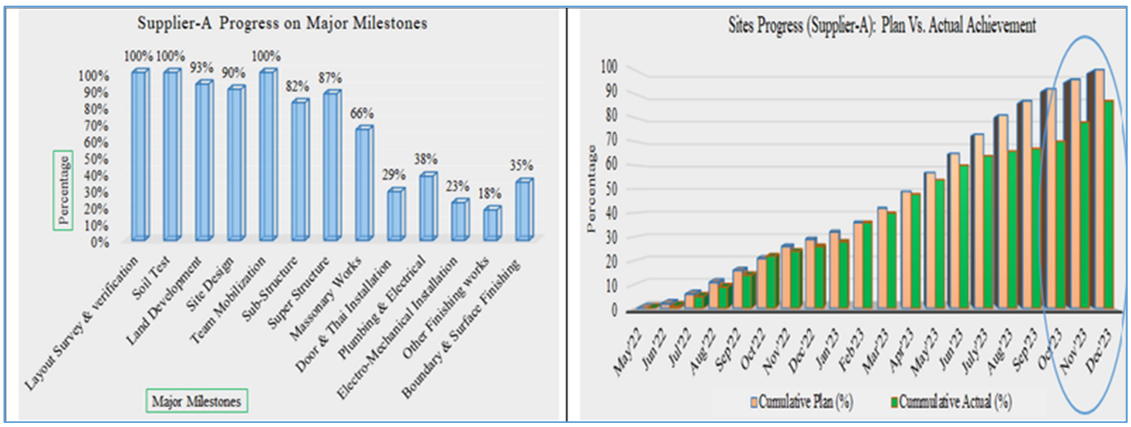


Fig-15: Supplier-A performance evaluation

- Develop clear and comprehensive contracts in terms of price, delivery and payment to avoid misunderstandings.
- Establish fair and timely payment practices that encourage suppliers to prioritize the projects supplies with quality.

3.3.5 Process Mapping and Standardization:

Few common issues are visible due to no proper documentation practices to the projects. Most construction works are getting started with no proper documentations and construction protocols related with site detail design, authority approval, full package schedules, safety guidelines, change requests and quality control measures, which all are limiting standard construction practice, resulting various disputes and difficulties at site, and getting decay the brand image for the organization as a whole. Thus Process mapping and standardization are prioritize to establish as construction practices that to enhance efficiency, quality, and work consistency across the construction projects and thus following dynamic approaches are initiated to practice with the changing needs and challenges of the organizational construction process.

- Break down the construction activities into distinct processes and clearly outline them to identify the areas for further improvement.
- Use key performance indicators (KPIs) to monitor and measure the effectiveness of construction processes and the team involvement, as Fig-16 displays the KPI monitoring result about the impact of reduced labor productivity to the organization that is measured as part the practicum.
- Standardized project documents and communication protocols that include defined roles, responsibilities, and deliverables, quality standards, reporting formats, meeting schedules, and channels of communication.

- Standardize the selection of materials and specifications to ensure consistent quality and supply facilitates efficient.
- Regularly review and update the processes based on lessons learned and industry best practices.

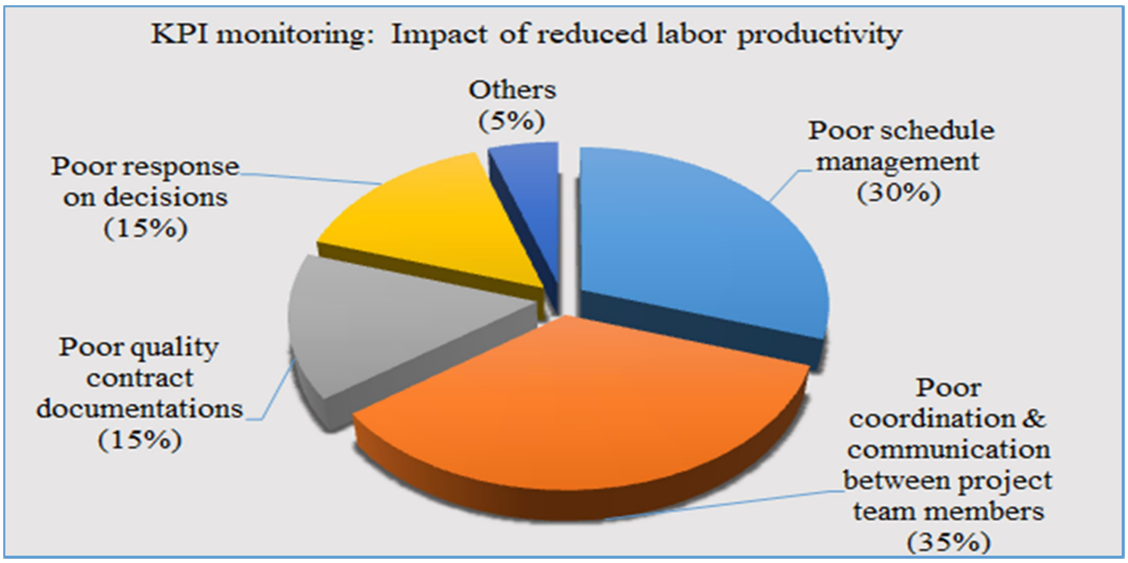


Fig-16: KPI monitoring: Impact of reduced labor productivity to the organization

3.3.6 Construction Standards:

Construction Standards are the specific quality factors to maintain in construction sector. As almost each construction projects are unique in nature, construction standards are must need to implement and thus below factors are prioritized to practicing from the projects initiation.

