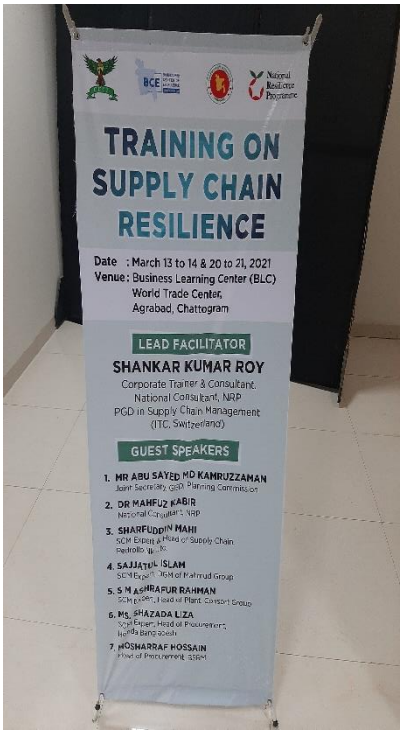
Training Report on
'Supply Chain Resilience'
On
13-14 & 20-21st March 2021

Venue:
Business Learning Center (BLC)
World Trade Center
Agrabad, Chattogram

Prepared by:
Shankar Kumar Roy
NRP Consultant
March 2021

WELCOME TO THE INAUGURAL SESSION
Training on Supply Chain Resilience
TRAINING ON
SUPPLY CHAIN RESILIENCE
Date : March 13 to 14 and 20 to 21, 2021
Venue : Business Learning Center (BLC) at World Trade Center, Agrabad, Chattogram


TRAINING ON
SUPPLY CHAIN
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World Trade Center,
Agrabad, Chattogram
LEAD FACILITATOR
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Corporate Trainer & Consultant,
National Consultant, NRP
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(ITC, Switzerland)
GUEST SPEAKERS
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2. DR MAHFUZ KABIR
3. SHARFUDDIN MAHI
4. SAJJATUL ISLAM
5. S M ASHRAFUR RAHMAN
6. MS. SHAZADA LIZA
7. HOSNARAF HOSSAIN

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01. BACKGROUND

The National Resilience Programme (NRP) is working to sustain the resilience of human and economic development in Bangladesh through inclusive, gender responsive disaster management and risk informed development. NRP is a joint programme being implemented by four agencies of Government of Bangladesh: Department of Disaster Management, Programming Division of Bangladesh Planning Commission, Department of Women Affairs and Local Government Engineering Department. The NRP-Programming Division (NRP-PD) Part is designed to enhance the capacities for gender responsive, disability inclusive risk-informed public and private investment. In this connection, a project has been initiated for building capacities of public and private sector officials to equip them with knowledge and skills for integrating disaster and climate change related risks into their investments.

The impacts of disasters are well understood in Bangladesh in the context of agricultural production and rural livelihoods. But climate change and disasters are also disrupting business in Bangladesh and will do in the future as well. Hotter summers, irregular and heavy monsoons, heavy rainfalls in a short amount of time, tropical cyclones etc. are causing severe stress in built urban environments, infrastructure and services. Cyclone causes disruption in port activities and thus affect export-import of the country. Not just in Bangladesh, all over the world climate change is visibly disrupting business. This shows that at the policy and private sector levels, more needs to be done to protect Bangladesh's economic growth from these natural disasters.

As with any form of disruption, climate change and other natural hazards are creating and will continue to create risks and opportunities for business in a diverse number of ways. For example, 'Resilience360- a supply chain risk management company managed by DHL', in their first annual risk report of 20181 found natural disasters as one of the main disruptive events affected the global supply chain. According to the World Economic Forum Global Risk Report 20192, investors, regulators and other stakeholders are now challenging companies to take responsibility by taking an integrated, strategic approach to addressing climate change and natural disaster impacts to their businesses. According to the report, environmental risks, water shortages, natural disasters are becoming recognized more and more by global businesses as a threat to their operations.

During the last two decades, the Readymade Garment (RMG) sector has been playing a significant role to the growth of Bangladesh economy. Given that Bangladesh is one of the most climate vulnerable and disaster-prone economies of the world and given the labor intensive nature of the RMG sector, it is imperative that climate and disaster risk management elements be adopted as a part of corporate

governance for competitive advantages as well as to avoid drop in profitability. While each RMG establishment is unique, and disaster risk management principles cannot be thought of as "one size fits all" prescription, without concerted efforts to incorporate infrastructural and managerial responses to such risk, RMG production delays will have a cumulative and significant impact on the RMG export volume and global market share. It will also have an impact on Bangladesh's image as a strong and growing export based economy in the global RMG supply chain.

Keeping this context of RMG sector of Bangladesh, the NRP-PD conducted a study on developing strategies to improve capacity of RMG sector for resilient supply chain. The study assessed the potential direct and indirect impact of natural hazards and threats to supply chain system of RMG products and proposed possible pathways for instituting systems and processes for reducing disruptions to supply chains caused by natural disasters and climate change. Most importantly, as a part of this process, the project is planning to organize training for industry sectors and business community leaders on resilient supply chain management to promote risk-informed business practices in Bangladesh. Therefore, the aim of this assignment is to develop a training module on supply chain resilience based on the study, titled "Supply Chain Resilience of RMG Sector" in order to enhance capacities of business professionals of the country.

02. OBJECTIVE OF THE TRAINING

The National Resilience Programme (NRP) will support training module development for Supply Chain Resilience in Bangladesh. The overall objective of this assignment is to develop training module, design and plan a training on supply chain resilience and coordinate all activities related to training module development under the project with the highest professional standard.

With this view in plan, total four training modules have been made. The main objective of this training to train participants on these four training modules. The other purpose of the training is to make participants aware of the impact of natural disaster and climate change. Besides, through this training, the participants will get acquainted with their jobs, their responsibilities and also increase the job-related knowledge and skills.

It is essential to increase productivity and mitigate risk and be more resilient in combating competition in the market. Effective training can help increase productivity of participants by imparting the required skills. After completing the training, it is hoped that the participants would be able to address the issues like Supply Chain Management (SCM), Supply Chain Risk Management (SCRM), and Supply Chain Resilience (SCR) more efficiently and effectively in their respective organizations.

03. SCOPE OF THE WORK

The consultant will serve as consultant for NRP-Programming Division Part Project located in Planning Commission. The scope of the training program may be narrated as follows:

- Coordinate, liaison with Project Director, NRP-PD, Project Manager, and Planning Specialist for design, development and finalization of training module.

- Share brief description of contents of the training module with logical sequence for approval from Programming Division and UNDP.

- Develop a pre-training and post-training feedback form.
- Conduct a four daylong training in consecutive two weeks in Chattogram in consultation with NRP, CCCI and relevant authorities
- Perform other necessary tasks, as deemed important, for the successful completion of the four daylong training
- Submission of final training report

04. TRAINING MODULES AND DATE OF TRAINING

Modules	Name of the Modules	Date of training
01	Supply Chain Management: Its Overview and Resilience Strategies	13th March 2021
02	Demand Management Its Forecast Techniques	14th March 2021
03	Purchasing and Supply Management	20th March 2021
04	Logistics, Inventory, Transportation and Warehouse Management	21st March 2021

05. TRAINING OUTLINES

Major contents of the training were as follows:

S .No	Module	Contents
01	**Supply Chain Management: Its Overview and Resilience Strategies**	Supply Chain Management and its Basic Concepts
		Value Chain Analysis
		Five essential stages in developing successful supply chain
		SCM and Its three wings
		Key factors to developing a Supply Chain Strategy
		Managing Supply Chain Risks
		Covid-19 made Supply Chain a household word
		RMG Sector: An Overview and Its SCM
		How Natural Disaster and Climate Change Affect RMG Sector in Bangladesh
		Supply Chain Resilience and Related Issues
		How to Measure Supply Chain Resilience
		Build Supply Chain Resilience for a Post COVID-19 World
		Study on Supply Chain Resilience of RMG Sector in Bangladesh: Key Findings and Strategic Recommendations
02	**Demand Management and Its Forecast Techniques**	Demand Management: Definition and Key Concepts
		Benefits of Demand Management
		Factors Affecting Demand

		Demand Management Challenges
		Types of Demand and Characteristics of Demand
		Resilient Supply Chain by Combating Unprecedented Demand Volatility
		Demand Forecasting
		Ways of Forecasting Demand
		Quantitative Analysis Techniques for Forecasting Demand
		Bill of Materials (BOM)
		Material Requirement Planning (MRP)
		DRP (Distribution Resource Planning): Time-bucket Matrix Display
		MTS, MTO and ETO and Resilience Supply Chain
		Natural Disaster: Strategy in Respect of Demand and Capacity
		What is the Bullwhip Effect and How Do You Minimize it?
		Resilience Supply Chain and Business Continuity Planning (BCP)
		Dr. Hau Lee's Uncertainty Framework
		Agile Supply Chain: Zara's Case Study Analysis
		Dr. Hau Lee's Triple-A Supply Chain
03	**Purchasing and Supply Management**	Purchasing/Procurement-Basic Concepts
		Make or Buy (Outsourcing) Decision
		Types of Purchasing Items
		Purchasing and Supply (P& S) Process:
		Internal Standardization Reduces Time and Effort to Develop Purchase Specification and Help to make Supply Chain More Resilient
		Resilient SC: VE (Value Engineering)-A Structural Problem Solving Technique in the Field of P&S
		Supply Risks Caused by Natural Disasters
		Lowest Total Cost of Ownership (TCO) as Criteria to Evaluate Offers
		Basis of Pricing
		How to Apply Price Revision Formula: An Example
		Commodity Price Risk
		Negotiation in the P&S Process
		Risks in International Trade & How to Manage Them
		Horizontal Integration and Vertical Integration
		Cost Saving through Procurement: A Way to Supply Chain Resilience
		Vendor Evaluation
		Green/Environmental Procurement Towards Developing Resilient Supply Chain
04	**Logistics, Inventory, Transportation and Warehouse Management**	Logistics and Related Issues
		Operational and Strategic Responsibilities of Logistics
		Third Party Logistics (3PL) to Build Supply Chain Resilience
		4PL (Fourth Party Logistics)
		Inventory- Definition and Relevant Concepts
		Inventory and Working Capital Cycle
		The Cost of Not Holding inventory
		Factors in Determining Inventory Quantity

		Lead-time Management and Enhancing Ability to be Resilient
		Inventory Replenishing System
		Supply Chain Resilience: Safety Stock to Combat Uncertainty
		Safety Stock Calculation
		Inventory Stocktaking and Audit
		Inventory Turnover
		Supply Chain Resilience: Create a Buffer-stock for 3-months' Worth of Supply Needed for the RMG and textile Industry
		Transportation
		Vehicle Cost Analysis and Development of Resilience Capabilities
		Warehouse and Related Issues

06. LIST OF RESOURCE PERSONS

Lead Facilitator:

Mr. Shankar Kumar Roy, NRP Consultant

Guest Speakers:

- Mr. Abu Syed Md. Kamruzzaman, Joint Secretary, GED, Planning Commission
- Dr. Mahfuz Kabir, National Consultant, NRP
- Mr. Shrafuddin Mahi, SCM Expert
- Mr. Sajjatul Islam, SCM Expert, DGM, Mahmud Group
- Mr. S M Ashrafur Rahman, SCM Expert, Head of Plant, Consort Group
- Ms. Shazada Liza, SCM Expert, Head of Procurement, Honda Bangladesh
- Mr. Mosharraf Hossain, Head of Procurement, BSRM

07. METHODOLGY OF THE TRAINING

The training course was mostly both interactive and participatory. The provision of providing information, concepts, and knowledge, and practice with the participatory process were applied in the training program. The participants were also considered as a source of knowledge.

Opportunities have been created to share and review each other's experience, knowledge, and skills. Different participatory techniques were used in the training program in order to make the training lively and friendly to the participants. Considering the experiential, reflective and analytical approaches of participatory approaches, the training was highly emphasized on visualization and participatory evaluation as well as commonly affecting emotions, attitudes, and behaviors. The training course was designed using the following methods and techniques:

- Brainstorming
- Individual discussion
- Ice-breaking session
- PPT presentation
- Pre and post-test evaluation

However, to make the training effective and meaningful, a training outline has been designed to match the training approach with the participants.

08. INAGURAL SESSION

On the first day of training of a four-day training on "Supply Chain Resilience" i.e. on 13th March 2021, an inauguration session was held at Chattogram's World Trade Center on Saturday. Mr. Khandker Ahsan Hossain, chief (Programming Division) of the Planning Commission inaugurated the programme as it's the chief guest.

Mr. Syed Mohammed Tanvir, director, CCCI; Mr. Arif Abdullah Khan, programme analyst, United Nations Development Programme (UNDP); Mr. Abu Syed Md Kamruzzaman, joint secretary of the Planning Commission spoke on this occasion. Mr. S M Morshed, project manager moderated the inauguration ceremony.

Mr. Khandker Ahsan Hossain said the issue of supply chain resilience was included in the government's 8th five-year plan. He stressed the importance of the capacity building of investors, regarding supply chain resilience, for sustainable economic growth.

Mr. Syed Mohammed Tanvir, director of CCCI, said, "The chamber has undertaken this initiative so that the employees concerned, of the private sectors, can overcome challenges and risks through training and learning."

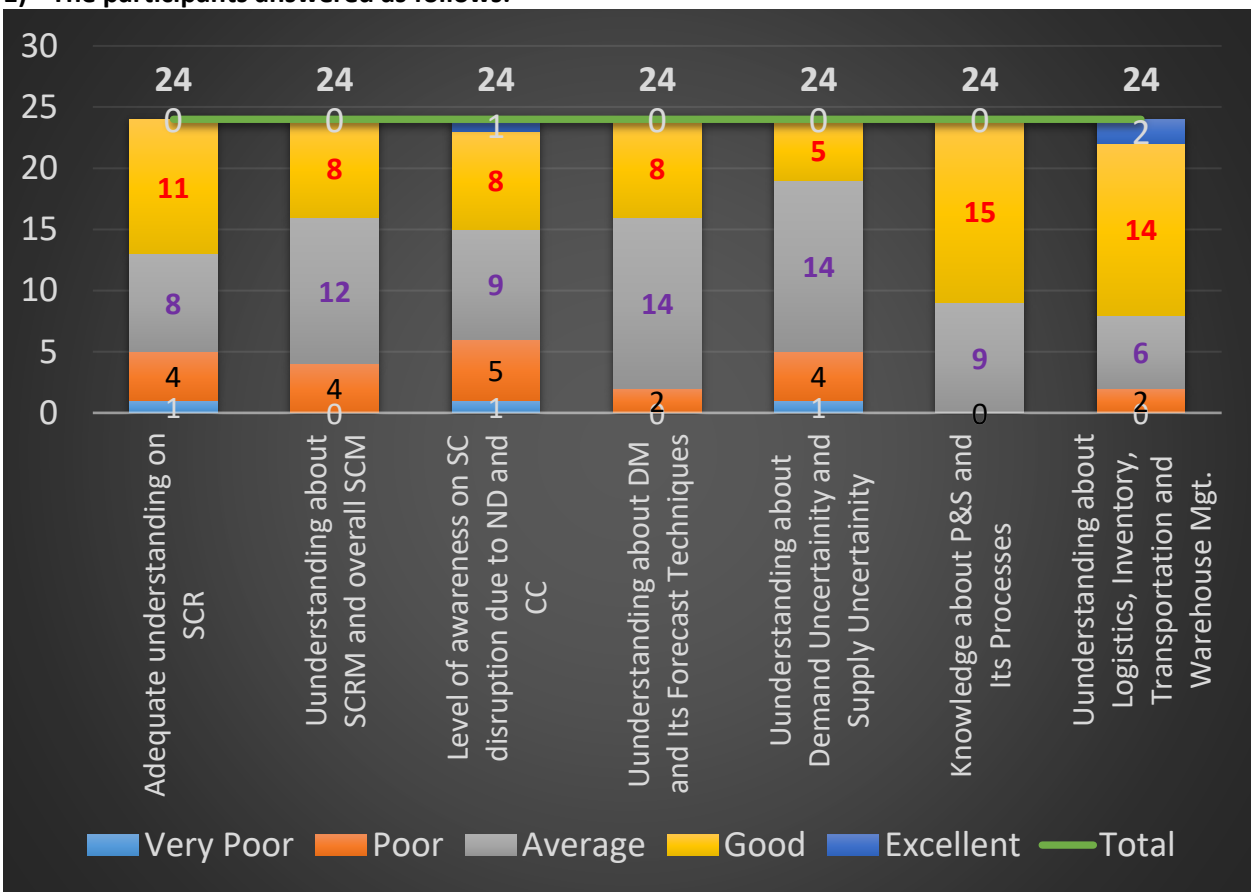
Mr. Arif Abdullah Khan, programme analyst of UNDP, noted that the private sector is a key to achieving the Sustainable Development Goals in Bangladesh. "We need to make the private sector resilient from disaster and climate change. This training is a good start," he added.

The Chief Guest and other three distinguished guests at the inauguration session unwrapped covers of four modules respectively.

09. PRE-TRAINING FEEDBACK FROM PARTICIPANTS

A pre-training evaluation form was developed to evaluate the readiness of participants. The participants submitted their responses. The summary of the feedback is given below.

1) The participants answered as follows:

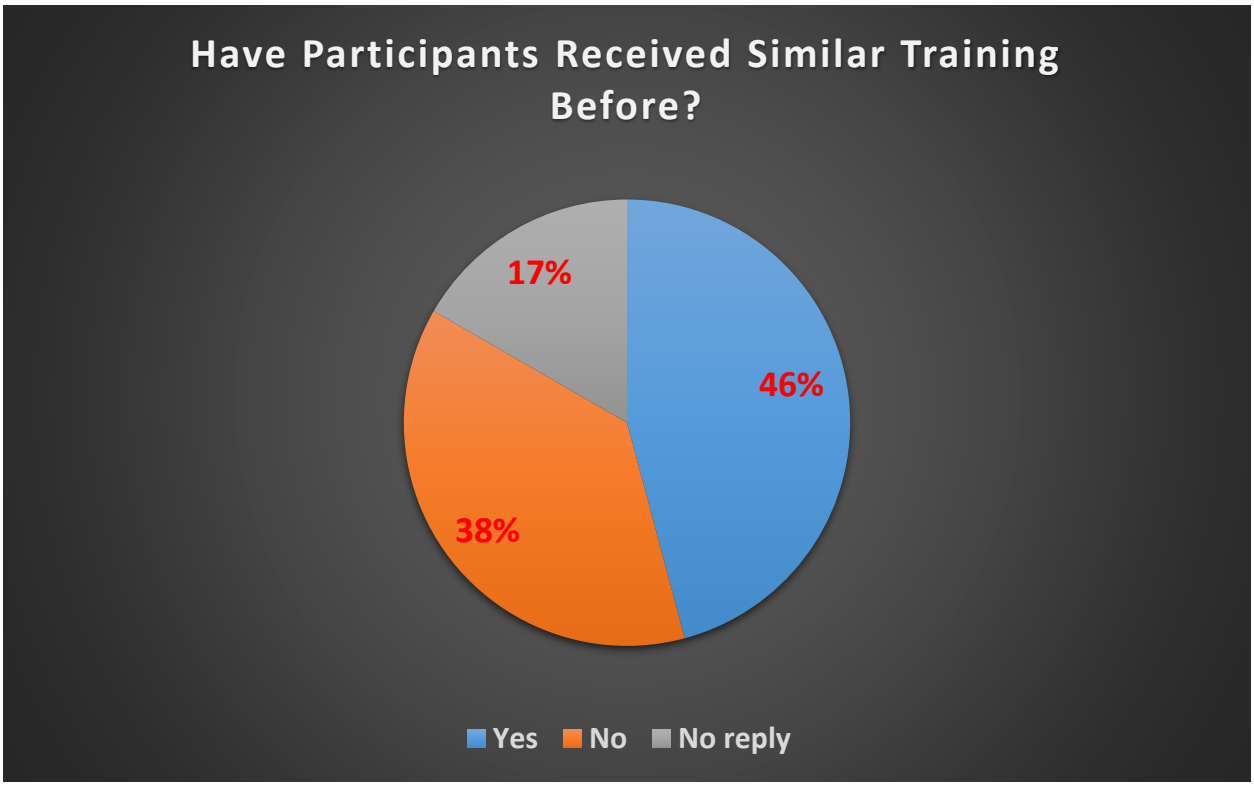


Regarding “adequate understanding on SCM”, out of 24 participants; 11 said ‘good’, 8 said ‘average’, 4 said ‘poor’ and one said ‘very poor’. One refrained from answering.
On “understanding about SCRM and overall SCM”, out of 24 participants; 8 said ‘good’, 12 said ‘average’, 4 said ‘poor’ and one said ‘excellent’.
Regarding “SC disruption due to ND and CC”, out of 24 participants; 8 expressed ‘good’, 9 said ‘average’, 5 said ‘poor’ one said ‘very poor’ and one said ‘excellent’.
Regarding “understanding about DM and Its Forecast Technique”, out of 24 participants; 8 said ‘good’, 14 said ‘average’, and 2 said ‘poor’.
Regarding “understanding about ‘Demand Uncertainty’ and ‘Supply Uncertainty’ ”, out of 24 participants; 5 commented ‘good’, 14 said ‘average’, 4 said ‘poor’ and one said ‘very poor’.
Regarding “knowledge about P&S and Its Processes”, out of 24 participants; 15 said ‘good’, and 9 said ‘average’.

Regarding “understanding about Logistics, Inventory, Transportation and Warehouse Management”, out of 24 participants; 14 said ‘good’, 6 said ‘average’, 2 said ‘poor’ and 2 said ‘excellent’.

2. Participants were also asked whether they have received any training on ’Supply Chain management’, ‘Supply Chain Resilience’, Logistics or similar issues:

Out of 26 participants, 24 submitted their feedback form. Out of said 24 participants, 11 were able to receive training and 9 did not receive any training. Four (4) participants refrained from answering.



3. Participants described their expectation from the course.

01	Like to know more about Supply Chain Resilience (SCR)
02	Want to know something new and different about Supply Chain (SC)
03	Get basic ideas about SC
04	Gather knowledge about SCR and Its Management
05	Expand my working knowledge
06	Develop Negotiation tools and techniques
07	Enhance knowledge on Sourcing and Supplier Development Strategies
08	Obtain depth knowledge of SCM, SCR, inventory and Logistics
09	Want to know how to save transport cost
10	To be capable of minimizing supply chain risk in my organization
11	To be conversant about Demand Management and its Forecast Techniques
12	Like to implement training knowledge and relate with RMG Inventory

13	Like to know Demand Management Challenges
14	Know the techniques to developing the SCM Processes

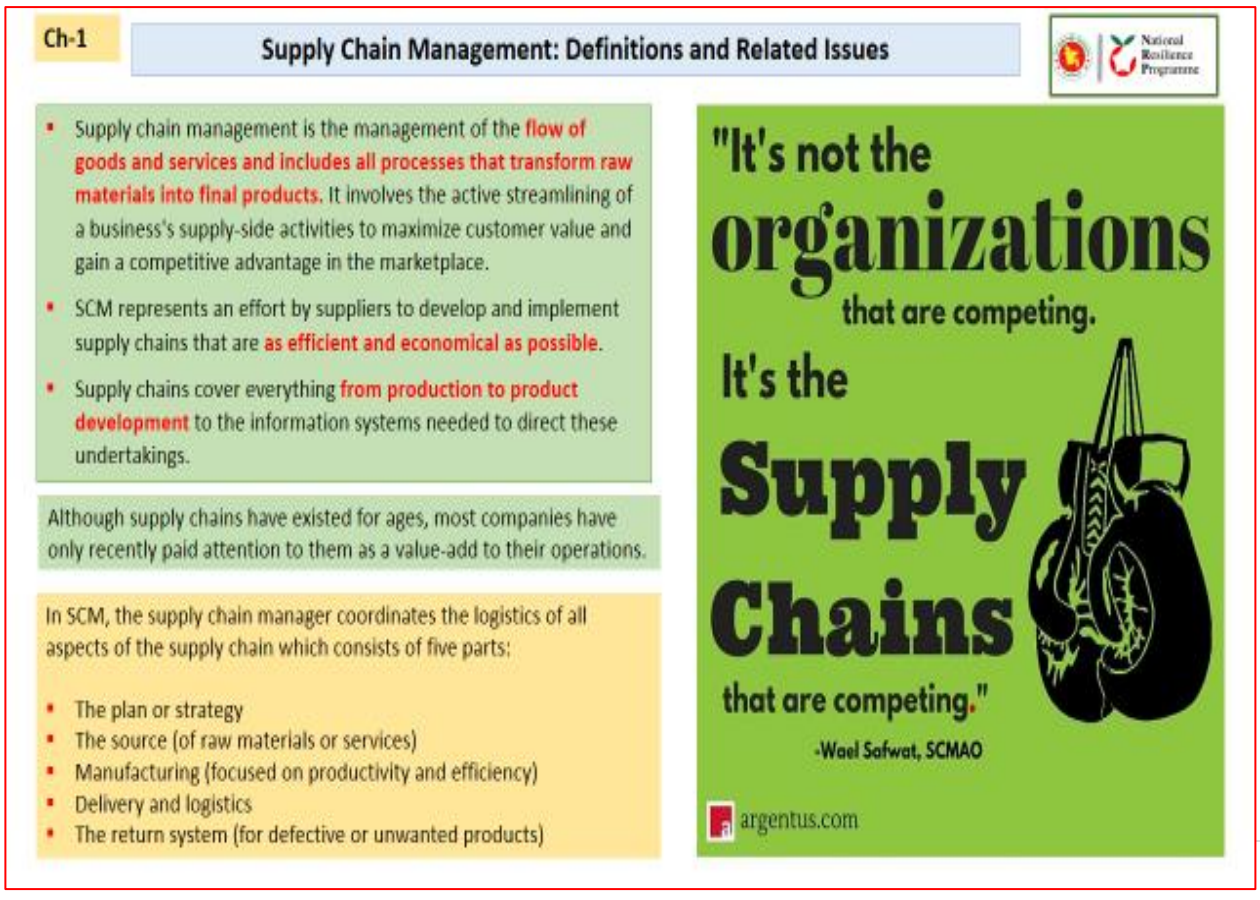
10. BRIEF DESCRIPTION OF 4 DAYLONG TRAINING

Day 1: Training Session 1(Module 1: SCM: An Overview and Its Resilience Strategies)

Mr. Shankar Kumar Roy, Lead Facilitator and NRP Consultant begun the session with an ice-breaking session and there was an introduction part where participants introduced themselves. He mainly highlighted following areas.

- Supply Chain Management and its Basic Concepts
- Four Fundamentals of SCM
- Value Chain Analysis
- Benefits Customers Seek in the Products or Services
- Key Factors to Developing a Supply Chain Strategy
- Managing Supply Chain Risks

The following slides reflect highlighted portion of his deliberation.



Benefits Customers Seek in the Products/Services

Quality	Availability	Customer Service & Responsiveness	Low Cost
Functionality	Order Quantity	Product/Service information for customers	Purchase price
Adaptability	Lead-time to delivery	Responsiveness to customer queries	Cost of acquisition
Flexibility	Lead-time in response to needs	Technical support to customer	Total cost of ownership
Uniqueness	Supply range, quantity and flexibility	Maintenance and repair services	Supply range, quantity and flexibility
Ease of Use	Reliability of delivery	Reliability of delivery	Reliability of delivery
Durability	Continuity of supply	Continuity of supply	Continuity of supply
Uniformity			
Environmental Friendliness			
Safety			
Meets requirements			

Participants raised questions about different dimension of quality and the facilitator replied them with examples.

Day 1: Training Session 2 (Module 1: SCM: An Overview and Its Resilience Strategies)

Mr. Abu Sayed Md Kamruzzaman, Joint Secretary, General Economics Division (GED), Planning Commission conducted the second session of day 1 and covered following topics:

- Managing Supply Chain Risks
- Supply chain management strategies
- Covid-19 made Supply Chain a household word
- RMG Sector: An Overview and Its SCM
- How Natural Disaster and Climate Change Affect RMG Sector in Bangladesh
- Supply Chain Resilience and Related Issues
- The Core Enablers of Supply Chain Resilience Strategy: People, Process and Technology

As Supply Chain Resilience is a relatively new terminology to the audience, Mr. Kamuruzzaman supplemented the topic with a practical demonstration. The following slides reflect highlighted portion of his deliberation.

RMG Sector: Few Projection to Note

Comparative projection for RMG Export Value in Billion US$

Market	2% per Annum	5% per Annum	10% per Annum
EU 27 in Year 2025	25.65	29.15	34.98
USA in Year 2025	6.75	7.67	9.21
Total in Year 2025	32.40	36.82	44.19
EU 27 in Year 2030	28.24	36.43	52.47
USA in Year 2030	7.43	9.59	13.81
Total in Year 2030	35.67	46.02	66.28

Comparative projection for RMG Export Value in TEUs

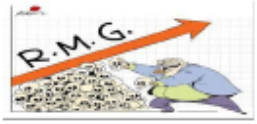
Volume in TEU	2% per Annum	5% per Annum	10% per Annum
Total in Year 2025	1,597,004	1,814,777	2,177,733
Total in Year 2030	1,756,704	2,268,471	3,266,599

- The above 2 table show the comparative forecast for RMG export value in the two major export destinations, USA and 27-member European Union for the years 2025 and 2030 under different growth scenario and corresponding cargo volume in terms of TEUs.
- These forecasted figures **need to be considered while planning for transportation networks.**

Ref: Study on Supply Chain Resilience of RMG Sector in Bangladesh by National Resilience Programme (NRP) Programming Division, Planning Commission, November 2020.

Important Timelines of Bangladesh Readymade Garments Industry

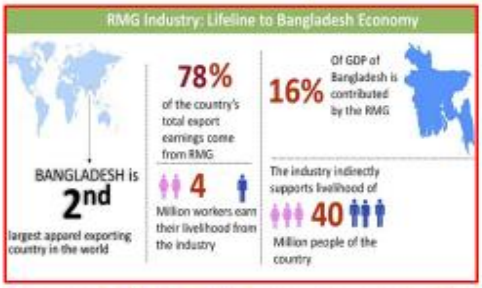
Serial	Year	Issue
1	1970-1980	Early period of growth
2	1982-1985	Boom days
3	1985	Imposition of quota restriction
4	1990	Knitwear sector developed significantly
5	1993	Child labor issue and its solution
6	2003	Withdrawal of Canadian quota restriction
7	2005	Phase out of quota restriction
8	2006	Riots and strike by garments labor
9	2007-2012	Stable growth
10	2013-2017	Decline and facing different challenges
11	2020	COVID-19 (Corona Virus)
12	2021	Plan to implement Resilient Supply Chain



Ch-4 RMG Sector: Its Overview and SCM

- The ready-made garments (RMG) industry in Bangladesh has experienced an unprecedented growth over the last two decades. RMG alone earned about **78% of the yearly foreign exchange earning** of the country. About 4.0 million people are employed in the garment sector. The **growth rate of RMG export was over 20% per over the last two decades.** Out of 4.0 million manpower employed in factories, 3.20 million are women, which is almost 80% of total manpower (Source form BGMEA).

