SUPPLY CHAIN PERFORMANCE AND CUSTOMER SERVICE

Dr Ibraheem Forson Abdul-Azeez
School of Transport and Logistics
Lagos State University
ibraheem.abdul-azeez@lasu.edu.ng
07036555582

Educational Background

- PhD Transport and Logistics
- MSc Transport Studies
- MSc Management
- B.Tech Transport Management

Professional Affiliations

- Fellow, Chartered Institute of Transport and Logistics (FCILT)
- Fellow, Chartered Institute of Transport Administration (FInstTa)
- Fellow, Institute of Strategic Management, Nigeria (FSM)

Research and Teaching Interests

- Transport and Logistics
- Operations & Supply Chain Management
- Project Management

Current post:

- Coordinator, Postgraduate Programmes
- Head, Department of Logistics and Supply Chain Management, School of Transport and Logistics

Consultancy and Grant

- Federal Ministry of Works
- Ministry of Transportation, Lagos State
- Federal Road Safety Corps, FRSC
- Lagos State Traffic Management Authority (LASTMA)
- National Universities' Commission
- Lagos State Waterways Authority
- HELP Logistics
- United States Trade and Development Agency
- Volvo Research and Educational Foundations
- TETFund

Conference, training, and workshops

- South Africa, Uganda, Ethiopia, Kenya, Kigali, Ghana
- Sweden, Germany, France, Netherlands, Belgium, Qatar, Albania, Kyrgyzstan

Over 40 articles in peer-reviewed journals locally and internationally

Agenda

01	Overview of Cement Supply Chain
02	Depot Value Delivery
03	Demand Management and Order Management
04	Customer Service and Contractor Management

Icebreaker

How Does Cement Get to the Customer?

Sketch or describe the journey from raw material to customer

Global & Nigerian Cement Landscape

- An indispensable component for infrastructure development
- A critical commodity that shapes our built environment
- 60 million metric tonnes per year
- Dangote Cement, Lafarge Africa, an d BUA Cement

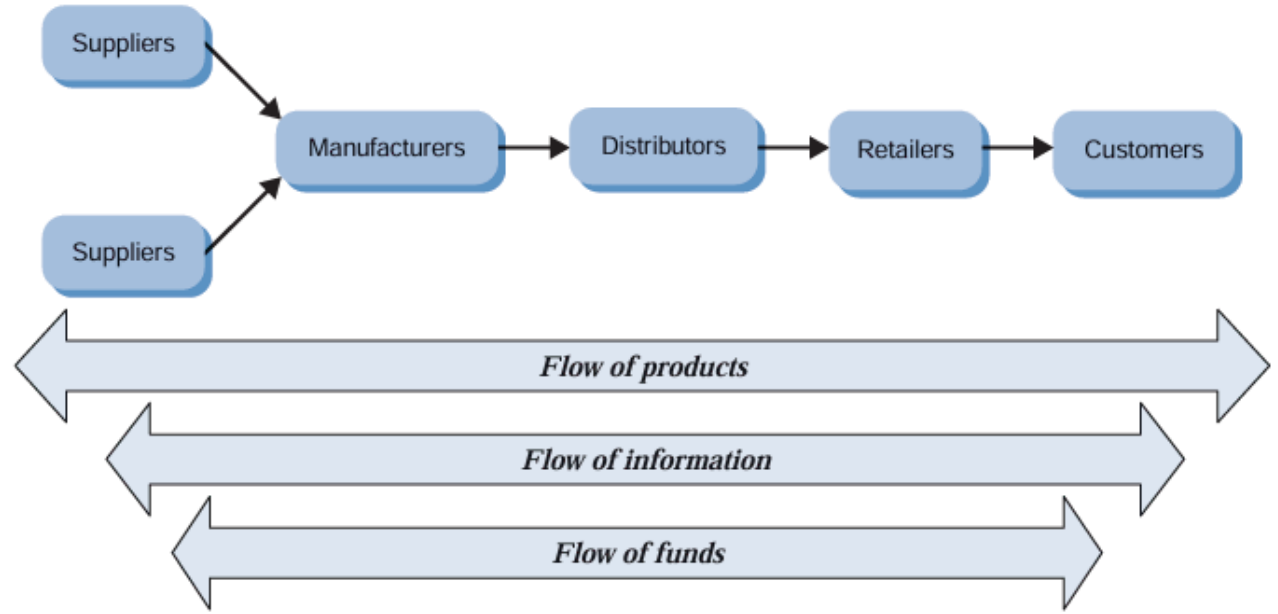
	COUNTRY	CEMENT PRODUCTION 2023 (T)
	China	2.1B
	India	410M
	Vietnam	110M
	United States	91M
	Turkey	79M
	Iran	65M
	Brazil	63M
	Indonesia	62M
	Russia	57M
	Saudi Arabia	53M