- Structural detail analysis, specific site drawings, specifications are to be validated by experienced professionals (Architects, Engineer, consultants)
- Construction quality codes and standards (BNBC, ACI) are to be strictly followed on each construction phases with supervision by qualified Professionals.
- Design professionals must be familiar with construction materials and techniques that constructors and site representative are using in the project.
- Standards safety measures to be outlined in regards of construction nature to practically establish on each project site.

3.4 Observations on TQM Practice to LPL

Through the TQM practicum, my personal knowledge gain and understanding relates that the empowered employee, team and management thought to be consistent towards the quality gain in LPL which might result positively to practice the TQM throughout the group that to achieve indeed sustainable business growth. In such cases, following future strategies and potential developments to be prioritized those I realized as practicum observations.

- Top or senior management commitment and involving themselves to keep continue implementing TQM and its principles to the organization.
- In parallel with the employee, all level of workers to be involved with the TQM principles and motivated them to improve their performance through effective communication and improved coordination.
- The organization must focus on the relationship between project quality management and supply chain management for the achievement of better organizational performance.
- Education and training in TQM theory and practice to be placed at all levels of engineering, architecture and construction team and in all phases of design, construction, and operation, to develop the competitiveness.
- Taking such measures to achieve high quality is the cost of money but management should not consider this only as an expense rather an investment for the organizations to achieve business goals in the long run through the quality construction.
- Establish policies and procedures to prevent unethical behavior, conflicts of interest, and non-compliance with quality standards to encourage a culture of integrity, honesty, and -accountability throughout the organization.
- Establish lesson learned database prepared through the feedback from current and previous projects and practice to the organization to eliminate repetition of defects.

Chapter 4

Conclusion and Recommendations

4.1 Conclusions:

Labaid Properties Limited is rapidly growing in construction sector as real-estate and construction development Company, processing from the raw materials and service supplies to build the livings for people as finished products and as a service provider to the end user. To be a pioneer in the competitive market, quality product and service is the ultimate target, thus the LPL management accepted the viable TQM Principles practice to continue with the construction cycles, as a whole to the organization for ensuring the product and service quality that implies costs and time saving in many ways.

Though the construction cycles are time being to reach its ending, the TQM practices in ongoing phases of construction cycles during the practicum period does makes the visibility of changed quality culture at least with involved employees that is reflecting like a harmony of cultural shift to the employees. Accordingly, the management gets the clear understanding that TQM has to be practiced on every step, starting from the project initiation to till the construction project completion to achieve its ultimate goals.

Through the initiated practicum benefits, it is clear that TQM and its principles is not only applicable to direct manufacture-based organization but also viable to adopt in the construction-based organization as TQM bring the changes mainly through the process development and standardization, employee involvement and collaboration, teamwork and co-operation those imply quick response to changing requirements and quality concerns.

In summary, adopting and practicing the TQM principles to the construction project is a cultural shift within the organization and a commitment to continuous improvement. By

practicing the TQM, construction companies like LPL can achieve the quality expectations that enhance project outcomes, reduce costs, increased customer satisfaction and brand image that ultimately promote the company's long-term success in today's competitive business landscape.

Accordingly, through such practicum student gets the opportunity to achieve the practical knowledge to align the academic study in the field with the direct guidance of relevant supervisors that tends the practicum as the personal gain to get its positive impact and benefits throughout the professional life.

4.2 Recommendations

Practicum identified a couple of inhibiting issues, placed here in below as recommendations that must address on an integrative and comprehensive approach to cultivate the TQM and its principle effectively on any construction based organization.

- TQM is not a one-time initiative but a continuous process of improvement that requires commitment and dedication from all levels of the organization.
- Organizations should establish the employee succession planning on experienced employees retire or leave which generally create challenges in maintaining the consistent of quality works and smooth transition of knowledge and skills has the vital importance on sustainable quality performance and its consistency.
- Relevant Contractor and Supplier firms also should have formal TQM plan practices that will enhance the quality tendency throughout the works and supplies to the organization.
- Contractors and suppliers must need to bind all parties together including their subcontractors and third parties by mutually set and internalized the project goals, firmly acting as quality focused team to ensure end-to-end quality management, mitigate quality risks and foster better outcomes for the organization as a whole.