- 35+ years of experience in apparel manufacturing.
- With 4000+ factories Bangladesh is serving all major global fashion brands.
- Duty-free Market Access to EU,
- Experienced Labor Force, and International Quality.
- More than 150 countries import apparel from Bangladesh.
- Factories equipped with latest machinery and technologies to meet the demand of latest fashion trends.
- Home to world's **highest number of Green Factories**. These factories use energy-efficient and environment-friendly technology and practices that save water, energy and minimize pollution.



http://textilemerchandising.com/ready-made-garment-rmg-bangladesh/

Day 1: Training **Session 3** (Module 1: SCM: An Overview and Its Resilience Strategies)

Following the second session Mr. Abu Sayed Md Kamruzzaman, Joint Secretary, General Economics Division (GED), Planning Commission also conducted the third session of day 1 and covered following topics:

- Purchasing/Procurement-Basic Concepts
- Make or Buy (Outsourcing) Decision
- The Make or Buy: Break-Even Analysis

- Types of Purchasing Items
- Know Your Types of Purchase Items: Basis Supply Strategy

The following slides reflect highlighted portion of his deliberation.

Make or Buy (Outsourcing) Decision

- While the term **outsourcing** popularly refers to **buying** material and components from suppliers instead of making them in house, it also refers to buying materials or components **that were previously made in house.**
- Whether to make or buy materials or components is a **strategic decision** that can impact an organization's competitive position.
- Traditionally, **cost** has been driver when making sourcing decision. However, organizations today focus more on the strategic impact of the sourcing decision on the firm's **competitive advantage**.
- For example, Honda would **not outsource** the making of its **engines** because it considers engine to be **vital part** of its automobile's performance and reputation.
- Honda may outsource the production of **brake drums** to high quality, low cost supplier that specializes in brake drums.
- Generally organizations **outsource non-core activities** while focusing on core activities

Ch-1 Key Concepts

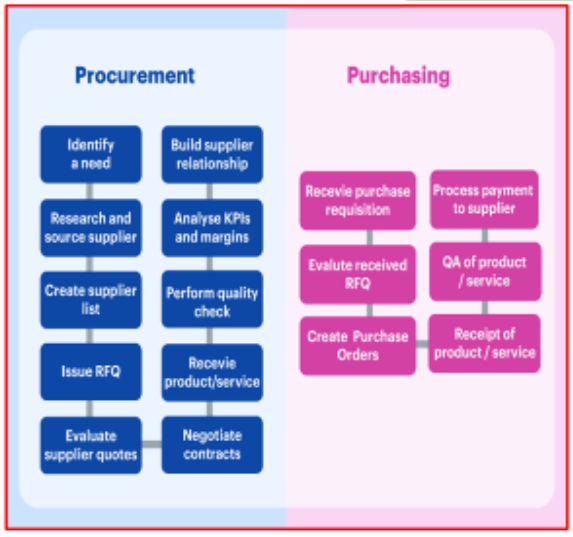
Purchasing/Procurement

In Europe: Purchasing is the **strategic part** of buying a goods or a service. Procurement is considered **as the fulfillment of orders to secure daily's operations.** Procurement normally depends on Purchasing.

In USA: It is the other way around. Procurement is the **strategic part** of buying goods or a service. Purchasing is considered as **transactional part** of the process. Purchasing normally depends on procurement.

In fact, procurement is the process starting **from material requisition to material acquisition.**

The same concept is also called **as supply management in the SCM (Supply Chain Management) context.**



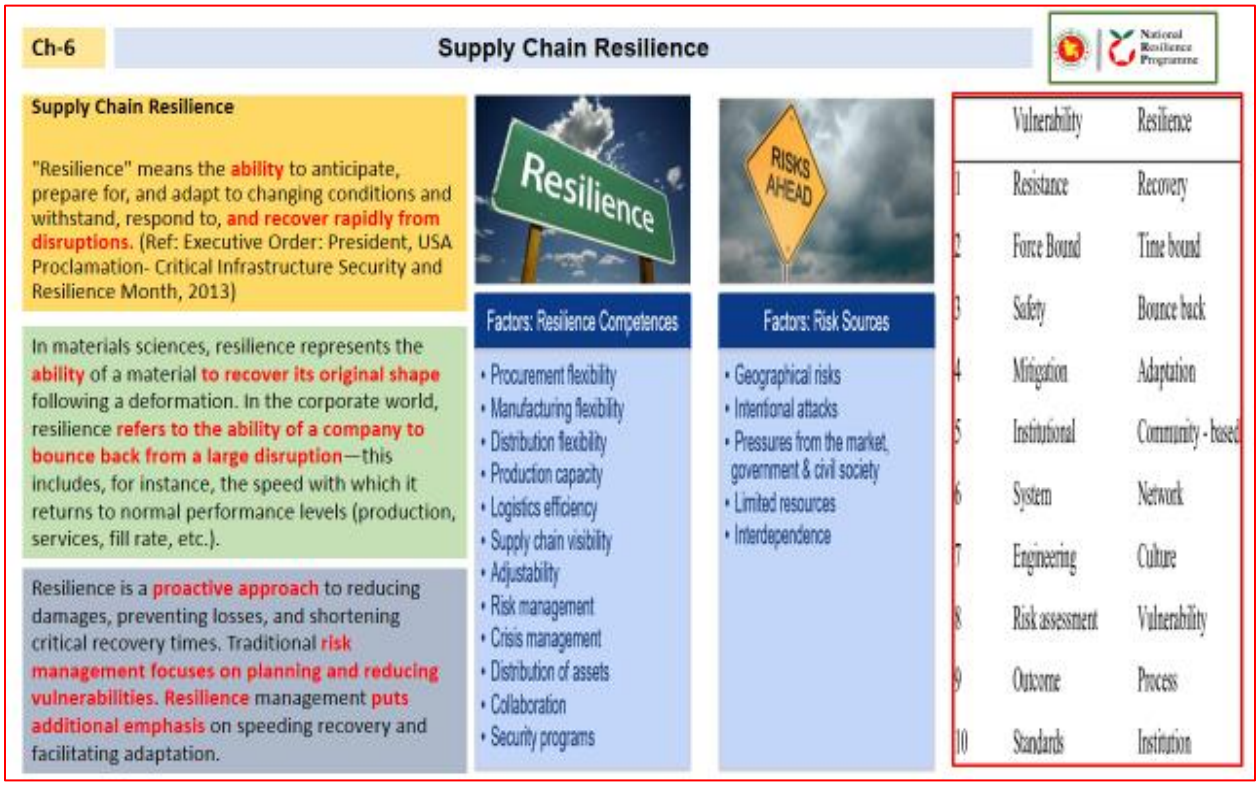
Ref: https://kissflow.com/procurement/procurement-vs-purchasing/

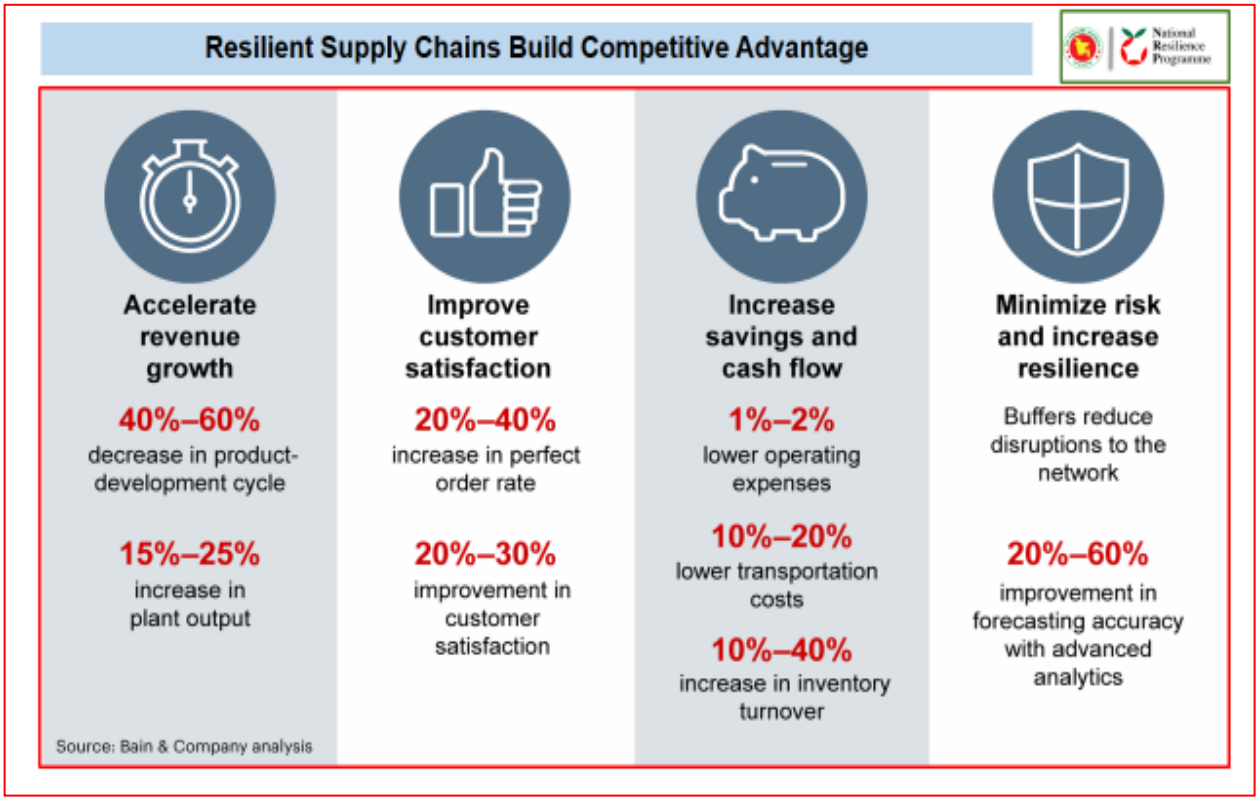
Day 1: Training **Session 4** (Module 1: SCM: An Overview and Its Resilience Strategies)

The fourth session was conducted by Mr. Shankar Kumar Roy, Lead Facilitator and NRP Consultant conducted the fourth session and covered following topics:

- Study on Supply Chain Resilience of RMG Sector in Bangladesh: Key Findings and Strategic Recommendations
- Study on Supply Chain Resilience of RMG Sector in Bangladesh:
- Comparative projection for RMG Export value in TEUS
- The 12 Best Supply Chain Companies of 2020
- Important Timelines of Bangladesh Readymade Garments Industry

The following slides reflect highlighted portion of his deliberation.





After completing the fourth session of day1, Mr. Mr Sajjadul Islam, DGM, Mahmud Group, a Chattogram based SCM expert shared his practical experience. He took about 45 minutes covering his presentation and an interactive session.

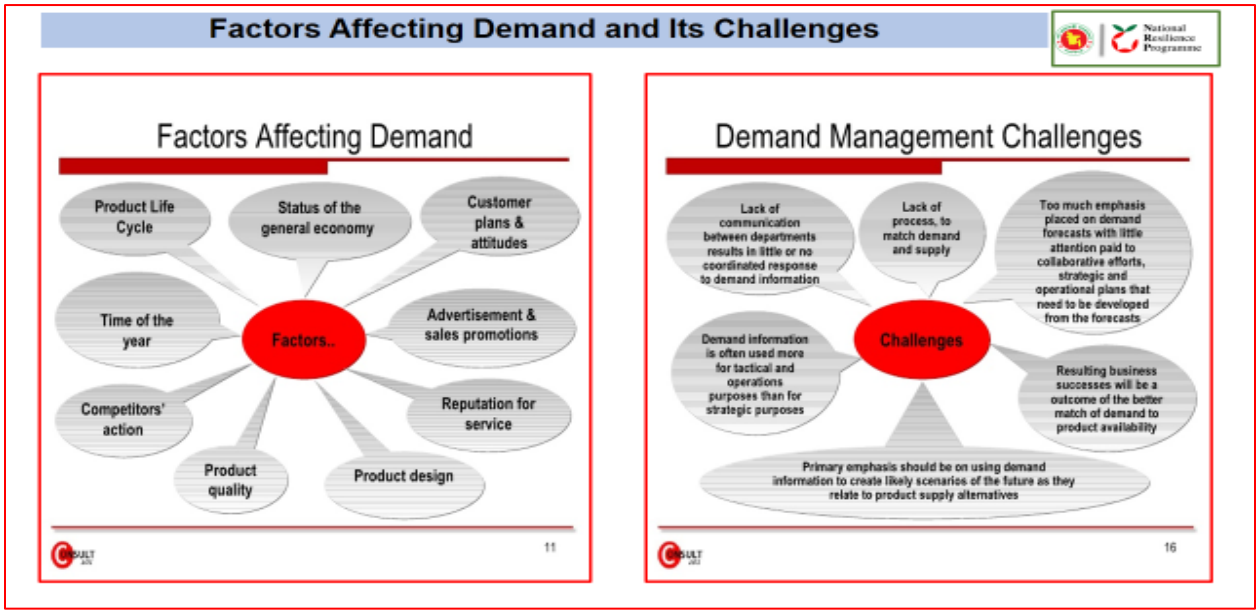
Day 2: Training **Session 1**(Module2: Demand Management and Its Forecast Techniques)

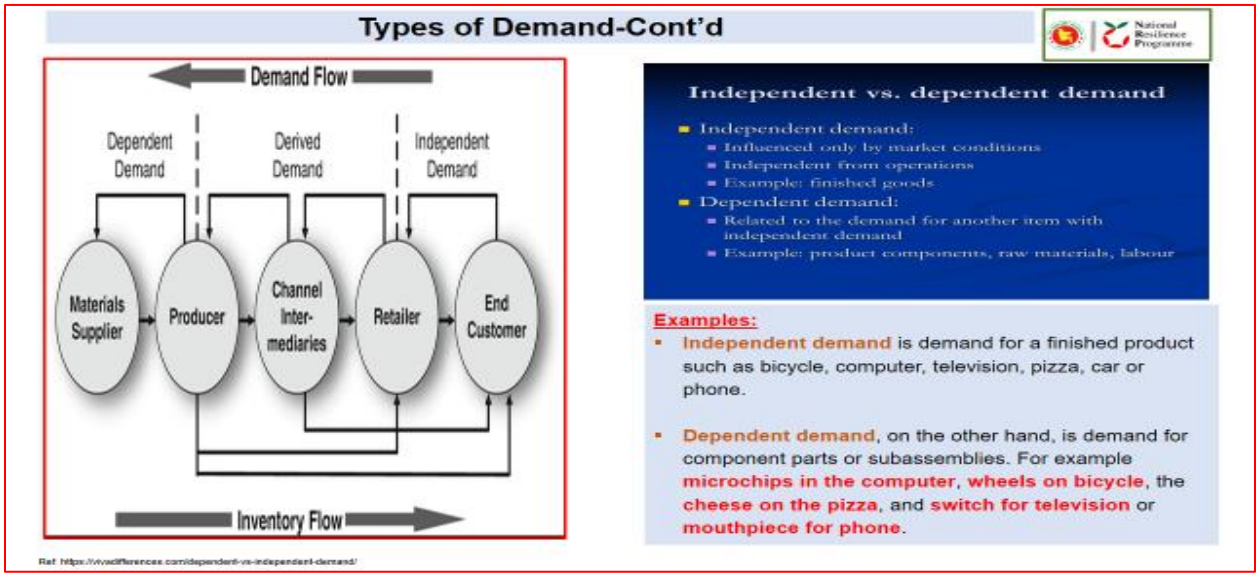
As usual Mr. Shankar Kumar Roy, Lead Facilitator and NRP Consultant begun the session with an ice-breaking session. He mainly discussed following topics.

- Demand Management: Definition and Key Concepts
- Benefits of Demand Management
- Factors Affecting Demand
- Demand Management Challenges
- Types of Demand
- Characteristics of Demand

A good demand management process can enable a company to be more proactive to anticipated demand, and more reactive to unanticipated demand. An important component of demand management is finding ways to reduce demand variability and improve operational flexibility. Reducing demand variability aids in consistent planning and reduces costs. Increasing flexibility helps the firm respond quickly to internal and external events.

Out of many highlighted points, the following two slides show factors affecting demand and Its challenges and types of demand.



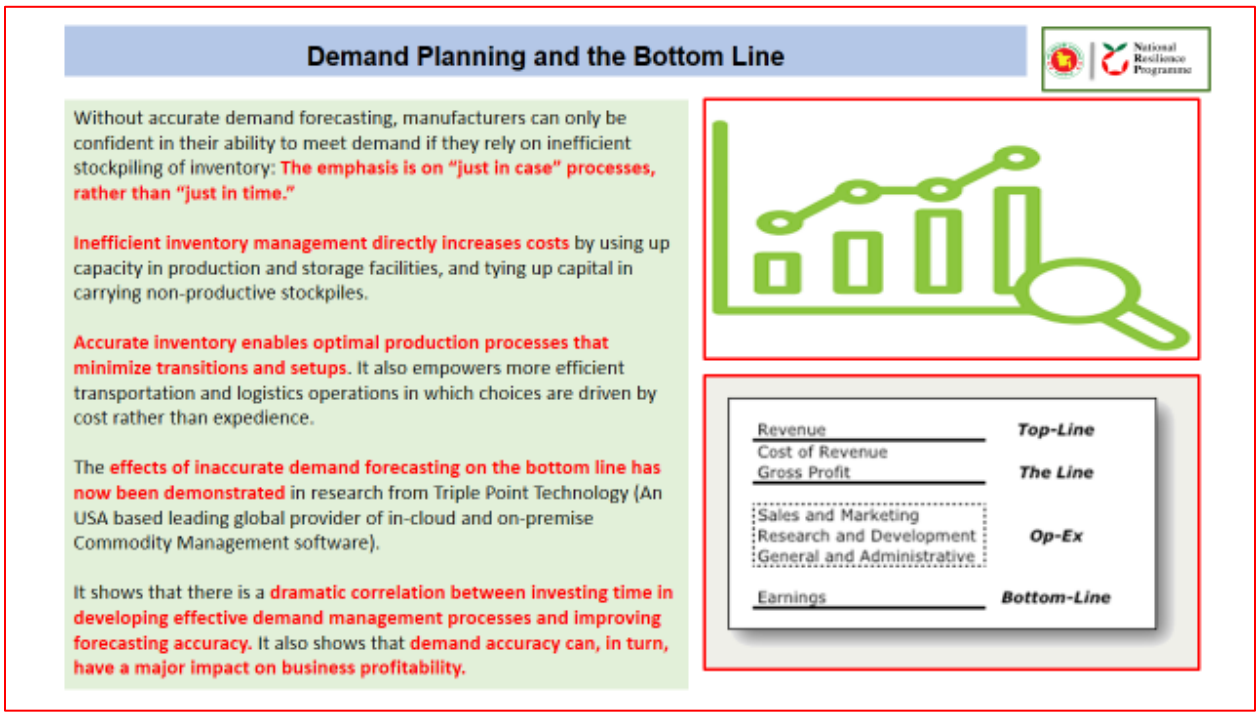


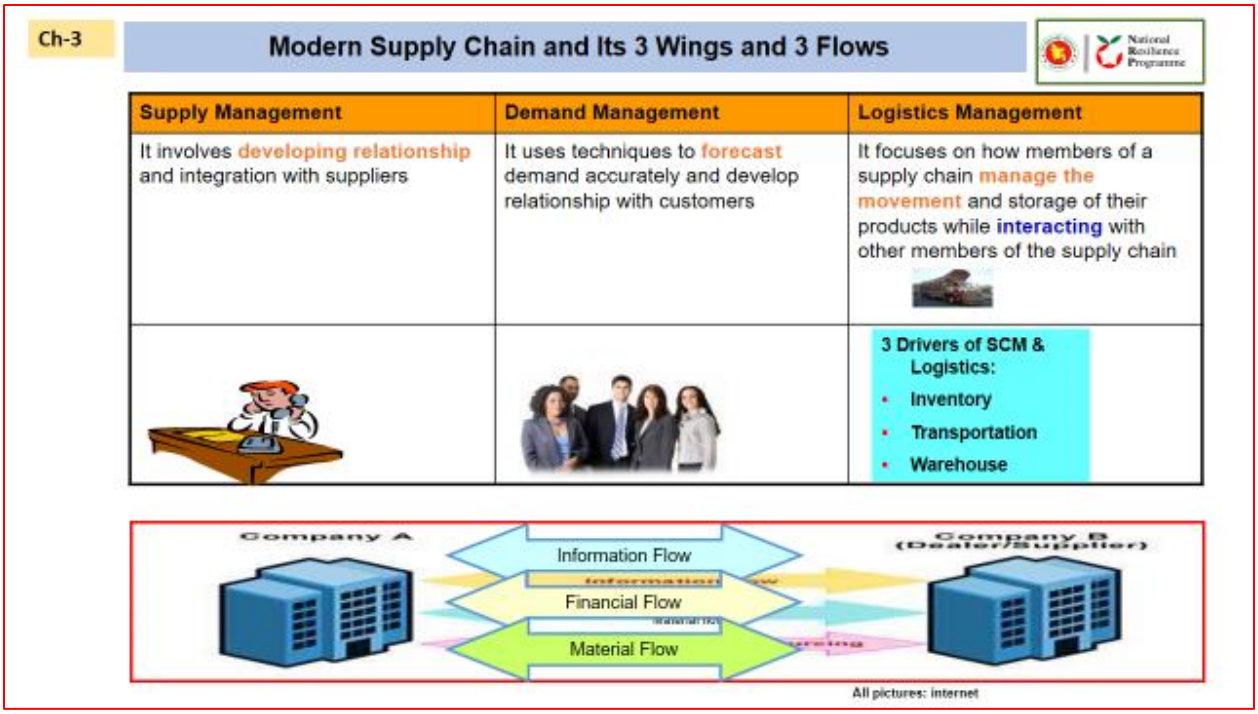
Day 2: Training Session 2 (Module 2: Demand Management and Its Forecast Techniques)

Mr. Sharrfuddin Mahi, SCM Expert conducted the second session of day 2 and covered following topics:

- Resilient Supply Chain by Combating Unprecedented Demand Volatility
- Demand Planning and the Bottom Line
- Defining Best Practice for Demand Planning
- SCM and its Three Wings
- Demand Forecasting
- Demand Forecasting Examples
- Importance of Demand Forecasting

The following slides reflect highlighted portion of his deliberation.





Day 2: Training Session 3 (Module 2: SCM: Demand Management and Its Forecast Techniques)

Mr. Shankar Kumar Roy, SCM Expert conducted the third session of day 2 and covered following topics:

- Factors Influencing Demand
- Factors Influencing Supply
- Ways of Forecasting Demand
- Quantitative Analysis Techniques for Forecasting Demand
- Demand Forecasting Process- 3 Phases
- Bill of Materials (BOM)
- Material Requirement Planning (MRP)
- MRP Calculation
- DRP (Distribution Resource Planning): Time-bucket Matrix Display
- MTS, MTO and ETO and Resilience Supply Chain

The following slides reflect highlighted portion of his deliberation.

Demand Forecasting Examples

- Some real-world practical examples of Demand Forecasting are –
- A leading **car maker**, refers to the last 12 months of actual sales of its cars at model, engine type, and color level; and based on the expected growth, forecasts the short-term demand for the next 12 month for purchase, production and inventory planning purposes.
- A leading food manufacturing company refers to the last 24 months of actual sales of its highly seasonal products **like soups and mashed potatoes.**
- An analysis is carried out at the flavor and packaging size level. Then based on the market potential, demand is forecasted for the next 12 to 24 months for sourcing of key ingredients like tomatoes, potatoes, etc. and for capacity planning and evaluating the need for external co-packing.

Ch-7

DRP: Time-bucket matrix display

- Distribution resource Planning (DRP) is essentially a simulation system that models all expected activities involved in shipping goods through networks over a **defined planning time horizon**

- Lead Time: 1 week
- Order Quantity: 500 pieces
- Time Horizon: 8 weeks
- Min. Safety Stock 250 pieces
- Max. Stock limit 600 pieces

Delivery cancelled

Details	Past Due	Week							
		1	2	3	4	5	6	7	8
Forecast Demand		200	210	220	200	180	200	210	160
Shipment on Order (in transit)	500		500		500		500		500
Planned Shipment Quantity		500		500		500		500	
Received Shipment Quantity		500		500		ALERT	500	500	
Projected Stock on Hand	195	495	285	565	365	185	485	775	615

Delayed receipt

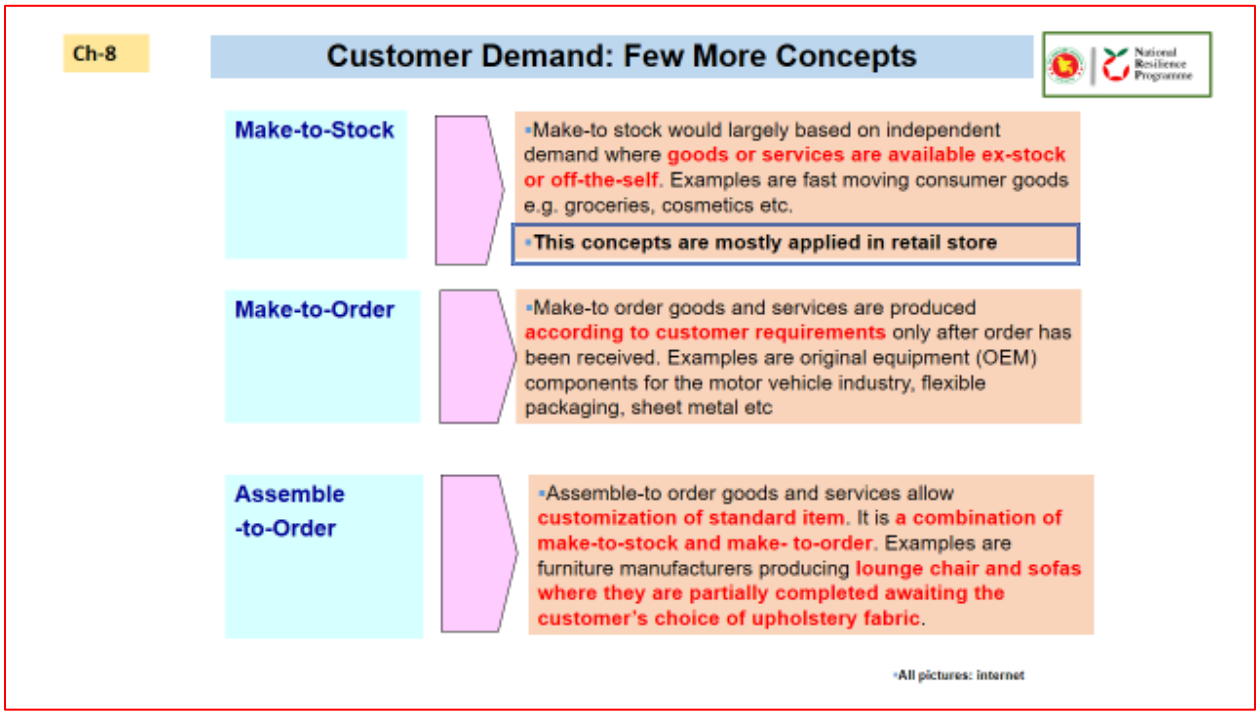
Over limit

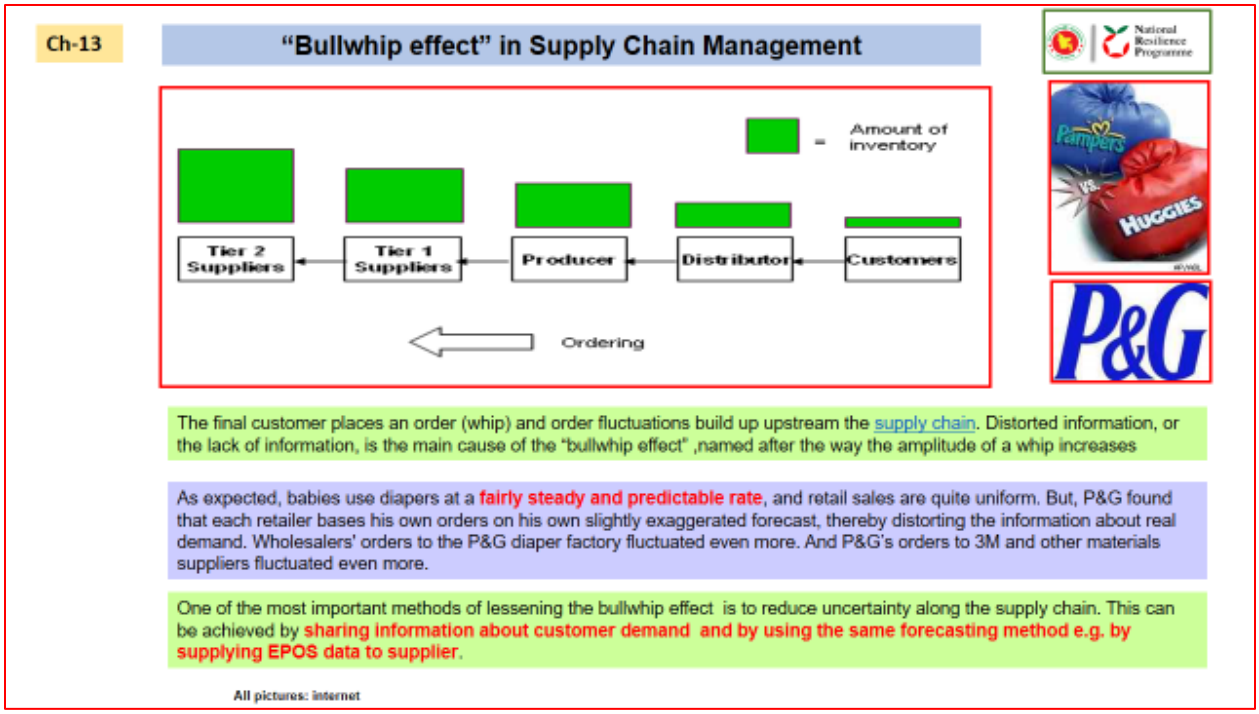
Day 2: Training Session 4 (Module 2: SCM: Demand Management and Its Forecast Techniques)

Mr. Shankar Kumar Roy, lead facilitator and NRP consultant conducted the fourth session of day 2 and covered following topics:

- Natural Disaster: Strategy in Respect of Demand and Capacity
- What is the Bullwhip Effect and How Do You minimize it?
- Resilience Supply Chain and Business Continuity Planning (BCP)
- BCP- Case Study: German Telecom Giant Rapidly Restores Service After Fire
- Dr. Hau Lee's Uncertainty Framework
- Agile Supply Chain: Zara's Case Study Analysis
- Dr. Hau Lee's Triple-A Supply Chain

The following slides reflect highlighted portion of his deliberation.





After completing the fourth session of day 2, Mr. S M Ashrafur Rahman, Head of Plant, Consort Group a Chattogram based SCM expert shared his practical experience. It is relevant to add here that Mr. Rahman spent a good portion of his career at reputed MNC GSK. He took about 45 minutes covering his presentation and share his experience of SCM in MNC.

Day 3: Training **Session 1**(Module3: Purchasing and Supply Management)

As usual Mr. Shankar Kumar Roy, Lead Facilitator and NRP Consultant begun the session with an ice-breaking session. He mainly discussed following topics.

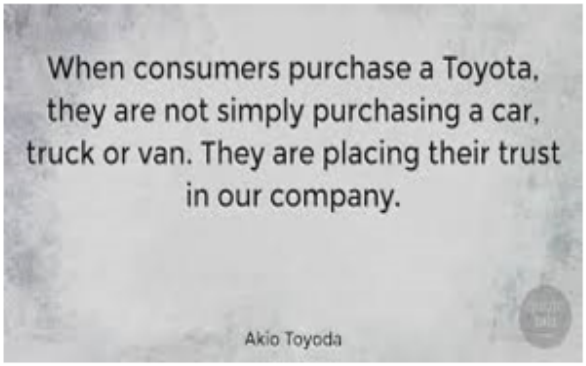
- What COVID-19 Taught Us about Strategizing for Supply Chain Resiliency
- How to Measure Supply Chain Resilience
- Build Supply Chain Resilience for a Post COVID-19 World
- Purchasing and Supply (P&S) Process
- Internal Standardization Reduces Time and Effort to Develop Purchase Specification and Help to make Supply Chain More Resilient
- Resilient SC: VE(Value Engineering)-A Structural Problem Solving Technique in the Field of P&S

Ch-3 Purchasing and Supply (P& S) Process

- The purchasing and supply function usually involves being the main point for assessing purchasing requirement, managing the interface with suppliers, placing orders, receiving purchased materials, authorizing payment, and other related activities.
- In other words, P&S is considered as the sourcing function of an organization involved with selection and handling of suppliers and their goods and/or services that are needed to run the organization. P&S function does not work in isolation- it works with other functions that together make up an organization efficient and cost-effective.

There are number of different processes and sub-processes managed by P&S function and they mainly include:

1. Identify Specification, Needs and Requirements
2. Analyzing the Supply Market
3. Select Areas of Supply and its Strategy
4. Identify and Select Suppliers
5. Bidding Process and Negotiating
6. Preparing and Managing Contracts
7. Transportation and Logistics in Purchasing
8. Maintaining Optimum Inventory
9. Measuring and Evaluating performance

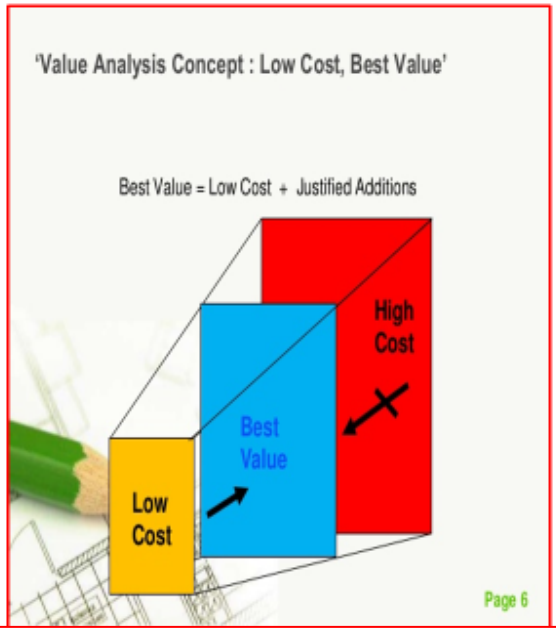


We will now explain each of these process and relevant supply risks along with resilience techniques/strategies.

Ch-6 Value Engineering

Value engineering is a systematic, organized approach to providing **necessary functions in a project at the lowest cost.**

- Value engineering promotes the substitution of materials and methods with less expensive alternatives, without sacrificing functionality. It is **focused solely on the functions of various components and materials**, rather than their physical attributes. Value engineering is also called value analysis.
- **The concept of value engineering evolved in the 1940s at General Electric, in the midst of World War II.** Due to the war, purchase engineer Lawrence Miles and others sought substitutes for materials and components since there was a chronic shortage of them.
- These substitutes were often found **to reduce costs and provided equal or better performance.**
- For example, a bottle of dishwashing liquid that becomes slippery after some of the soap **has leaked to the sides may be improved by redesigning the shape of the bottle and the opening spout to improve grip and minimize leakage.**
- This improvement could lead to increased sales without incurring additional advertising costs.

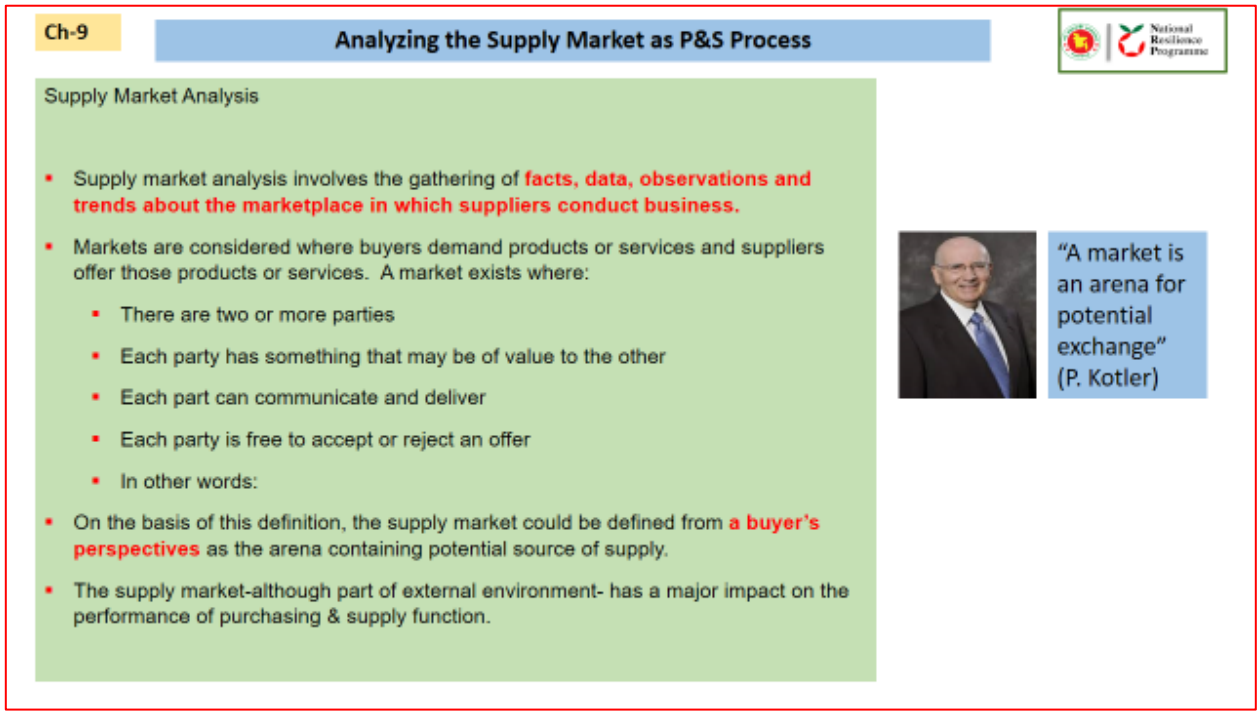


Day 3: Training **Session 2** (Module3: Purchasing and Supply Management)

Dr. Mahfuz Kabir, NRP Consultant conducted the second session and he mainly covered following elements

- Supply Risks Caused by Natural Disasters
- Purchasing and Supply Strategy and Supply Positioning Model (SPM) as P&S Process
- Supply Positioning Model (SPM)
- Obtaining and Selecting Offer as P&S Process
- Criteria to Evaluate Offers
- Lowest Total Cost of Ownership (TCO) as Criteria to Evaluate Offers
- Basis of Pricing
- How to Apply Price Revision Formula: An Example
- Commodity Price Risk
- Negotiation in the P&S Process

The following slides reflect highlighted portion of his deliberation.



Dr. Mahfuz Kabir, NRP Consultant conducted the third session and he mainly covered following elements

- Risks in International Trade & How to Manage Them
- Horizontal Integration and Vertical Integration
- Cost Saving through Procurement: A Way to Supply Chain Resilience
- Cost Saving Techniques
- Cost Saving: Cost Saving Through TCO (Total Cost of Ownership) Analysis

The following slides reflect highlighted portion of his deliberation.

Ch-14

Commodity Price Risk

Commodity price **risk refers to financial losses that may occur to both the consumer, and the producer** when there is a change in commodity prices. A risk for the buyers is that the prices for commodities may be high. Take an example of the carpenters. They have to buy wood to make furniture. If the wood prices go up, it will also mean that the costs of buying furniture will be higher. The producers will have lower profits because there will be few buyers.

Generally, producers face the risk of low commodity prices. For instance, if in the first year of planting the prices of crops are high, the farmer plants more hoping for higher profit margins. What will happen when the prices suddenly fall? The farmer makes losses. Commodity price risk does not happen just like that. Factors **including weather, technology, politics, market conditions, and seasons affect commodity prices.**

Groups Affected by Commodity Price Risk

Producers including farmers, mining companies, oil companies, and car manufacturers face price risks on their production inputs

Consumers face price risk when the prices go up as this affects their demand for commodities

Imposing tariffs on exports causes prices to go up. **Exporters** also experience hardship in the markets when this happens

Governments face price risks, especially when it comes to revenue generation. An increase in prices causes the government to generate more revenue

Basis of Pricing-Cont'd

2. Lowest total cost of ownership (TCO)

The TCO approach attempts to qualify all costs- and revenues- associated with particular purchase. This follows the so called **"cradle –to-grave"** approach. This kind of analysis is mostly relevant when purchasing equipment.

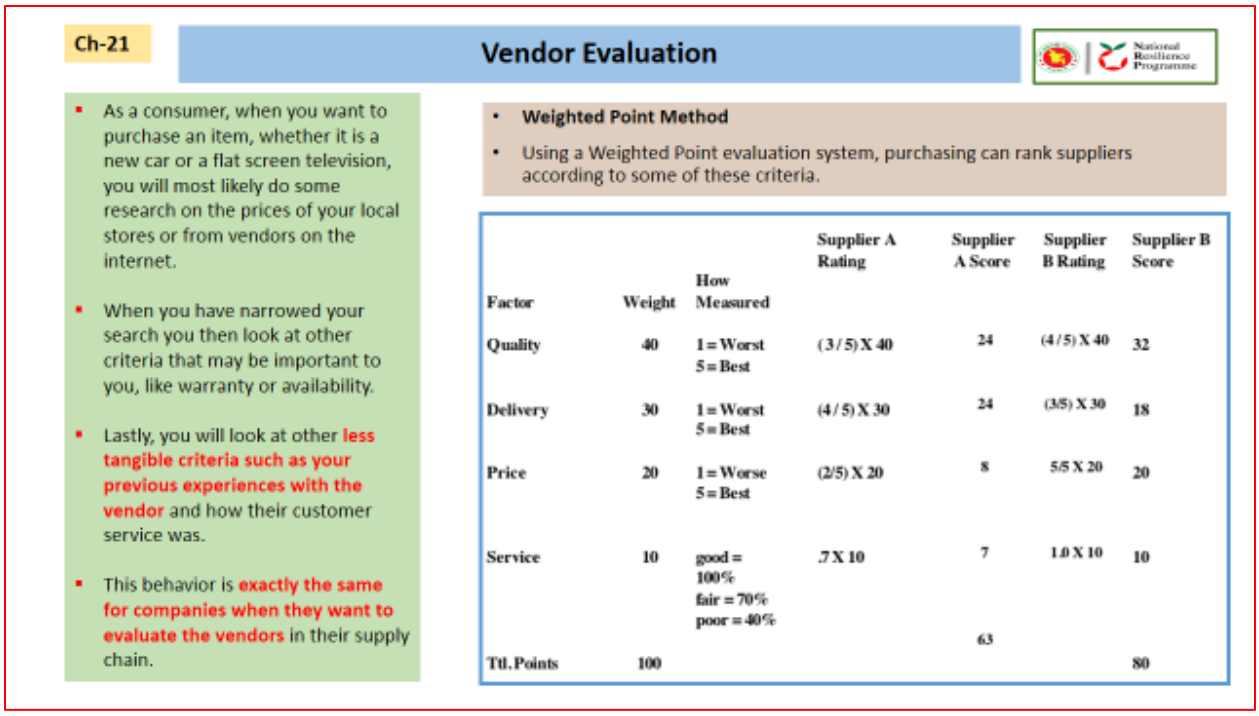
Component that generally make the TCO:

- Purchase cost
- Operating cost
- Preventive maintenance cost
- Repair cost
- Cost of disposal
- Capital cost
- Cost related to currency fluctuation
- The cost of employees' time
- The importance of the timing of costs
- Net Present Value (NPV)

Day 3: Training Session 4 (Module 3: SCM: Demand Management and Its Forecast Techniques)

Mr. Shankar Kumar Roy, lead facilitator and NRP consultant conducted the fourth session of day 3 and covered following topics:

- Vendor Evaluation
- Purchasing & Sourcing Management in Apparel Industry
- Green/Environmental Procurement Towards Developing Resilient Supply Chain
- Green Procurement



Ch-21

Vendor Evaluation

- As a consumer, when you want to purchase an item, whether it is a new car or a flat screen television, you will most likely do some research on the prices of your local stores or from vendors on the internet.
- When you have narrowed your search you then look at other criteria that may be important to you, like warranty or availability.
- Lastly, you will look at other **less tangible criteria such as your previous experiences with the vendor** and how their customer service was.
- This behavior is **exactly the same for companies when they want to evaluate the vendors** in their supply chain.

- **Weighted Point Method**
- Using a Weighted Point evaluation system, purchasing can rank suppliers according to some of these criteria.

Factor	Weight	How Measured	Supplier A Rating	Supplier A Score	Supplier B Rating	Supplier B Score
Quality	40	1 = Worst 5 = Best	(3/5) X 40	24	(4/5) X 40	32
Delivery	30	1 = Worst 5 = Best	(4/5) X 30	24	(3/5) X 30	18
Price	20	1 = Worse 5 = Best	(2/5) X 20	8	5/5 X 20	20
Service	10	good = 100% fair = 70% poor = 40%	.7 X 10	7	1.0 X 10	10
				63		
Ttl. Points	100					80

After completing the fourth session of day 3, Ms. Shazada Liza, Head of Procurement, Honda Bangladesh and SCM expert shared her practical experience.

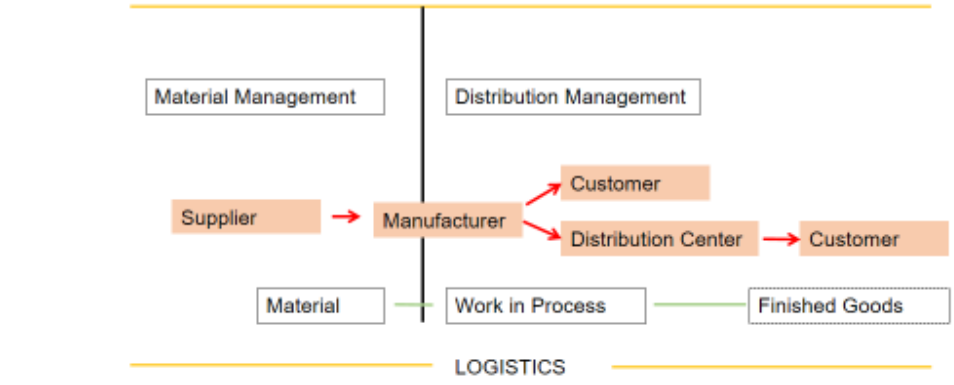
Day 4: Training **Session 1**(Module4: Logistics, Inventory, Transportation and Warehouse Management)

As usual Mr. Shankar Kumar Roy, Lead Facilitator and NRP Consultant begun the session with an ice-breaking session. He mainly discussed following topics.

- Logistics and Related Issues
- Operational Responsibilities of Logistics
- Strategic Responsibilities of Logistics and Emphasis of Resilience Supply Chain
- Logistics: Physical Flow
- Three Stages of Logistics
- Third Party Logistics (3PL) to Build Supply Chain Resilience
- Why 3PL Can Achieve Economy of Scale & Provide Better Services?
- 4PL (Fourth Party Logistics)

The following slides reflect highlighted portion of his deliberation.

Physical Flow



The **physical distribution of products** flows through a variety of geographically placed distribution points. The distribution points could include the manufacturing facilities, distribution centers, wholesalers and retailers, or distribution of goods may flow directly to the customer or through various levels as shown above.

Logistics includes the activities of acquiring material (procurement), moving material through the manufacturing environment (manufacturing of products), and distribution (getting the products to, or close to, the final customer).

Why 3PL can achieve economy of scale & provide better service?

- **Consolidation is the key!**

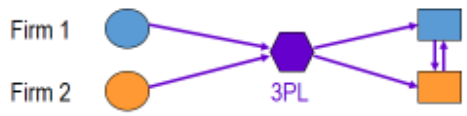
Example: 2 independent firms, 2 independent supply chains

Consider 2 scenarios

Scenario 1: The firms performs their own logistics functions

2 warehouses
2 separate distribution networks

Scenario 2: A 3PL takes care of both firms' logistics functions



1 warehouse
1 distribution network

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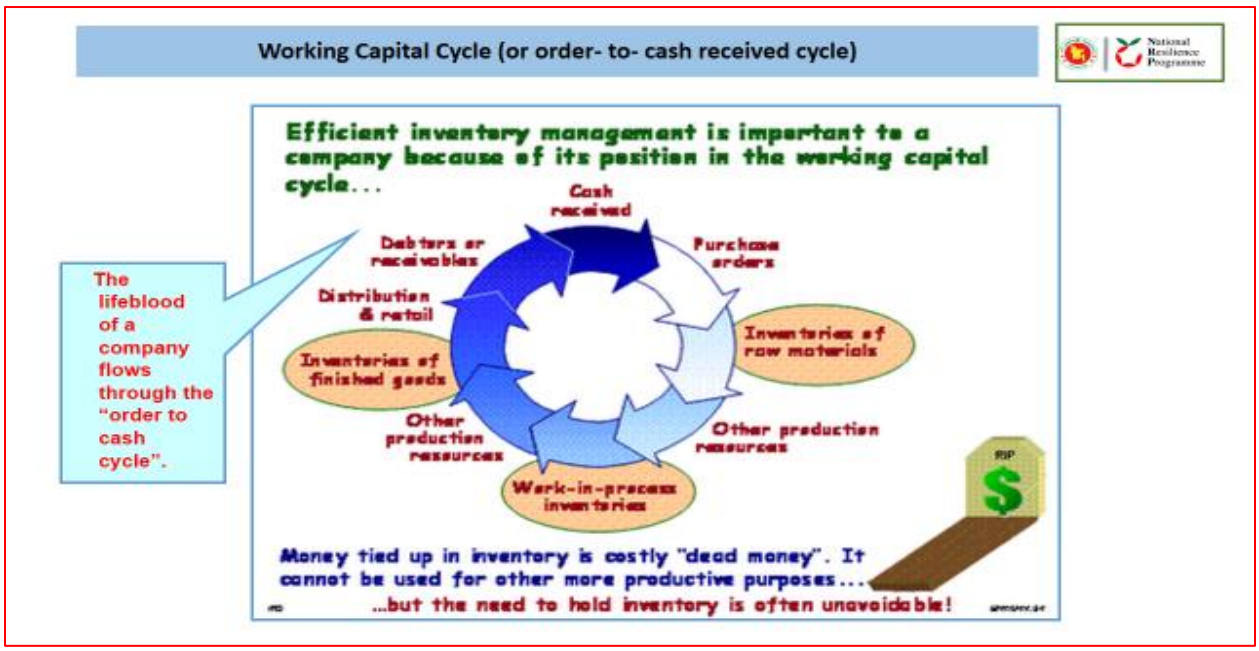
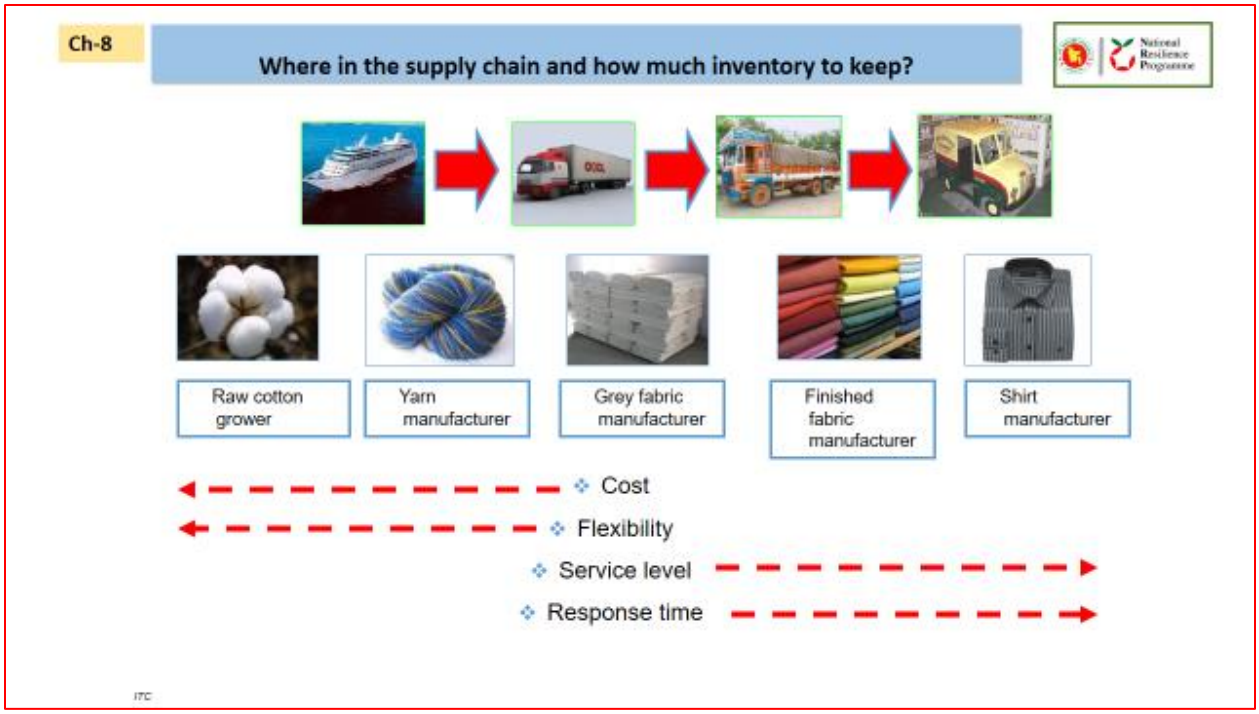
Day 4: Training Session 2(Module4: Logistics, Inventory, Transportation and Warehouse Management)

Mr. Shankar Kumar Roy, Lead Facilitator and NRP Consultant conducted the second session and he mainly covered following elements

- Inventory- Definition and Relevant Concepts
- Inventory and Working Capital Cycle
- The Cost of Not Holding inventory
- Factors in Determining Inventory Quantity
- Lead-time Management and Enhancing Ability to be Resilient
- How Do You Reduce Lead-time?
- Inventory Replenishing System
- Economic Order Quantity (EOQ)
- Inventory in the Supply Chain
- Supply Chain Resilience: Safety Stock to Combat Uncertainty
- Safety Stock Calculation
- Inventory Stocktaking and Audit
- Inventory Turnover
- Valuation of Inventory
- Supply Chain Resilience: Create a Buffer-stock for 3-months' Worth of Supply Needed for the RMG and textile Industry
- Transportation

The following slides reflect highlighted portion of his deliberation.





Day 4: Training Session 3 (Module 4: SCM: Logistics, Inventory, Transportation and Warehouse Management)

Dr. Mahfuz Kabir, NRP Consultant conducted the third session of day 4 and covered following topics:

- Cost Comparison between Two Modes of Transportation
- Vehicle Cost Analysis and Development of Resilience Capabilities
- Evaluation Transportation Choices
- Study on Supply Chain Resilience in RMG: Review of Supply Chain Development Plans at the National Level-
- Warehouse and Related Issues

The following slides reflect few highlighted portion of his deliberation.

Overall Transportation Objectives

1. Use large vehicles: With larger vehicles, we can take the advantage of economies of scale.

2. Utilize full vehicle capacity: It is always better if vehicles carry full load or at least nearly full load of material.

3. Minimize idle time: It is desirable to keep the vehicles busy doing useful work for the maximum possible time, so that it can is minimize idle time.

All pictures: Internet

Objective of Warehouse/Store Management

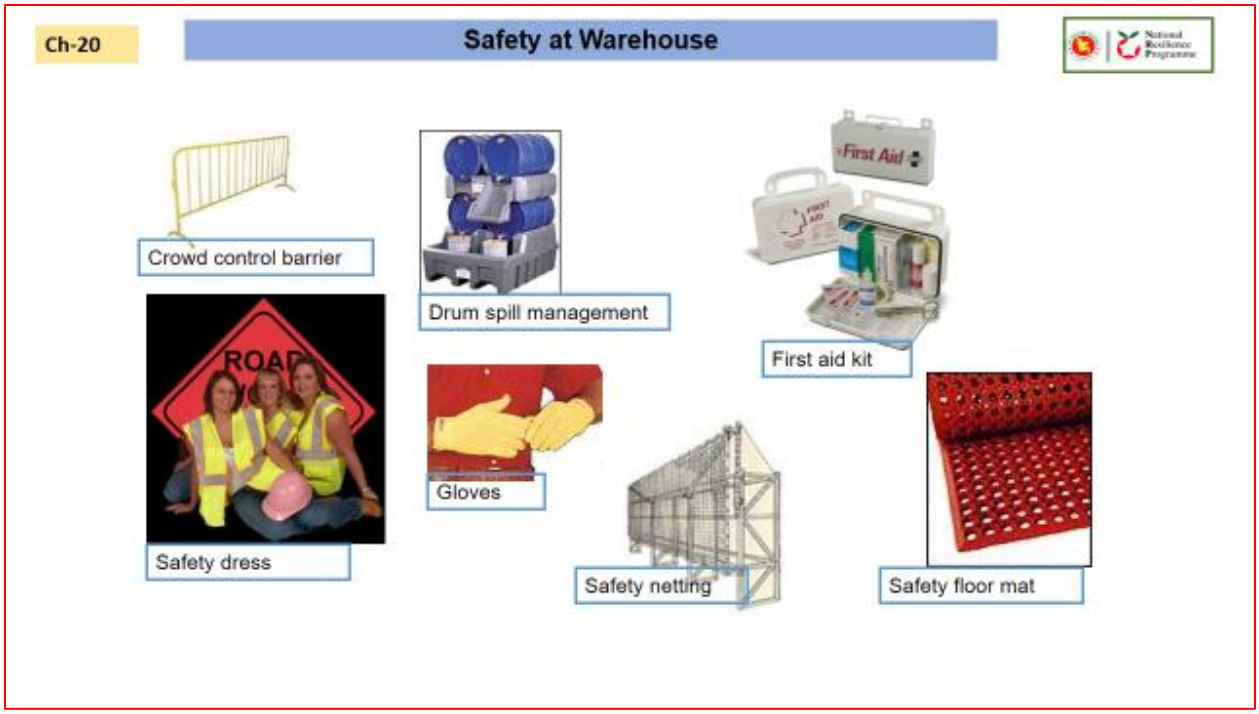
- Maximize completion of orders **on time & in full (OTIF).**
- Minimize the cost of warehouse operations.
- Maximize inventory turnover (i.e., mminimize the time that materials stay in the warehouse).
- Minimize response time to demand & errors in dispatches.
- Preserve the quality, value & security of the stored items.
- Ensure a balanced flow of materials needed to keep the business running
- Oorganize and account for the receipt & issue of materials

Day 4: Training Session 4 (Module 4: SCM: Logistics, Inventory, Transportation and Warehouse Management)

Dr. Mahfuz Kabir, NRP Consultant conducted the fourth session of day 4 and covered following topics:

- Warehouse: Location Evaluation
- Warehouse Design and Efficiency
- Safety at Warehouse
- Green Warehouse and Supply Chain Resilience

The following slides reflect few highlighted portion of his deliberation.

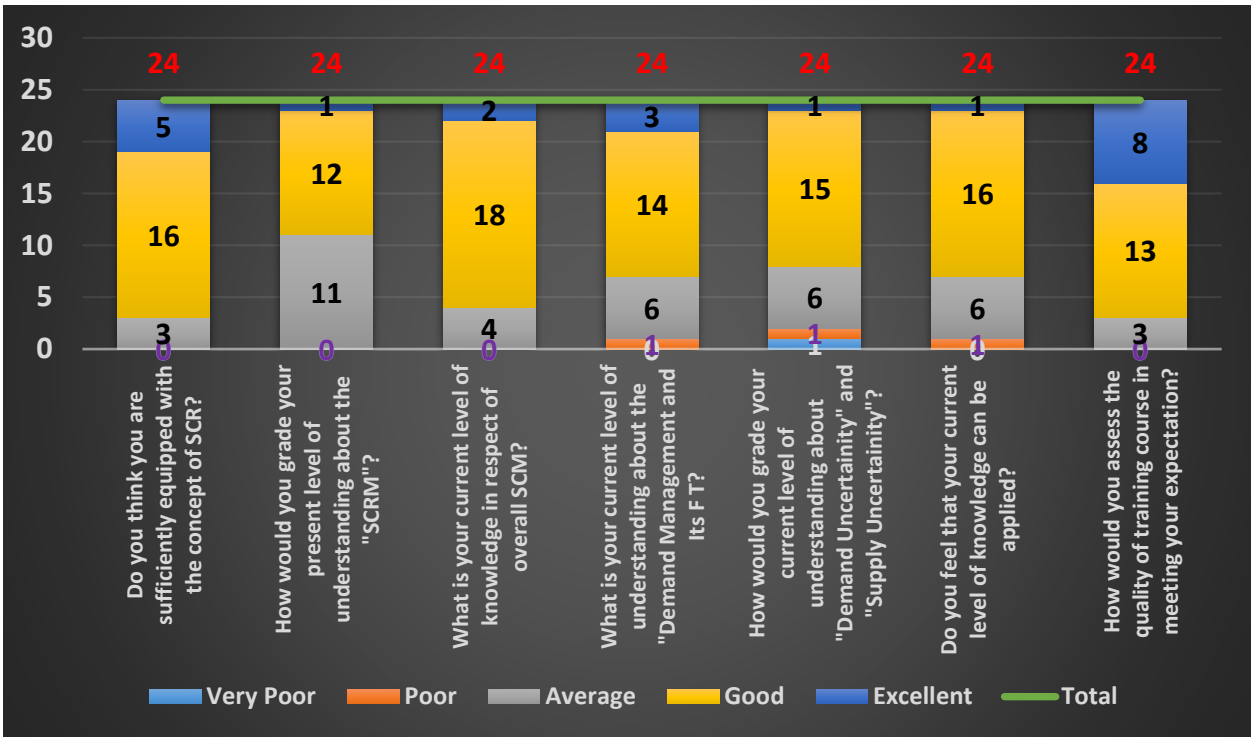


11. POST-TRAINING EVLUATION FEEDBACK

After completion 4 days training, all participants had submitted their post-training evaluation feedback stating their views on the delivered training. The purpose of this post-training feedback is to improve future training to be organized by NRP.

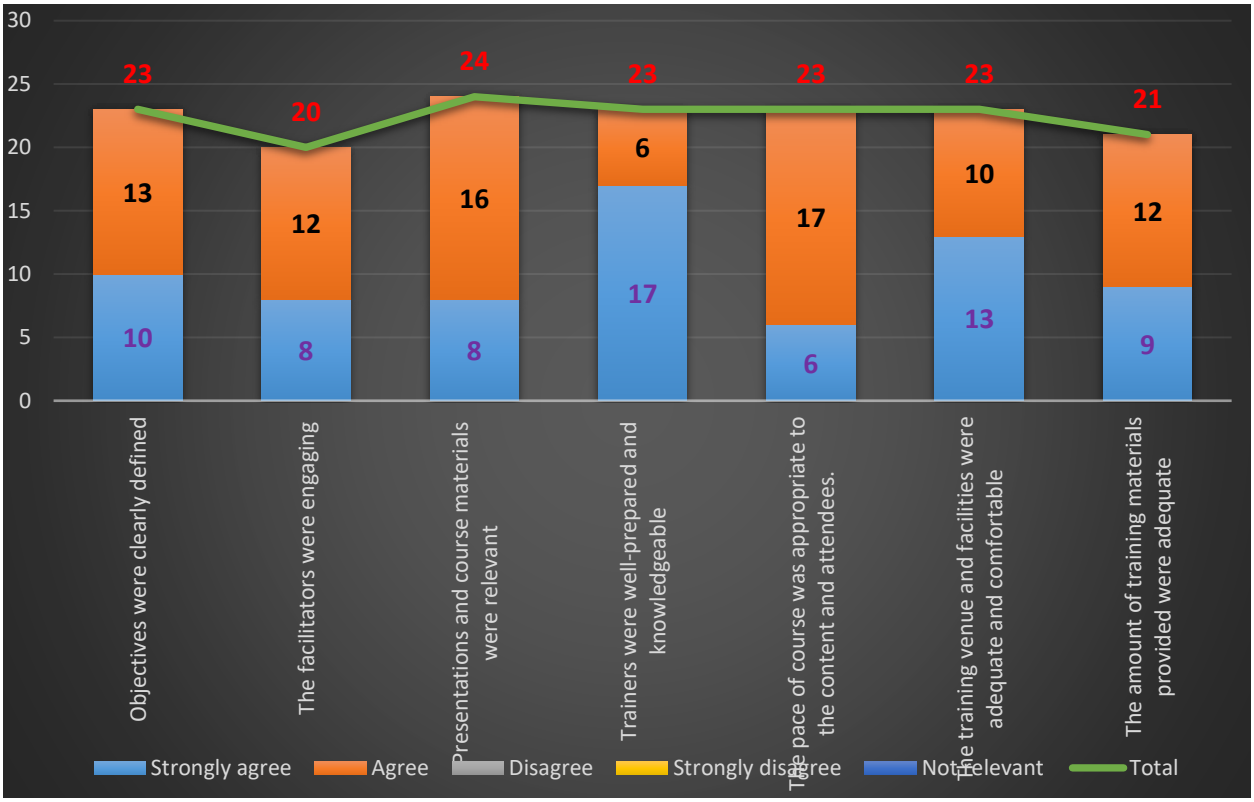
The summary of feedback is given below:

1. Participants were asked to put their feedback on following issues.



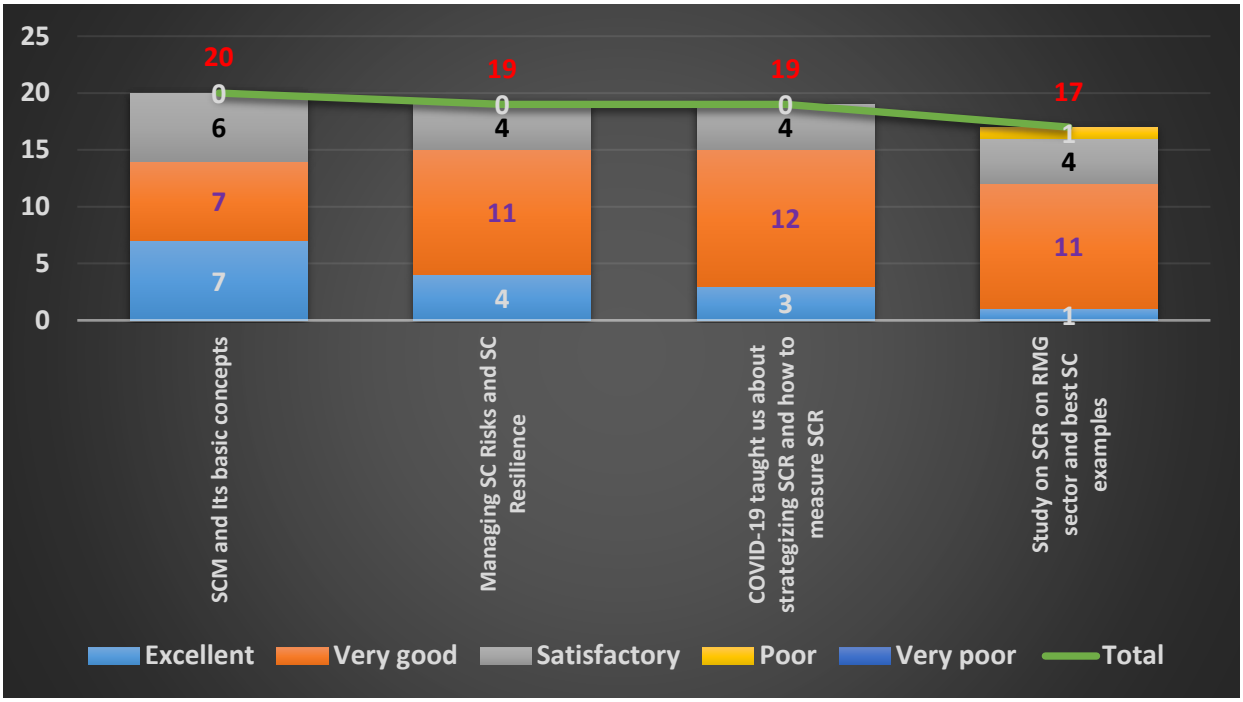
Brief description of the above chart
In respect of “whether participants are sufficiently equipped with the context of Supply Chain Resilience (SCR)”, out of 24 participants; 16 said ‘good’, 3 said ‘average’, and 5 said ‘excellent’.
Regarding “present level of understanding about Supply Chain Risk Management (SCRM)”, out of 24 participants; 12 said ‘good’, 11 said ‘average’, and one said ‘excellent’.
Regarding “current level of knowledge in respect overall SCM”, out of 24 participants; 18 expressed ‘good’, 4 said ‘average’, and two said ‘excellent’.
Regarding “demand management and its forecast techniques” out of 24 participants; 14 said ‘good’, 6 said ‘average’, 1 said ‘poor’ and 3 said ‘excellent’.
Regarding “understanding about ‘Demand Uncertainty’ and ‘Supply Uncertainty’ ”, out of 24 participants; 15 commented ‘good’, 6 said ‘average’, 1 said ‘poor’, 1 said ‘very poor’ and one said ‘excellent’.
Regarding “current level knowledge can be applied”, out of 24 participants; 16 said ‘good’, 6 said ‘average’, 1 said ‘poor’ and 1 said ‘excellent’.
Regarding “how would you asses the quality of training course”, out of 24 participants; 13 said ‘good’, 3 said ‘average’, and 8 said ‘excellent’.

2. Participants were asked to express their level of agreement with the following statements.



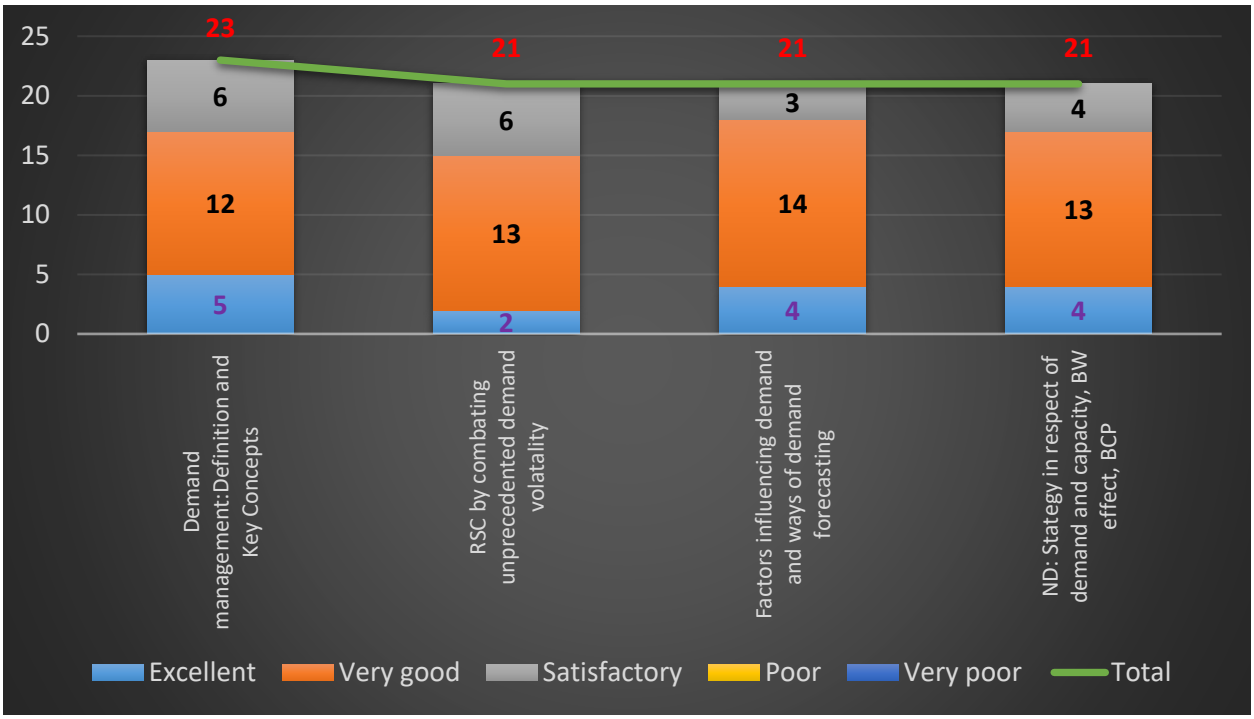
Brief description of the above chart
Regarding "whether objectives were clearly defined" out of 24 participants; 13 said 'agree' and 10 said 'strongly agree' and one refrained from answering.
Regarding "whether the facilitators were engaging" out of 24 participants; 12 said 'agree' and 8 said 'strongly agree' and four refrained from answering.
In respect of "presentations and course materials were relevant"; out of 24 participants; 16 said 'agree' and 8 said 'strongly agree'.
Regarding "whether trainers were well-prepared and knowledgeable"; out of 24 participants; 17 said 'strongly agree' and 6 said 'agree' and one refrained from answering.
Regarding "the pace of workshop was appropriate to the contend attendees" out of 24 participants; 17 said 'agree' and 6 said 'strongly agree' and one refrained from answering.
Regarding "the training facilities and venue were adequate and comfortable"; out of 24 participants; 10 said 'agree', 13 said 'strongly agree', and one refrained from answering.
Regarding "the amount of training materials provided were adequate"; out of 24 participants; 12 said 'agree', and 9 said 'strongly agree', and three refrained from answering.

3. Participants were asked to rate the effectiveness of individual section and in regard to Module 1: SCM: An Overview and Its Resilience Strategies; they answered as follows:



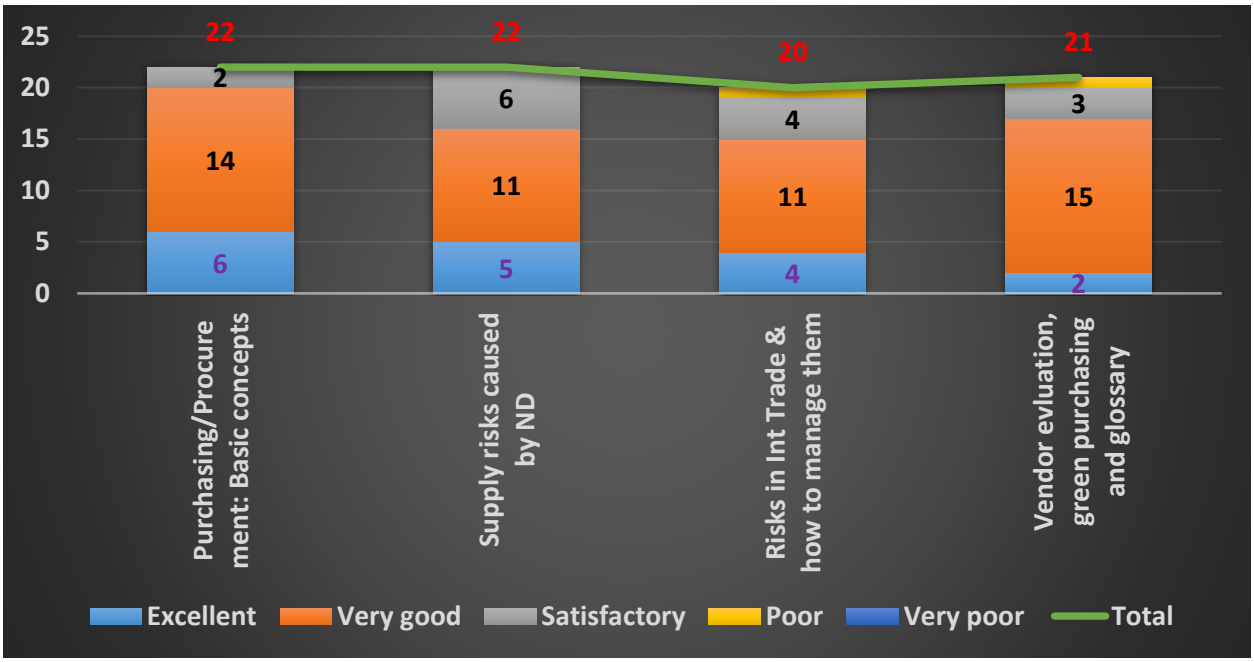
Brief description of the above chart
Regarding "SCM and Its basic concepts" out of 24 participants; 7 said 'excellent', 7 said 'very good' and 6 said 'satisfactory' and four refrained from answering.
Regarding "managing 'SC Risks' and 'SC Resilience' " out of 24 participants; 4 said 'excellent', 11 said 'very good' and 4 said 'satisfactory' and five refrained from answering.
Regarding "COVID-19 taught us about strategizing foe SC Resilience (SCR) and how to manage SCR" out of 24 participants; 3 said 'excellent', 12 said 'very good' and 4 said 'satisfactory' and five refrained from answering
Regarding "study on SCR on RMG sector and best SC examples"; out of 24 participants; 1 said 'excellent', 11 said 'very good' and 4 said 'satisfactory', 1 said 'poor' and seven refrained from answering

4. Participants were asked to rate the effectiveness of individual section and in regard to Module 2: Demand Management and Its Forecast Techniques; they answered as follows:



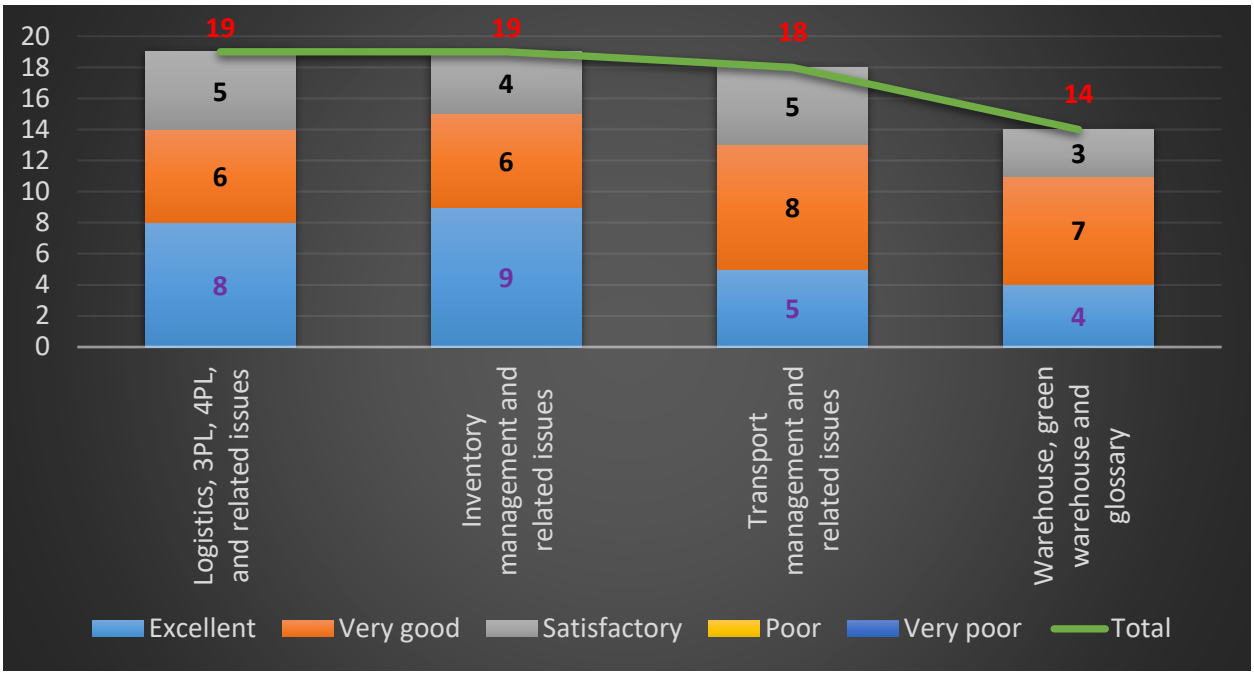
Brief description of the above chart
Regarding "demand management: definition and key concepts " out of 24 participants; 5 said 'excellent', 12 said 'very good' and 6 said 'satisfactory' and one refrained from answering.
Regarding "resilience SC by combating unprecedented demand volatility" out of 24 participants; 2 said 'excellent', 13 said 'very good' and 6 said 'satisfactory' and 3 refrained from answering.
Regarding "factors influencing demand and ways of demand forecasting" out of 24 participants; 4 said 'excellent', 13 said 'very good' and 4 said 'satisfactory' and three refrained from answering
Regarding "ND: strategy in respect of demand and capacity, BW effect BCP etc."; out of 24 participants; 4 said 'excellent', 13 said 'very good' and 4 said 'satisfactory', and three refrained from answering

5. Participants were asked to rate the effectiveness of individual section and in regard to Module 3: Purchasing and Supply (P&S) Management; they answered as follows:



Brief description of the above chart
Regarding "purchasing and procurement: Basic concepts " out of 24 participants; 6 said 'excellent', 14 said 'very good' and 2 said 'satisfactory' and two refrained from answering.
Regarding "supply risks caused by ND" out of 24 participants; 5 said 'excellent', 11 said 'very good' and 6 said 'satisfactory' and 2 refrained from answering.
Regarding "risk in international trade and how to manage them" out of 24 participants; 4 said 'excellent', 11 said 'very good' and 4 said 'satisfactory' and four refrained from answering
Regarding "vendor evaluation, green purchasing and glossary"; out of 24 participants; 2 said 'excellent', 15 said 'very good' and 3 said 'satisfactory', and three refrained from answering

5. Participants were asked to rate the effectiveness of individual section and in regard to Module 4: Logistics, Inventory, Transportation and Warehouse Management; they answered as follows:



Brief description of the above chart
Regarding "Logistics, 3PL, 4PL, and related issues " out of 24 participants; 8 said 'excellent', 6 said 'very good' and 5 said 'satisfactory' and five refrained from answering.
Regarding "Inventory management and related issues" out of 24 participants; 9 said 'excellent', 6 said 'very good' and 4 said 'satisfactory' and 5 refrained from answering.
Regarding "Transport management and related issues" out of 24 participants; 5 said 'excellent', 8 said 'very good' and 5 said 'satisfactory' and 6 refrained from answering.
Regarding "Warehouse, green warehouse and glossary"; out of 24 participants; 4 said 'excellent', 7 said 'very good' and 3 said 'satisfactory', and ten refrained from answering.

Overall comments from participants

Which aspects of this training was the most useful?
- Logistics - Resource persons were from the relevant field - Understanding supply chain challenges - This training is very useful for resilience supply chain - Module 3 and 4 were most useful - Presentations - Inventory management and natural disaster - Demand forecast - Vendor selection and evaluation - Pricing - Inventory management - Risk identification and minimization - Supply chain resilience

- Supply chain and its basic concept and its resilience strategy
- Purchasing and procurement concept and strategy
- Experience sharing
- SCM and its resilience
- Third party logistics
- Forecasting
- This training is very useful for our areas of job
- SCM to meet customer expectation with maximum satisfaction
- Awareness of natural disaster like Covid-10 and planning of resilient for early recovery
- This training is the most useful for each company
- Concepts and applications
- Total program is very useful
- The trainer is an expert person who tried to tell us real life experiences
- Forecasting and costing method classes were very useful. Besides, TCO and holding cost techniques were also useful

Which areas of the training could be improved?
- All are good - Time distribution - Supply chain risks, Inventory, Logistics and transportation etc. - Increase duration - Warehousing techniques - All relevant documents/training materials should be provided before training - Need to increase training period - Negotiation skill - Interaction of all candidates - Demand management and its forecast techniques - Supply chain in RMG sector - Supply chain resilience: “The ability to come back to the original position” - Company-wise case study analysis may be included - Time and practicality - Four days training is not enough and it should be of 6/7 days

What else would you like to see included in this event? Are there any other topics that you would like to be offered training courses in?
- It's sufficient - Top management from various organizations should be engaged - Communication skill - Policy on garment sector - Inventory management - Demand forecast - Need to include business sectors like merchandising units, service units, etc. - Practical (Bangladesh context basis) case study - Group discussion - Supply chain management and supply chain management risk - Should be more focused in RMG sector - Sourcing and negotiation - SCM challenges of Bangladesh - Training on H. S. Code - Presentation slides and module are well defined - More technical analysis tools.

How do you plan to use this training in your professional life as well as in promoting supply chain resilience at your current organization? (Please mention specific activities)
- Total subject will be applied to our company's work - I will work to reduce number of suppliers who would support in implementing SCR - I would share with top management in order to make resilient organization - Improve inventory report - If concept of 'demand management' is applied, our organization will be benefited and our professional life will be improved - I will plan to utilize all methods trained in this course - Transport cost per ton per kilometer - I will promote supply chain resilience by analyzing demand management, forecasting analysis, risk assessment, and proper inventory management -Will implement TCO - I will give an idea about supply chain resilience to my colleagues - I will apply these learnings in my organization - I will try my best - I will try to introduce VMI (Vendor Managed Inventory) - I will try to implement 3PL

- I will give my best effort to utilize the experiences of training
- Alternative source
- Time management
- We will take advance preparation for resilience
- We will try to address the issues like natural disaster, climate change, earthquake, floods
- We will get some safety stock considering natural disaster
- To emphasize 'JIT' process and efficient inventory management
- Develop information sharing among participants along with SCM members
- Demand forecast accuracy and develop relationship with customers
- Will share to colleagues
- Will practice
- Will apply the concepts like forecasting techniques, inventory management, cost of transportation and risk management etc.
- Will apply application of forecasting method. Besides, SKU, ABC and SPM categorization will be applied. Will try to apply re-order system

Any other comments
- Very nicely prepared - Overall good. I learnt something from this program and it will help to go next - Need some policy changes like bank and govt. holiday etc. - Training period should be increased for detail training - To arrange similar training half yearly basis - Requesting to make these types of training frequently in Chattogram - Need to focus more on in RMG sector and Textile industry - Arrange more training in Chattogram - Enjoyed a lot and need more time - Thanks to Mr. Shankar Kumar Roy and CCCI for useful and interactive training

12. OPEN DISCUSSION

At the end of fourth day session, an open discussion among all participants was held. This open discussion was jointly moderated by Dr. Mahfuz Kabir, NRP Consultant and Mr. Wasfi Tamim, CEO, Bangladesh Center of Excellence (BCE). Some of the participants shared their experiences in their respective organizations. Few participants emphasized the necessity of further improvement of facility at port and services of custom. All participants praised for organizing such useful training and requested to organize similar training in near future.

13. CERTIFICATION DISTRIBUTION CEREMONY AND CLOSING THE EVENT

At the end of the fourth day session, a certification distribution ceremony was held. The ceremony was attended by Mr. Khandker Ahsan Hossain, Chief Programming Division, Planning Commission, Dr. Nurun Nahar, Joint Chief (Joint Secretary), Programming Division and Project Director, NRP-PD and Mr. Muhammad Jahedul Huq, UNDP representative. Mr. Mahbubul Alam, President, Chattogram Chamber of Commerce and Industry attended the session virtually.

14. IMAGE GALLARY

View
CCCI President Mahbubul Alam
Mute
Start Video
Security
Participants
Polls
Chat
Share Screen
Record
Reactions
More
End
ENG
1653
21/03/2021

TRAINING ON
SUPPLY CHAIN RESILIENCE

15. ANNEXTURE: 1- LIST OF PARTICIPANTS

Total 26 participants attended the training course:

SN	Name	Desig.	Dept.	Organization	Mobile	Email
01	Khalil Ullah Chowdhury	Manager	Comm	Thainis Apparel	01779712208	khalil@thianis.com
02	Abu Fayes Chy	Exe.	SC	BSRM	01755545875	abu.chowdhury@bsrm.com
03	Shimul Kanti Chowdhury	Manager	SC	KSRM	01929921539	shimul.kanti@ksrm.com.bd
04	Md. Manik Miah	Asst Mgr.	SC	Rangs FC Properties	01708158522	manik@rancon.com.bd
05	M Rashedul Islam	Manager	Fin & SC	B M Energy	01701209828	rashedulislam@bmenergybd.com
06	Moddaser Ibn Ilias	Asst Mgr	S&M	Maf Shoes	01985559206	muddasir@mafshoes.com
07	Md. Akhtaruzzaman	Sr. Mgr.	Store	Base Textile Ltd	01730798405	akthar@basetextile.com
08	Md. Shafiqul Alam	Asst Mgr.	SC	GPH Ispat Ltd	10707007213	shafiqul.scm@gphispat.com
09	Arif Hossain	Sr. Exe.	Merch	Four H Group	01717091419	arif.hossain@fourhgroup.com
10	Mehadi Hasan	Jr. Merc.	Merch	Independent Appraels	01875233038	m.mehadi.cbift@gmail.com
11	Shaif Uddin Ahmed	Sr. Mgr.	Merch	Clifton Group	01988620960	shaif@cliftongroupbd.com
12	Md. Nazim Uddin	Asst Mgr.	Proc	Well Group	N/A	nazim-wellfabrics@textilebd.net
13	S.M. Moinul Huq Refat	ED	Textile	Asian Group	01713109813	refat@asianapparels.com
14	Md.Mehadi Hasan Shovon	Officer	SC	BNO Lubricant	01977266204	shovon062@gmail.com
15	Md. Ridwanul Karim	Exe.	Proc	A.K. Khan&Co	01818204573	‘ridwanul@akkhan.com
16	Md. Istiaque Mahmod Shah	Mgr.	Fin.	BSA Group	01817727002	dipufb9@gmail.com
17	Adnan Hadi Sardar	HOD-SC	SC	Confidence Cement	01714121112	adnanulhadi@yahoo.com
18	M.S. Shahin	Exe.	SC	MM Ispahani Ltd	01977900212	ms.shahin23@gmail.com
19	Mamunur Rahman	Sr. Off.	Proc	N Mohammad Group	01825273251	mamuncct@gmail.com
20	Mahbub Dener Khan	Mgr.	SC	Pedrollo NK Ltd	01919376341	mahbub.dener@pedrollobd.com
21	Zahid Uddin Ahmed Chowdhury	HOD-SC	SC	Regent Textiles	01730700421	Zahid.ahmad@regentfabrics.com

22	Kazi Md. Rayhanul Hoque	Trainee Officer	HR & Admin	Mars Appareals	01670459691	rrayhan26@gmail.com
23	S.M. Morshed Kamal	Mgr	Purchase	Ms Product	01842286052	smmorshedkamal@gmail.com
24	Engr. Mohd. Farque	Sec In Charge	N/A	The Ctg Chamber	01816249968	engrmohdfarque@gmail.com
25	Md. Ariful Islam	Sr. Merch	Merch	Section Seven Ltd	01713148153	arif@sectionsevenltd.com
26	Md. Forkan Uddin	Exe.	Comm	CPDL	01777766071	purchase@cpdl.com.bd