UNIT – III

Service Guarantee & Service Recovery: How to provide Service guarantee? How to recover from Service failure?

SERVICE GUARANTEE

A **Service Guarantee** is a **formal promise** by an organization to deliver a **specified service standard** and offer **compensation or corrective action** if the service fails. It acts as a **risk-reduction mechanism**, reassuring customers in **intangible** and **variable** service environments by **building trust**, ensuring **accountability**, and signaling **service quality**.

KEY OBJECTIVES:

- **Risk Minimization:** Reduces customers' perceived uncertainty.
- **Trust Building:** Increases confidence in the service provider.
- **Service Reliability:** Encourages consistent and dependable service delivery.
- **Competitive Advantage:** Differentiates the service offering.
- **Structured Recovery:** Provides a clear mechanism for handling failures.

CHARACTERISTICS-

- **Unconditional Terms:** Simple, no hidden clauses.
- **Clear Language:** Easy for customers to understand.
- **Meaningful Compensation:** Provides genuine value.
- **Easy Invocation:** Simple to claim the guarantee.
- **Easy Collection:** Fast refund or remedy process.
- **Credible Promise:** Firm must be capable of delivering it.
- **Complete Coverage:** Addresses major causes of dissatisfaction.

IMPORTANCE OF SERVICE GURANTEE

For Customers

- **Risk Reduction:** Lowers fear of service failure.

Confidence Building: Strengthens belief in service quality.

- **Clear Remedies:** Offers defined steps for resolving issues.
- **Fairness & Transparency:** Ensures honest and transparent handling.
- **Higher Satisfaction:** Improves overall customer experience.

For Companies

- **Operational Discipline:** Promotes standardized performance.
- **Employee Motivation:** Encourages high service standards.
- **Failure Detection:** Identifies weak points in service processes.
- **Brand Differentiation:** Strengthens market positioning.
- **Actionable Feedback:** Provides useful data for improvement.

Example - "*A hotel offering "100% Satisfaction Guarantee – If anything is wrong with your stay, you don't pay."*

TYPES OF SERVICE GURANTEE

1. Unconditional Satisfaction Guarantee - Applies with no restrictions; full compensation if dissatisfied.

Example: *"100% satisfaction or your money back."*

2. Specific Attribute Guarantee - Covers a measurable service feature like speed or accuracy.

Example: *"Delivery within 30 minutes."*

3. Combined Guarantee - Blends satisfaction guarantee with performance commitments.

Example*: "Full refund + 24-hour resolution guarantee."*

4. Implicit Guarantee - Based on strong brand reputation without explicit statement.

Example: *Premium hotels offering superior quality by default.*

5. Performance Guarantee - Ensures specific measurable metrics.

Example: *"99.9% network uptime guaranteed."*

HOW TO PROVIDE A SERVICE GUARANTEE?

Providing a service guarantee requires **operational readiness**, **clear communication**, and the ability to consistently meet the promised standards.

KEY PRINCIPLES-

- **Specific Standards:** Define clear, measurable performance criteria.
  Example: *"Delivery within 24 hours" sets a measurable commitment.*
- **Unconditional Promise:** Avoid fine print that confuses or limits customers.
  Example: *"No-questions-asked refund if dissatisfied."*
- **Meaningful Compensation:** Offer remedies customers value.
  Example: *Free meal or refund for poor food quality.*
- **Simple Communication:** Convey guarantee terms in plain language.
  Example: *"Late delivery = 50% refund" displayed clearly at counters.*
- **Easy Claims:** Minimize effort required to use the guarantee.
  Example: *Instant refund at counter without forms.*
- **Fast Resolution:** Provide quick refunds or service correction.
  Example: *Immediate credit issued for network outage.*
- **Credible Delivery:** Make promises that can be consistently fulfilled.
  Example: *Airline guarantees on-time morning flights only.*

STEPS-

- **Employee Training:** Staff should fully understand and confidently honor guarantees.
- **Resource Alignment:** Ensure adequate manpower, technology, and support systems.
- **Customer Awareness:** Communicate guarantees through all customer touchpoints.
- **Measurable Standards:** Link internal KPIs to guarantee performance.
- **Failure Tracking:** Record guarantee claims and analyze recurring failures.

SERVICE RECOVERY

Service Recovery refers to the **actions taken to address service failures** and **restore customer satisfaction**, aiming to convert dissatisfaction into loyalty.

KEY OBJECTIVES -

- **Restore Satisfaction:** Ensure the customer feels valued and supported
- **Regain Trust:** Re-establish confidence in the service provider
- **Prevent Loss:** Stop customers from switching to competitors
- **Identify Failures:** Detect weaknesses in service processes
- **Improve Quality:** Use failures to strengthen service design.

IMPORTANCE -

- **Customer Retention:** Prevents customers from leaving after a failure.
- **Brand Protection:** Safeguards the firm's **image and reputation**.
- **Trust Restoration:** Rebuilds customer **confidence and reliability**.
- **Service Improvement:** Helps identify gaps and drive **process correction**.

HOW TO RECOVER FROM SERVICE FAILURE?

Recovering from a service failure requires **speed, empathy, and accountability** to rebuild customer confidence, which includes-

Immediate Steps

- **Quick Response:** Address the issue immediately to prevent escalation.
- **Active Listening:** Allow customers to explain the problem fully.
- **Sincere Apology:** Provide a genuine apology without excuses.
- **Ownership:** Accept responsibility; avoid blaming external factors.

Solution & Follow-Up

- **Appropriate Resolution:** Fix the issue or offer a suitable alternative.
- **Fair Compensation:** Provide refunds, discounts, or replacements when necessary.
- **Follow-Up Assurance:** Confirm customer satisfaction after resolution.

Long-Term Preventive Actions

- **Root Cause Analysis:** Identify underlying causes of failures.
- **Documentation:** Record recurring issues for pattern analysis.
- **SOP Improvements:** Update processes, training, and standards.
- **Service Design Enhancement:** Strengthen systems to avoid repeat issues.
- **Technology Upgrades:** Improve faulty tools or infrastructure.

Example

Hotel Example

Unclean room reported → staff apologizes → upgrades room → compensates → follows up → updates housekeeping SOPs.

Telecom Example

Network outage → immediate acknowledgment → explanation → data credit → prevention plan.

UNIT-4

UNIT- IV

Forecasting Demand for Services: A review of different types of forecasting methods for demand forecasting.

Managing Capacity and Demand: Strategies for matching capacity and demand, Psychology of waiting, Application of various tools used in managing waiting line in services.

Managing Facilitating Goods: Review of inventory models, Role of inventory in services

Managing service supply relationship: Understanding the supply chain/hub of service, Strategies for managing suppliers of service

Vehicle Routing Problem: Managing after sales service, Understanding services that involve transportation of people and vehicle, Techniques for optimizing vehicle routes

FORECASTING DEMAND FOR SERVICES-

Demand Forecasting is the process of **predicting future customer demand** using historical data, trends, and analytical methods. It helps organizations plan **capacity**, allocate **resources**, reduce **cost**, and improve service performance.

PURPOSE-

- **Capacity Planning:** Helps estimate required staff, equipment, and facilities
- **Resource Allocation:** Ensures optimal use of manpower and materials
- **Financial Planning:** Assists in budgeting and revenue estimation
- **Service Level Improvement:** Prevents delays, stockouts, or service failures
- **Strategic Decisions:** Supports long-term expansion and investments.

CONSEQUENCES OF POOR FORECASTING-

- **Underestimation:** Stockouts, long waits, overload, poor satisfaction.
- **Overestimation:** Idle capacity, wasted labor, higher cost, inefficiency.

Example: *A hospital forecasts patient inflow to arrange enough doctors during peak hours.*

TYPES OF FORECASTING METHODS

1. QUALITATIVE METHODS (Judgment-based)

- **Expert Opinion:** Uses experience of specialists.
  Example: Experts estimate festive-season hotel occupancy.
- **Delphi Method:** Anonymous multi-round expert consensus.
  Example: Panel predicting tourism demand.
- **Market Research:** Surveys/interviews to capture customer intentions.
  Example: Coaching center surveys students for admissions forecast.
- **Sales Force Composite:** Forecast from sales teams' local knowledge.
  Example: Agents estimate next month's broadband subscriptions.

2. QUANTITATIVE METHODS (Data-driven)

- **A. Time Series Analysis**
  - **Moving Averages:** Smooths data to reveal trends.
    Example: Café forecasts footfall using 7-day moving average.

- **Exponential Smoothing:** More weight to recent demand.
  ***Example**:* Telecom firms forecast call volumes.
- **Trend Projection:** Extends historical growth forward.
  Example: Gym predicts membership increase from 3-year trend.

- **B. Causal / Econometric Models**
  - **Regression Analysis:** Forecast using factors like price, ads, income.
    Example: Transport firm predicts ridership using fuel prices.
  - **Econometric Models:** Study multi-variable cause–effect.
    Example: Airline uses GDP + tourism index to project demand.
  - **Machine Learning Models:** Detect complex patterns for accuracy.
    Example: E-commerce predicts order spikes using ML.

MANAGING CAPACITY & DEMAND

Managing capacity and demand means balancing the organization's **available resources (capacity)** with **customer demand** so services remain smooth, fast, and cost-efficient. If demand exceeds capacity → delays, dissatisfaction. If capacity exceeds demand → waste and higher costs.

TWO MAJOR APPROACHES ARE

(1) Adjusting Capacity (Supply-side
(2) Shaping Demand (Demand-side).

1. ADJUSTING CAPACITY (SUPPLY-SIDE STRATEGIES)

Capacity is modified to match customer demand.

- **Lag Strategy:** Add capacity only after demand increases — cost saving but **risk of delays**.
- **Lead Strategy:** Build capacity ahead of demand — high readiness but **higher cost**.
- **Match Strategy:** Adjust capacity gradually to follow demand — **balanced & flexible**.

Example: *A restaurant increases staff only during festive rush (Match Strategy).*

2. SHAPING DEMAND (DEMAND-SIDE STRATEGIES)

Demand is influenced to match available capacity.

- **Pricing Strategy:** Lower off-peak prices to shift customers
- **Promotions:** Offers & discounts to spread demand
- **Service Differentiation:** Premium vs. basic service during peak hours
- **Complementary Services:** Offer alternative services to balance load
- **Customer Communication:** Inform peak vs. non-peak timings.

Example*: A movie theatre reduces morning ticket prices to increase attendance.*

PSYCHOLOGY OF WAITING

Customers judge a service not only by the actual wait time but by **how the wait feels**. Managing perception improves satisfaction even if the waiting duration does not change.

APPROACHING TO MANAGE WAITING -

- **QUEUING MANAGEMENT (Operational View)**
  - Controls the **actual wait time** through structured queues.
    - **Flow Control:** Organizes customer movement efficiently.
    - **Queue Design:** Single-line queues, priority lines, token systems.
    - **Load Distribution:** Redirect customers to low-wait counters.
  - ○
- **PERCEPTUAL MANAGEMENT (Psychological View)**
  Shapes how customers **experience** the wait, making it feel shorter.
    - **Distraction Techniques:** TV, music, digital screens.
    - **Information Sharing:** Showing expected wait time reduces anxiety.
    - **Environment Design:** Comfortable seating, clear signage.

PRINCIPLES OF WAITING

- **Unoccupied waits feel longer:** Provide entertainment or info
- **Pre-service waits feel longer:** Make queue entry simple & guided
- **Uncertain waits feel longer:** Give accurate wait-time estimates
- **Unfair waits feel longer:** Use transparent and fair systems.
- **Unexplained waits feel longer:** Explain reasons for delays.

Example: *Hospitals displaying "Expected wait time: 12 minutes" on screens.*

APPLICATION OF TOOLS USED IN MANAGING WAITING LINES

Digital / Virtual Tools

- **Virtual Queuing:** Customers join queue via app/QR, no physical waiting.
- **Online Appointment Booking:** Pre-scheduling reduces crowding
- **Mobile Apps:** Show live queue updates and notifications.
- **Automated Alerts:** SMS/app notifications for turn updates.

In-Person Tools

- **Self-Service Kiosks:** Ticketing and registration without staff
- **Digital Signage:** Displays current turn numbers and wait times
- **Real-Time Queue Displays:** Show movement of queue clearly.

Analytics & Management Tools

- **Queue Management Software (QMS):** Central system to track & optimize queues
- **Analytics Dashboards:** Analyze waiting trends & improve staffing.
- **Staff Interfaces:** Helps staff manage calls and customer flow.

MANAGING FACILITATING GOODS

- Facilitating goods are the **tangible items** used or consumed by customers during a service delivery.

  Examples- *include food materials in restaurants, medical supplies in hospitals, or forms/documents in banks.*

- Effective management of these goods is crucial for smooth service operations, cost control, and maintaining service quality.

REVIEW OF INVENTORY MODELS

Service organizations use simplified inventory models adapted for services, where **demand is variable**, goods are supportive, and stockouts directly affect service performance.

Different Inventory Models are-

Model	Purpose / Concept	Key Features	Example
A. Economic Order Quantity (EOQ)	Finds **optimal order size** to minimize cost	• Balances **ordering cost** & **holding cost** • Assumes **constant demand**	A café calculates ideal milk order quantity to reduce cost & avoid spoilage.
B. ABC Classification	Categorizes inventory by **importance/value**	• **A-items:** High value → strict control • **B-items:** Medium value → moderate control • **C-items:** Low value → simple control	Hospitals treat **implants** as A-items and **syringes** as C-items.
C. Just-In-Time (JIT)	Maintains **minimum inventory** by receiving goods **only when needed**	• Low **storage cost** • Needs **reliable suppliers** • Reduces **waste**	Fast-food chains stock fresh vegetables **daily**.
D. Safety Stock Model	Keeps **extra buffer stock** for uncertainty	• Protects from **stockouts** • Useful for **variable demand** services	Pharmacies keep extra units of high-demand medicines.
E. Reorder Point (ROP)	Determines level at which **new order** is required	• Formula: **ROP = Demand during lead time + Safety Stock** • Prevents **delays/shortages**	A hotel restocks toiletries when inventory hits minimum level.

ROLE OF INVENTORY IN SERVICES

- **Service Continuity:** Prevents service breakdown caused by missing essential items.
- **Demand Balancing:** Maintains buffer stock to manage unpredictable service demand
- **Faster Service Speed:** Readily available goods reduce delays and waiting time
- **Customer Satisfaction:** Ensures reliability and builds trust through consistent availability
- **Cost Control:** Avoids overstocking (waste) and understocking (service loss).

MANAGING SERVICE SUPPLY RELATIONSHIP

Service supply relationships describe how service providers coordinate with suppliers and customers to deliver consistent service quality. Unlike product supply chains, services follow a **hub-and-spoke model** where the provider acts as the central hub connecting multiple stakeholders.

KEY CHARACTERISTICS -

- **Intangibility:** Inputs often include information, not physical materials
- **Simultaneity:** Production & consumption happen at once
- **Capacity Dependency:** Supply relies on available staff, equipment, and time
- **Customer Interaction:** Customer actions directly influence service output
- **High Variability:** Demand and customer requirements change frequently

Hub-and-Spoke Model

Service supply works through a **hub-and-spoke structure**, where a **central service provider** coordinates real-time interactions with multiple **suppliers and customers**.

It includes-

- **Central Hub:** Service provider acts as the core
- **Customer as Co-Producer:** Customers supply inputs (info, presence, participation
- **Bidirectional Flow:** Information, materials, and actions move both
- **Multiple Spokes:** Suppliers, partners, and customers connected to the same
- **Real-Time Interaction:** Service delivery depends on immediate availability of capacity

Example:

A hospital (hub) coordinates with labs, pharmacies, doctors, and patients (spokes) simultaneously.

STRATEGIES FOR MANAGING SUPPLIERS IN SERVICES

Strategy	Key Components	Example
A. Supplier Selection & Evaluation	• **Quality Standards:** Clear SLAs and service expectations • **Performance Metrics:** Reliability, accuracy, turnaround time • **Audits & Compliance:** Periodic quality checks	*A hospital evaluates lab partners quarterly for **accuracy** and **report turnaround time**.*
B. Collaboration & Communication	• **Shared Information:** Demand patterns, schedules, issues • **Technology Integration:** ERP, CRM, shared portals • **Joint Problem Solving:** Work together to fix bottlenecks	*A hotel shares weekly **occupancy data** with its laundry vendor through a portal.*
C. Capacity Coordination	• **Flex Contracts:** Temporary staff or outsourcing in peak time • **Backup Suppliers:** Reduce dependency risk • **Forecast Sharing:** Suppliers adjust capacity based on demand	*A restaurant hires an outsourced **kitchen team** during festival rush.*
D. Risk Management	• **Contingency Plans:** Alternate suppliers, backup stock • **Service Guarantees:** Penalties for delays or quality issues • **Monitoring Variability:** Track demand fluctuations	*A telecom firm uses multiple **SIM distributors** to avoid stockouts.*
E. Relationship Building	• **Long-Term Partnerships:** Stable, reliable service • **Training & Alignment:** Suppliers follow service standards • **Incentives:** Reward consistent & quality performance	*A hotel chain trains food suppliers on **hygiene SOPs** and rewards timely delivery.*

IMPORTANCE OF SUPPLIER MANAGEMENT IS CRUCIAL IN SERVICES

- **Consistency:** