

Cooperative Education Report

Leveraging International Partnerships for a Sustainable Energy Future: Insights from Coslight India's Role in Advancing Renewable Energy in Nepal

Written by: Ishan Tiwari

Student ID: 6408040017

This report is submitted in partial fulfillment of the requirements for Cooperative Education, Faculty of Business Administration, Academic semester 3/2023

Siam University

Title: Leveraging International Partnerships for a Sustainable Energy Future: Insights

from Coslight India's Role in Advancing Renewable Energy in Nepal

Written by: Ishan Tiwari Student Id: 6408040017

Department: Bachelor of Business Administration (Marketing)

Academic Advisor: Bikash Dahal

Oral Presentation Committee

(Bikash Dahal,)

Academic Advisor

(Mr.Amit Segal)

Job Advisor

Ashutosh Midra

(Mr. Ashutosh Mishra)

Cooperative Education Committee

(Assistant Professor Maruj Limpawattana, Ph.D.)

Man of sh

Assistant President and Director of Cooperative Education Department

Project Title: Leveraging International Partnerships for a Sustainable Energy Future: Insights

from Coslight India's Role in Advancing Renewable Energy in Nepal

Author: Ishan Tiwari

Advisor: Bikash Dahal

Degree: Bachelor of Business Administration

Major: Marketing

Credit: 5 credits

Faculty: Business Administration

Semester/Academic year: 3/2023

Abstract

This report highlights my internship at Coslight India, focusing on VRLA batteries used in UPS and EV systems. During my time there, I identified key business challenges, particularly inefficiencies in inventory management and delayed order fulfillment, which impacted production and costs. By applying my Business Administration coursework, including knowledge in areas like Finance, Data Analysis, and Business Strategy, I helped address these issues and improve operational efficiency. The experience also provided valuable insights into the renewable energy sector, particularly how business practices in India can inform strategies for the renewable energy industry in Nepal.

Keywords: Production, Marketing, Business strategy, Data analysis

Acknowledgment

I sincerely thank Kathmandu College of Management and Siam University for creating this

platform, which enables students to apply their academic knowledge to real-world situations.

Additionally, I would like to thank my Internship Supervisor, Mr.Bikas Dahal, and assistant

professor Dr. Maruj Limpawattana for their unwavering support, direction, and oversight during

the Co-op Program.

I would like to express my heartfelt gratitude to Coslight India for providing me with this

invaluable internship opportunity. This experience has been a pivotal moment in my academic

and professional journey, allowing me to bridge the gap between theory and practice in the

dynamic field of renewable energy.

My deepest thanks also go to the entire team at Coslight India. Your warm welcome and the

trust you placed in me by assigning meaningful responsibilities have significantly enriched my

learning experience. I would like to extend a special appreciation to Mr Amit Sehgal, whose

collaboration and valuable inputs have greatly contributed to my professional development.

Lastly, I want to acknowledge the unwavering support of my family and friends. Your belief

000000

in me has been a constant source of motivation, driving me to excel in this endeavor and beyond.

Thank you for always being there for me.

Thank you Sincerely,

Ishan Tiwari

Student ID: 6408040017

3

Table of Contents

Abstract	2
Acknowledgment	ŝ
List of Figures	<i>6</i>
List of Acronyms	<i>6</i>
1 Introduction	7
1.1 Company Milestone	<u>9</u>
1.4 Coslight's Strategy for Competitive Advantage and Growth	
1.5 Strategic Analysis of the Company	11 12 14
2 Intentions to join the company	
2.1 Organizational Structure	17
2.2 Statement of the Report	18
2.3 Job description and responsibility	
2.4 Contribution as a student	19
3 Learning Process	22
3.1 Indication of how I successfully solved the problems	27
3.2 Examples of how such problems were solved	23
4 Conclusion	25
4.1 Things learned during the internship	25
4.2 Theoretical to Practical	25
4.3 Self-assessment as a professional	26
4.4 Benefits from the internship for your future career:	
Bibliography	
Annendix	20

Annex 1.1 (Internship Completion Certificate)	30
Annex 1.2 (Tender: Letter of Acceptance)	
Annex 1.3 (Coslight Barcode system)	
Annex 1.4 (My photo in Coslight Factory during internship period)	31
Annex 1.5 (Me with the Top Management of Coslight)	31



List of Figures

Figure 1: Milestone of Coslight

Figure 2: Coslight company information

Figure 3: Coslight Portor's Five Forces Analysis

Figure 4: Coslight Organizational Chart

List of Acronyms

VRLA Batteries: Valve-Regulated Lead-Acid Batteries UPS: Uninterruptible Power Supply