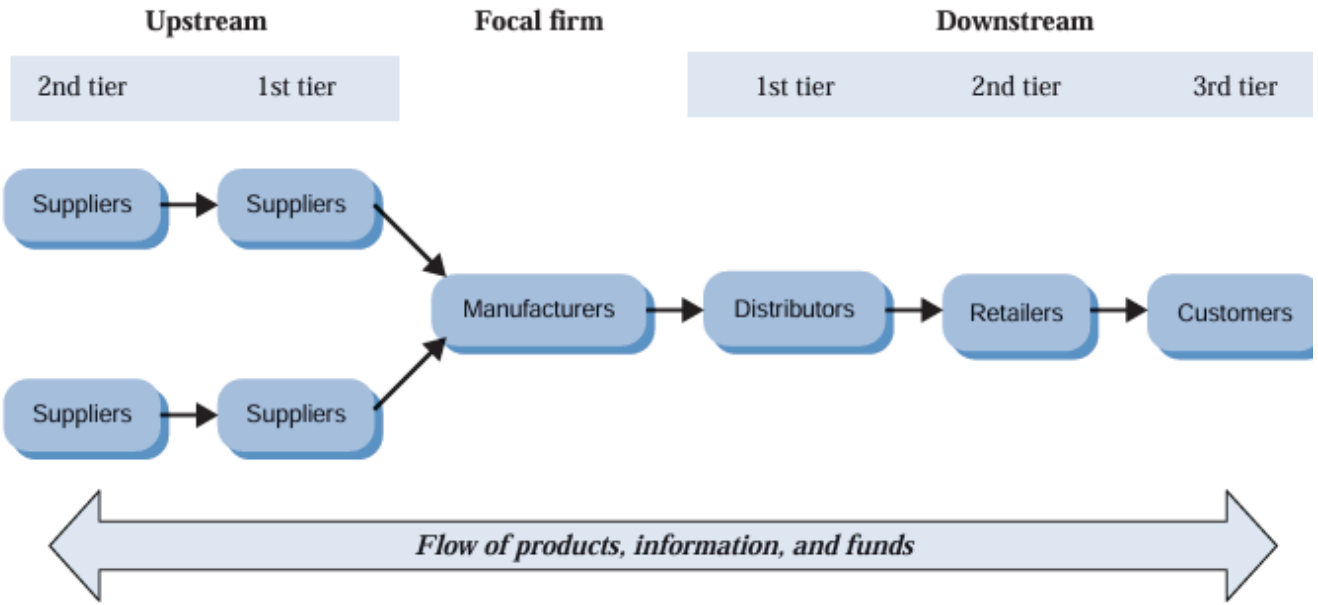
What is Logistics and Supply Chain?

Logistics involves the planning and control of material flows and related information within organizations as they move through the supply chain.

Supply Chain is a network of organizations, activities, and resources involved in moving a product from supplier to customer.

- Difference
- **Logistics = Movement and flow**
- **SCM = Coordination**





What is Supply Chain Management

Supplier Tier2

Supplier Tier2

Supplier Tier2

Supplier Tier2

Supplier Tier2

Supplier Tier1

Supplier Tier1

Supplier Tier1

Manufacturer

Distributor

Distributor

Customer

Customer

Customer

Customer

Overview of Cement Supply Chain

Raw materials Extraction

Production (clinker production: through heating the mixture in a rotary kiln – Grinding: mixing clinker with gypsum)

Packaging

Distribution → Depot → Customer

Supporting Flows: Information + Cash

Operational Challenges in Cement Logistics

- Truck shortage
- Maintenance gaps
- Road conditions
- Congestion
- Scheduling conflicts
- Documentation
- communication delays

Depot as a Critical Node

- **Key functions**
  - Inventory holding
  - Loading
  - Consolidation
  - Documentation
- **Values**
  - Service Reliability
  - Speed
  - Cost Efficiency
  - Accuracy

Understanding OTIF

On-Time-In-Full: percentage of deliveries that arrive at the **right time, right quantity, right condition.**

Why OTIF matters

Customer satisfaction	Reduced complaints	Efficiency and cost control

OTIF Components

On-Time: Delivery within the committed window

In-Full: Quantities complete & verified

In-Good Condition: No damage; correct paperwork

Depot OTIF Drivers

- Loading speed (trucks/hour)
- Yard congestion management
- Document accuracy
- Transporter coordination
- Inventory accuracy

Depot Key Performance Metrics

- OTIF: % of deliveries on time & in full (Reliability)
- TTT: Truck Turnaround Time (Yard efficiency)
- Loading Productivity: Trucks/hour (Process speed)
- Inventory Accuracy: Stock correctness (Planning accuracy)

Truck Turnaround Time (TTT)

- TTT is the total duration from the moment a truck enters the depot gate to when it exits after completing loading or unloading.
- Components of TAT
  - Gate-in processing time
  - Weighbridge-in time
  - Queueing/waiting time
  - Loading time
  - Weighbridge-out time
  - Gate-out clearance

Common Causes of High TTT

- Equipment breakdown
- Manual documentation
- Congestion from poor dispatch planning
- Contractor inefficiency
- Wrong truck sequencing

Time Between Failures - TBF

- TBF measures the reliability of critical equipment – loading lines, packers, forklifts, weighbridges, etc.
- TBF is the average time equipment runs without failure
- High TBF means stable operations, fewer interruptions, and service reliability
- Low TBF increases TAT and reduces OTIF

Waste in Depot Operations

- Waiting (drivers, documents)
- Motion (manual, unnecessary)
- Errors & rework
- Over-processing

Digital Tools Supporting OTIF

GPS/Telematics.

TMS dashboards

Real-time loading sequence

OTIF reporting

Improving Depot Efficiency

- Resilience: Ability to anticipate, adapt, and recover from disruptions
  - Risks: Driver strikes, insecurity, weather etc
- Digital Visibility: GPS, IoT, Telematics

Demand and Order Management

- Aligning supply, planning and customer needs
- What Drives Cement Demand?
  - Construction cycles (rainy/dry season)
  - Real estate & infrastructure projects
  - Distributor cash flow
  - Macroeconomic conditions.

Demand Forecasting Approaches

- **Qualitative**: Sales insights, dealer intelligence.
- **Quantitative**: Trends, moving average, seasonality models.

- **Importance**
  - Poor forecasting → Stockouts, overstocking, bullwhip effect
  - Good forecasting → Stable depot operations
- **The Bullwhip Effect**: small demand changes create larger swings upstream.

Order Management Cycle

- Order entry
- Order validation
- Allocation
- Dispatch scheduling
- Loading
- Delivery confirmation

Balancing Orders Across Depots

- Inventory availability
- Expected replenishment
- Route capacity
- High-value customers

Order Prioritization Rules

Customer type
Payment status
Distance/route
Product type
Truck availability

Customer Service

Key pillars

- Reliability
- Responsiveness
- Communication
- Professionalism

Demand Sensing & Predictive Analytics

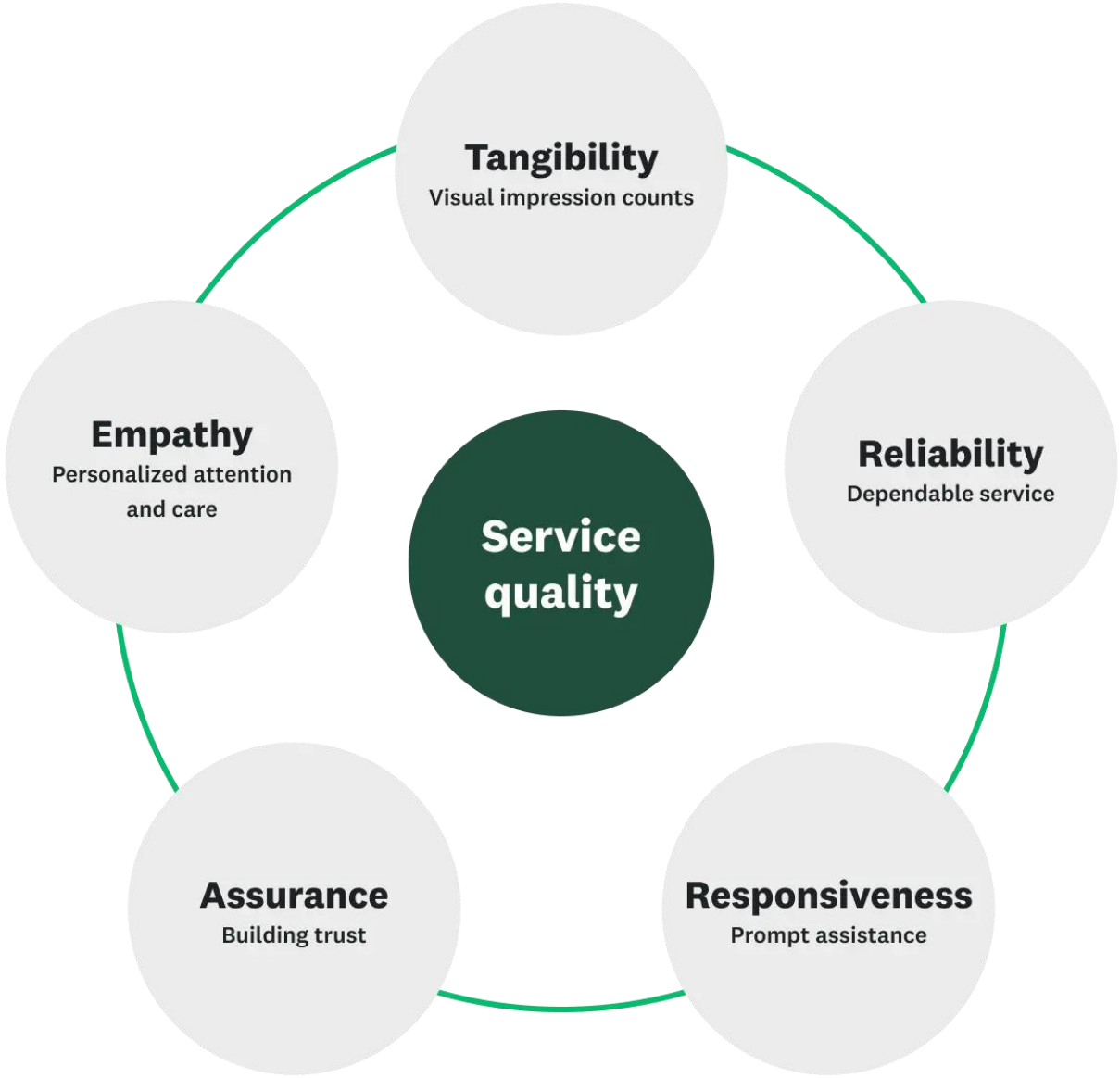
Real-time dealer sales

GPS + TMS = accurate ETA = better planning

AI-based demand fluctuations

Service Quality Dimensions (SERVQUAL)

meeting customer expectations



Typical Customer Pain Points

- Delayed trucks
- Wrong quantities
- Poor communication
- Driver behaviour

Handling Difficult Customers 1

- A difficult customer is a customer who displays frustration, dissatisfaction, or challenging behaviour because their expectations were not met.
  - Raising their voice or sounding angry
  - Complaining repeatedly
  - Being impatient or demanding
  - Interrupting or refusing to listen
  - Blaming the depot, transporter, or system
  - Expressing mistrust or threatening to switch suppliers

Handling Difficult Customers 2

- A customer becomes "**difficult**" because of the situation, not necessarily because of their personality. Often, their reaction reflects:
  - Pressure from their own business
  - Financial implications of delays
  - Repeated service failures
  - Poor communication or unclear expectations

Core Principles for Handling Difficult Customers

- Stay calm and professional
- Listen without interrupting
- Show empathy
- Clarify the facts
- Provide clear, actionable solutions
- Communicate timelines
- Follow Through

5-Step Response Model (L.E.A.P.S.)

- L – Listen: Allow the customer to explain without interruption
- E – Empathize: I can imagine how frustrating this must be
- A – Apologize: Apologize for the situation, not for being wrong
- P – Probe: Gather facts, clarify expectations
- S – Solve: Provide immediate solutions, next steps, and timeline

Why Contractor Management Matters

- Contractors represent the company's image in the field.
- Their performance directly influences OTIF and customer satisfaction.
- Strong contractor management enhances delivery, reduces risks, and increases operational efficiency.

Contractor Performance Scorecard

- OTIF performance
- Safety compliance
- Truck availability
- Document accuracy

Building Strong Contractor Relationships

Monthly performance reviews
Clear escalation & feedback channels
Reward consistent performance
Structured penalties for repeated failure
Regular engagement

Thank you