EV: Electric Vehicle

OEMs: Original Equipment Manufacturers ODM: Original Design Manufacturers UL:

Underwriters Laboratories

CE: Conformité Européenne

IEC: International Electrotechnical Commission HR: Human Resources

Chapter 1 Introduction

Coslight India is a Tier-1 Manufacturer and Global Supplier of High Quality & High Performance Lithium-Ion and Advanced VRLA Batteries. Coslight India is a 100 % subsidiary of Coslight International Group, a listed Hong Kong stock exchange company. Coslight India started its operation in India in 2007 and established a manufacturing plant in Una (Himachal Pradesh).

Coslight India-Core Business activities include lithium-ion and advanced VRLA, battery manufacturing, and the supply of customized energy storage solutions for telecom power infra. Coslight India is solely responsible for Sales and Service support for India & Asia Pacific Region from its Gurgaon office. Customer Satisfaction is the core value, the company provides aftermarket and customer support services to customers through our field presence in India and sales networks worldwide.

Coslight India is committed to developing and delivering High-end customized Energy storage solutions for Solar/UPS/EV & Smart Mobility/Smart cities/ESS segment OEMs, ODM & System Integrators. Government Prefects under' Make in India' initiatives. The Company has embraced our journey of enabling a green future with our innovative and affordable energy solutions for a better tomorrow.

Coslight India's Lithium-Ion/ Advanced VRLA energy storage products are designed best in quality & meet all International Standards & Codification like ISO-9000, ISO 14000, UL, CE, IEC, etc. Coslight has introduced the 2-wheeler (E-Bikes) brand as a Cosbike in the Indian market. The manufacturing unit for the Cosbike setup is in sector 4, Manesar, Gurugram.

During my internship at Coslight India, I had the privilege of being directly supervised by Deputy General Manager, Mr. Amit Seghal. This opportunity allowed me to broaden my knowledge by working across three key departments: Production, HR, and Finance. In the Production department, my primary responsibility was to oversee the production line, ensuring everything ran smoothly and promptly reporting any issues to the Senior Production Manager. I

was also actively involved in quality checks and control throughout the production process, ensuring that the products met the required standards.

In the HR department, I handled the monitoring of employee attendance using an electronic attendance system, as well as tracking half-day leaves and maintaining accurate leave records. Additionally, I was responsible for the Employee Requisition Form, Job Descriptions, and Documentation.

1.1 Company Milestone

These milestones indicate the growth and expansion of Coslight India Telecom Pvt. Ltd., especially in the battery and telecom sectors, and highlight their entry into the electric vehicle market in India.

- 1994 Coslight Founded: Coslight, a company focused on battery technology, was established.
- 1995 Telecom Supplier: Coslight became a supplier of batteries and related technologies to the telecom industry.
- 1999 HK Stock Listed: The company went public by listing its shares on the Hong Kong Stock Exchange.
- 2000 Li-Battery Launched: Coslight launched its first Lithium-Ion (Li-Ion) battery products.
- 2007 Manufacturing Unit Established in India: The company expanded its global presence by setting up a manufacturing unit in India.
- 2010 Li-Battery for Telecom Launched: Coslight introduced specialized Lithium-Ion batteries designed specifically for telecom applications.
- 2012 No. 1 Li-Battery Supplier in Telecom: The company achieved the top position as a supplier of Lithium-Ion batteries in the telecom sector.
- 2016 More than 2000 MWh Installed: Coslight reached a significant milestone by installing over 2000 megawatt-hours (MWh) of battery capacity.
- 2017 10th Anniversary & New Plant Inauguration: On its 10th anniversary, Coslight inaugurated a new lithium battery manufacturing plant in Manesar, India.
- 2018 Lithium-Ion Battery Assembly in Una: The company began assembling lithium-ion

batteries in Una, Himachal Pradesh, India.

2020 - Cosbike Brand Introduced: Coslight launched "Cosbike," a brand of electric two-wheelers (E-bikes), in the Indian market.

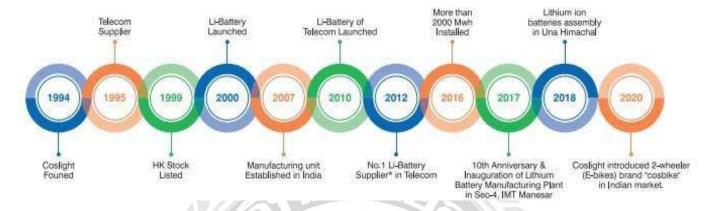


Figure 1: Milestone of Coslight

1.2 Vison of Coslight

Meet and Exceed Customer Expectations with Customized and Unique Hybrid and Energy Storage Solutions by using Flexible Architecture and proficient technology application and advancement. (Coslight India Telecom Pvt. Ltd)

1.3 Mission of Coslight

Consistently Maintain and Constantly Improve Product Quality, Performance, and Operational ease with uncompromising alignment to our core values while ensuring the engagement of enthusiastic employees waking towards exceeding Customer Expectations globally. (Coslight India Telecom Pvt. Ltd)

1.4 Coslight's Strategy for Competitive Advantage and Growth

Coslight India's strategy for competitive advantage is closely aligned with its intensive growth strategies, ensuring synergy between its market position and operational expansion. This alignment maximizes Coslight's organizational performance and strengthens its role within the

renewable energy and telecom infrastructure markets. The company's generic competitive strategy focuses on offering customized, innovative, and economically viable energy storage solutions, tailored to meet diverse client needs across global markets, including India, Europe, and the Asia-Pacific region. Coslight India's emphasis on customization and energy efficiency differentiates its products in the competitive field of energy storage and hybrid solutions. (Coslight India Telecom Pvt. Ltd)



Figure 2: Coslight company information

Coslight's intensive growth strategies prioritize market penetration through strategic partnerships, particularly with telecom companies, as well as by developing cost-effective, environmentally sustainable solutions. This focus on expanding reach within the telecommunications and renewable energy sectors aligns with its mission to exceed customer expectations through advanced technology applications and adaptable product architecture. Supporting strategies, such as product development in VRLA and lithium battery technology, enhance Coslight's competitive edge by continually improving product quality, performance, and ease of operation. This approach solidifies Coslight India's position as a leader in energy storage, ensuring growth while meeting global demand for sustainable energy solutions.

1.5 Strategic Analysis of the Company

During my analysis of Coslight India, I undertook a comprehensive strategic review using tools like SWOT, PESTEL, and Porter's Five Forces to gain a deeper understanding of the company's market positioning, challenges, and opportunities. Each framework offered unique insights that could guide Coslight's approach to both regional and international markets in the renewable energy sector.

1.5.1 Porter's Five Forces Analysis



Figure 3: Coslight Portor's Five Forces Analysis

Porter's Five Forces, I understood how Coslight navigates its competitive landscape. The high initial investment and expertise required in the battery manufacturing sector serve as barriers to entry for new competitors, though government incentives for clean energy initiatives could fuel emerging competition. Supplier power is strong due to reliance on specialized materials, making cost management critical, while buyer power remains high, with customers in the telecom and renewable energy sectors seeking affordable, customizable solutions. The threat of substitutes, including alternative storage technologies, remains moderate but calls for continuous innovation,

while intense rivalry with other established and local firms requires Coslight to stay ahead through efficient operations and advanced product development. (Porter, M. E. (2008)

1.5.2 PESTEL Analysis

ELEVANT ISSUES AND EFFECTS
Government regulations related to clean
nergy and emissions influence battery
chnology development and create growth
pportunities in green energy.
Tensions in global trade, especially
garding China-based companies, may affect
oslight's ability to compete in certain markets
nd its access to government contracts-
Policies promoting renewable energy and
ectric vehicles offer favorable growth prospects,
though dependency on government incentives
nn pose risks if policy changes occur.
Rising demand for EVs and energy storage
plutions, fueled by economic growth and energy
eeds, positively impacts Coslight's market.
Fluctuations in raw material costs (lithium,
ad) impact production costs. Currency exchange
tes also affect profitability in the international
arket
Economic downturns could reduce capital
pending on telecom infrastructure and large-scale
attery systems, affecting Coslight's revenue
reams.
con contact the co

SOCIAL FACTORS

level of education, conditions, mobility, social attitudes, religious beliefs,• socio-cultural changes, etc.

- Rising public and corporate awareness of Population and demographic changes, health climate change drives demand for sustainable social energy solutions, which benefits Coslight.
 - Increasing urbanization and interest in EVs and renewable energy drive demand for energy storage solutions, positioning Coslight to capture emerging markets and adapt its product offerings.

TECHNOLOGICAL FACTORS

technologies, technological• potential changes in standards, etc.

- Advances in battery technology, especially Changes in the availability or price of new in EVs and telecom sectors, require Coslight to technological infrastructure, invest in R&D to remain competitive.
 - Automation and advanced manufacturing technologies can improve efficiency and costeffectiveness, and Coslight's investment in these will be crucial maintaining competitiveness.

LEGAL FACTORS

Labor laws. relevant court employment regulations, etc.

- Coslight must adhere to international cases, standards (ISO 9000, UL, CE) for product quality, especially for batteries used in telecom and EVs. This creates additional compliance costs but also serves as a barrier for lower-quality competitors.
 - Protecting R&D innovations is crucial as the company develops advanced energy storage solutions, making patent protection important for maintaining competitive advantages.

ENVIRONMENTAL FACTORS

energy Climate. weather. regulations, etc.

- The focus on eco-friendly energy solutions consumption aligns with Coslight's commitment to green practices and will be key in regulatory compliance and market positioning.
 - Access to materials like lithium and cobalt, which are finite and concentrated in specific

regions,	poses	environmental	and	sourcing
challenge	es for ba	ttery production.		

With the **PESTEL analysis**, I was able to see how Coslight's environment supports its ambitions in clean energy innovation. Political and economic factors—like supportive energy policies and shifting costs of raw materials—play a critical role in shaping its operations and strategic moves. Social trends, particularly the global push for sustainability, further encourage Coslight to prioritize green practices, while technological advances in energy storage present exciting prospects for innovation. Regulatory and environmental considerations, on the other hand, demand high standards of compliance, creating both challenges and opportunities for differentiation in the market (PESTEL Analysis Framework. (2021).

1.5.3 SWOT Analysis

Strength		Weakness		
•	More than 30 years of Experience.	•	Difficulty getting trained skilled human	
•	Backed by big investors.	resourc	es in the location of the factory.	
•	Factory in space of 88088 Sqmt.		Dependence on Key Suppliers.	
•	Parent company listed in Hong Kon	g•	Limited Market Presence in Emerging	
Stock	market.	Market	S	
•	Advanced R&D capabilities	100		
•	Collaboration with leading technolog	у		
compa	nies			
Oppor	rtunities	Threat	cs	

Growing Demand for EV Batteries.	 High competition from both international 	
Opportunity to develop and market and domestic companies		
advanced energy storage systems for	 Backed by Chinese investors the 	
residential and commercial use.	company has to go through a third party for	
 Possibility to invest in next-generation 	government projects.	
battery technologies such as lithium-ion, solid-		
state, and advanced lead-acid batteries.		

The **SWOT analysis** highlighted Coslight's strengths, such as its established presence and advanced R&D capabilities, which are reinforced by a robust market reputation and strategic investor backing (Indian Energy Storage Alliance. (2024)). These factors give Coslight a competitive edge, especially as it seeks to expand its battery solutions across various sectors. Yet, challenges like dependence on key suppliers and limited skilled labor at some factory locations underscore the importance of strategic planning. Meanwhile, rising demand for electric vehicle (EV) batteries and advanced energy storage solutions present significant growth opportunities, even as high competition and regulatory barriers pose potential threats.

Chapter 2 Intentions to join the company

I chose Coslight India for my internship for a variety of reasons, including professional and personal ones. My family owns a company in Nepal's renewable energy market to provide the nation with environmentally friendly electricity options. Coslight India's primary objective aligns with our family businesses concentrated on producing cutting-edge solar batteries.

I want to get important insights into the most recent developments in solar battery technology throughout my stay at Coslight. My technical expertise will increase and I'll get practical abilities from this experience that I may use straight away to do my work at home. Working with experts in the field at Coslight will enable me to better understand the intricacies of state-of-the-art energy solutions, which I can then modify and use in our Nepalese context.

This internship is a unique opportunity to exchange knowledge. I'm excited to share the experiences of our family company in Nepal and to provide a platform where we can all benefit from one another's knowledge. We might be able to improve the efficiency and positive impact of our clean energy projects by using new battery technology and green practices that I learned about at Coslight.

In essence, an internship with Coslight India offers me the opportunity to combine global expertise with local fervor, which means it's more than simply a step in my career. My goal is to advance the sustainable energy industry in Nepal and grow our family company by utilizing Coslight's resources, knowledge, and innovative ideas. It appears that our collaboration will have a long-term positive impact on constructing a sustainable future for our region and beyond. (Nepal Electricity Authority, 2024)

2.1 Organizational Structure

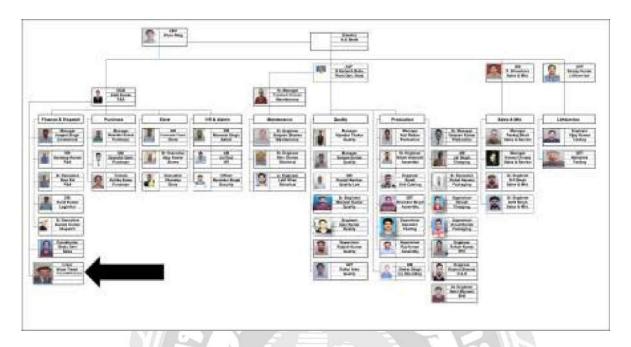


Figure 4: Coslight Organizational Chart

Organizational structure is that which lays out how work is assigned, coordinated, and supervised within a company, as well as who is obliged with what and how they are related to each other at work. The organizational chart of Coslight India is of a hierarchical type. This includes various levels of management with defined roles and responsibilities at every level. The presence of Senior and Junior Associates in each department allows specialization and management across various parts of the company. Including mentors in the structure highlights how much the company emphasizes its development and support. The Organizational Chart shown below correlates mostly with staff members only as the work and labor force are not included in the chart.

My role within the organization spanned three departments: Production, Human Resources, and Finance. I was actively engaged in various tasks as directed by my senior managers. Each day, before leaving the factory, I made it a point to report to the Heads of the respective Departments. Additionally, I provided a weekly update and report to my company supervisor, Mr. Amit Seghal detailing the work I had completed and the insights I had gained.

2.2 Statement of the Report

This report investigates the role of international partnerships in advancing renewable energy solutions for developing countries, focusing specifically on the collaboration between Coslight India and Nepal's renewable energy sector. By examining Coslight's innovations in solar battery technology and their application in the Nepali market, the study highlights the potential for technological and knowledge transfer to overcome local challenges and promote sustainable energy infrastructure. Ultimately, this research seeks to offer insights into how global collaborations can not only foster sustainable development in Nepal but also contribute to broader energy independence and environmental sustainability goals in similar regions.

Alongside the primary goal of Co-Operative Education Studies, which is to acquire practical experience in a professional setting while applying theoretical knowledge gained in coursework, there are several additional objectives. These include:

- 1. Gain valuable insights into advanced solar battery technology.
- 2. Enhance technical skills and acquire practical knowledge applicable to my family's renewable energy business in Nepal.
- 3. Collaborate with experts at Coslight India to understand cutting-edge energy solutions.
- 4. Adapt and implement new technologies and practices to improve clean energy projects in Nepal.
- 5. Merge global expertise with local passion to advance sustainable energy practices.
- 6. Contribute to the mission of providing environmentally friendly electricity and supporting the growth of our family business.

2.3 Job description and responsibility

During my internship at Coslight India, I actively contributed to several key areas across multiple departments, leveraging my educational background and keen interest in renewable energy. My role involved hands-on experience in production, quality assurance, HR, and finance, allowing me to gain a comprehensive understanding of Coslight's operations and contribute meaningfully in each area (Annex A1.1 (Internship Completion Certificate).

In the Production Department, I was responsible for monitoring the production line, ensuring smooth operations, and addressing issues in real time to support efficient output. I contributed to quality control processes, performing rigorous checks to ensure products met the company's high standards and complied with international certifications like ISO-9000 and ISO 14000 (International Organization for Standardization. (2020)). My involvement helped maintain production quality and minimize potential disruptions in the line, ultimately supporting the company's reputation for excellence in energy storage solutions.

In the Human Resources Department, I contributed by maintaining accurate employee attendance records, updating the electronic attendance system, and monitoring leave balances. I also managed Employee Requisition Forms and organized job descriptions, which contributed to a more streamlined recruitment and employee management process. This involvement allowed HR operations to function more effectively, ensuring that the workforce was appropriately staffed, and documentation was up-to-date.

In the Finance Department, my role involved understanding budget allocations and expense tracking, providing me with insights into the financial management aspects of an energy-focused company. I assisted with financial documentation and reporting, supporting cost-effective strategies for production and operational expenditures.

These contributions enhanced my practical skills and understanding of how diverse functions support a unified goal in renewable energy advancement, particularly in adapting cutting-edge technology for sustainable use in developing regions. This experience has equipped me with valuable insights that I aim to apply within my family's renewable energy business in Nepal, fostering a future built on sustainable, high-quality energy solutions.

2.4 Contribution as a student

As an intern at Coslight India, my role spanned three core departments: Production, Human Resources, and Finance. Each department provided me with unique responsibilities aimed at improving operational efficiency, supporting quality standards, and contributing to employee management practices. My work involved a combination of technical oversight, administrative support, and direct involvement in daily processes, guided by departmental managers and my direct supervisor, Mr. Amit Seghal, Deputy General Manager at Coslight.

2.4.1 Production Department Responsibilities

- Production Line Oversight: Monitored daily operations on the production line to ensure uninterrupted flow and promptly addressed any issues or delays by reporting them to the Senior Production Manager.
- Quality Control: Conducted quality checks at various stages of production, ensuring that products met Coslight's internal standards and international quality certifications.
- Reporting: Compiled daily operational reports detailing production status, challenges
 encountered, and measures taken, which were then reviewed with the Production Head and
 shared with my supervisor.

2.4.2 Human Resources Department Responsibilities

Attendance Monitoring: Maintained employee attendance records, updated the electronic system, and monitored attendance compliance, including the tracking of half-day leaves and absences.

Documentation Management: Handled Employee Requisition Forms, updated job descriptions, and organized employment documentation, assisting HR in maintaining accurate records.

Recruitment Support: Assisted in organizing recruitment documents and preparing for onboarding processes, which facilitated smoother hiring operations.

2.4.3 Finance Department Responsibilities

Financial Documentation: Assisted in maintaining records for departmental expenditures and budgeting, gaining insights into cost allocation and budget management within the production process.

Expense Tracking: Monitored routine expenses related to production and HR activities, providing support for efficient financial documentation and reporting.

Production Planning

The role of production planning is very important in the organization, the Production department should have the proper idea of how many units should be made to meet the need. The production should be at most the needed number as stocking the batteries is not a good option hence the extra produced batteries would mean a loss for the company. To plan the number of units to be produced, at the beginning of the month production department meets with the sales department to present the sales forecast, and the number of units is decided according to the forecast and follows the production plan (Appendix A1.0). 1-2% more than the forecast is produced to meet any emergency needs.

2.4.4 Regular Reporting

Each week, I provided my supervisor, Mr. Seghal, with a comprehensive report summarizing my contributions, observations, and insights gained from each department. This routine allowed for structured feedback and continuous improvement in my assigned tasks.



Chapter 3 Learning Process

During my internship at Coslight India, I encountered several business-related problems that affected the overall efficiency of operations. One key issue I observed was the lack of streamlined communication between departments, which often led to confusion and delays in decision-making. For example, there were instances when production schedules were adjusted due to a lack of alignment between the warehouse and production teams. Additionally, I noticed that the manual tracking of raw materials led to frequent stockouts and overstocking, contributing to unnecessary delays in production.

I strongly believe that addressing these inventory management issues should be a top priority during my internship. The inconsistent availability of materials, coupled with the absence of real-time tracking systems, created a ripple effect across the production process and order fulfillment. I suggested that streamlining inventory management could lead to more efficient production, reduce operational costs, and improve order fulfillment timelines. By focusing on optimizing inventory systems, the company could avoid delays and resource wastage, which would, in turn, enhance overall performance. Once these issues were resolved, the company could then turn its attention to other challenges, such as improving cross-department communication and fine-tuning logistics.

3.1 Indication of how I successfully solved the problems

I had the opportunity to work closely with the production team, where I identified inefficiencies At Coslight India, the inefficiencies in inventory management and the resulting delayed order fulfillment were critical issues that impacted the company's operational effectiveness. The inventory process was largely manual, which led to inconsistencies in tracking stock levels, unanticipated stockouts, and excessive overstocking. This lack of real-time visibility resulted in unnecessary production delays, missed deadlines, and escalated operational costs.

To resolve these issues, I introduced a more efficient and reliable solution through the integration of barcode scanning technology. By collaborating with the IT department, I helped implement a real-time inventory tracking system that captured every movement of materials—whether received, used, or dispatched. I used their existing ERP system to integrate my solution so it can be less time-consuming and use less company resources. This allowed the

production team immediate visibility into the status of inventory levels, which minimized both stockouts and overstocking.

In addition, I worked on demand forecasting by analyzing historical data, such as past order trends, production cycles, and material acquisition times from the existing ERP system. I developed a simple but effective inventory projection data, enabling the company to place more accurate and timely orders for raw materials. This significantly reduced the need for rush orders and minimized logistics costs associated with last-minute procurement.

By introducing automation and improving forecasting, I ensured that the right materials were always available at the right time, thereby eliminating the production delays. This approach reduced storage costs related to excess inventory and expedited shipping charges, making the entire process more cost-efficient and customer-focused. (Annex 1.4 Coslight barcode system)

3.2 Examples of how such problems were solved

Previously, Coslight India attempted to address its inventory management issues through manual stock counts and periodic checks. While this method ensured that inventory was reviewed, it was both time-consuming and prone to human error. Employees were required to manually check stock levels and update spreadsheets, but the lack of automation meant that updates were often inaccurate or delayed. This manual tracking system created a gap in real-time visibility, making it difficult for the production and procurement teams to make informed decisions about stock levels.

The company also relied heavily on ad-hoc communication between departments. For example, when materials were running low, warehouse teams often had to communicate through informal channels, such as emails or direct calls, to notify production teams. This resulted in delayed responses and a lack of urgency in securing critical materials. If stockouts occurred, the production team had to adjust schedules based on assumptions rather than real data, which led to production halts and unnecessary time wastage.

In terms of demand forecasting, Coslight India's approach was largely reactive. Forecasting was done manually by analyzing past orders and adjusting future purchase decisions based on gut feeling or historical trends, rather than real-time data. As a result, this often led to either understocking or overstocking, both of which increased storage costs and contributed to wasted

materials.

These methods were suboptimal, and the need for improvement was apparent. My solution, leveraging barcode scanning for real-time tracking and demand forecasting for more accurate procurement. Ensuring that inventory issues were no longer resolved reactively, but proactively and with greater precision.



Chapter 4 Conclusion

4.1 Things learned during the internship

During my internship at Coslight India, I learned a great deal about how businesses operate in the real world, particularly in a manufacturing environment. One of the key lessons was the importance of effective inventory management and cross-functional communication. I gained hands-on experience in identifying and solving operational inefficiencies, such as the challenges posed by manual inventory tracking and delayed order fulfillment. By working closely with the production, IT, and logistics teams, I understood the complexities of aligning supply chain processes with production needs.

Additionally, I gained insight into the corporate culture of a manufacturing company, learning how important it is to understand organizational dynamics and the role of teamwork in achieving business goals. The experience reinforced the significance of adaptability and problem-solving when working in a fast-paced, results-driven environment.

4.2 Theoretical to Practical

Throughout my Business Administration coursework, I gained theoretical knowledge that I was able to directly apply during my internship. For instance, my studies in Business Data Analysis were instrumental in helping me understand the importance of data-driven decision-making. I applied this knowledge when I implemented an inventory tracking system using barcode scanning, allowing for real-time monitoring of materials and products. This not only improved efficiency but also helped reduce costs associated with overstocking and stockouts.

My coursework in Business Strategy and Organization and Management helped me understand the importance of aligning business processes with overarching strategic goals. I applied these concepts when I collaborated with various departments to streamline communication, which led to smoother operations and more effective decision-making. Additionally, my understanding of Business and Digital Technology was crucial in helping me integrate digital solutions into Coslight's inventory management system. I was able to bridge the gap between theoretical knowledge of digital tools and their practical application in a business context. This experience helped me understand the pivotal role that technology plays in improving business efficiency.

4.3 Self-assessment as a professional

The internship at Coslight India was a valuable opportunity for self-reflection and professional development. I gained confidence in my ability to take initiative and tackle challenges, particularly in areas related to operations and project management. My interpersonal and communication skills were tested as I worked with a diverse team of professionals. I learned to adapt my communication style to suit different team members and effectively manage crossfunctional collaborations. Overall, I feel more confident in my professional abilities and am better prepared for future roles in business management and operations.

4.4 Benefits from the internship for your future career

The internship provided several benefits, both in terms of my professional growth and my understanding of business in India. One key takeaway was the realization that businesses in India, especially in manufacturing and supply chain management, face unique challenges, such as managing inventory in a fast-paced and competitive environment. Coslight India's emphasis on operational efficiency, cost reduction, and streamlining communication processes gave me valuable insights into the importance of optimizing internal processes to remain competitive.

In terms of replicating these lessons in Nepal, I believe there are several opportunities to improve efficiency. For example, the insights I gained on inventory management and digitalization can be applied to the many industries in Nepal, where inventory management systems may still rely on manual processes. By implementing real-time tracking and demand forecasting, businesses in Nepal could reduce operational costs and improve supply chain efficiency.

Moreover, the internship gave me a detailed look into production of battery technology. I was there for only few months, so I am fully not aware of the intricacy however, I have gained valuable knowledge about the technology. After my internship, I was able to use the knowledge I had gained to apply for a bid in a tender proposal for Nepal Telecom Communication regarding battery supply via my family business. Through understanding battery tech, evaluating competition, advantages and disadvantages of different product, market demand and prediction, I was able to make an educated recommendation which led us being approved for the tender.

In conclusion, the internship allowed me to bridge the gap between academic learning and real-world application, while also providing insights into how business operations are managed in India. I'm confident that these learnings will be valuable in both my professional career and in applying these best practices to businesses in Nepal.



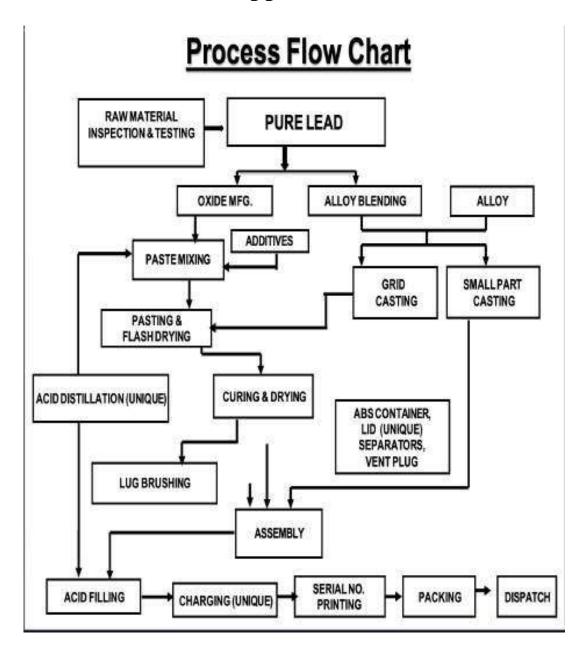
Bibliography

- Chen, Y., & Zhang, X. (2018). Advances in Lithium-Ion Battery Technology for Electric Vehicles and Renewable Energy Storage. Journal of Energy Storage, 19, 64-77.
- Coslight International Group. (2024). *Annual Financial Report*. Hong Kong Stock Exchange. https://www.hkexgroup.com/Investor-Relations?sc_lang=en
- Environmental Protection Agency. (2022). Guidelines on Eco-Friendly Battery Disposal and International Organization for Standardization. (2020). ISO 9001:2015

 Ouality Management Systems. Geneva, Switzerland: ISO.
- Indian Energy Storage Alliance. (2024). Market Report on Renewable Energy and Battery Storage in India. India ESA. https://indiaesa.info/
- Indian Ministry of New and Renewable Energy. (2023). *Annual Report 2023:*Sustainable Energy Initiatives. Government of India. https://www.india.gov.in/my-government/documents/annual-report?page=4
- Institute of Electrical and Electronics Engineers. (2020). IEEE Standards for Lithium-Ion Batteries in Energy Storage Systems. IEEE.
- McMillan, C. (2010). Five competitive forces of effective leadership and innovation. *Journal of Business Strategy*, 31(1), 11–22. https://doi.org/10.1108/02756661011012741
- Nepal Electricity Authority. (2023). *Progress in Renewable Energy Projects in Nepal*.

 Nepal Government Publications. https://www.dai.com/our-work/projects/nepal-renewable-energy-programme
- PESTEL Analysis Framework. (2021). In *Business Analysis Guidebook* (3rd ed.). New York, NY: Business Press. https://nibmehub.com/opac-service/pdf/read/Business%20Analysis.pdf
- Porter, M. E. 2008). The Five Competitive Forces That Shape Strategy. Harvard Business Review, 86(1), 78-93.
- Renewable Energy Nepal. (2024). *Green Initiatives and Renewable Energy in Nepal:*Opportunities and Challenges. Renewable Energy Nepal. https://future-minded.fmo.nl/future-minded-fmo-third-edition/green-energy-in-nepal
- Team, I. E. (2024). Coslight India. India Energy Storage Alliance. https://indiaesa.info/coslight

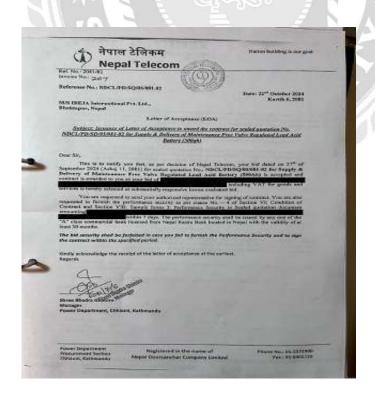
Appendix



Annex 1.2 (Internship Completion Certificate)



Annex 1.3 (Tender: Letter of Acceptance)



My photo in Coslight Factory during internship period

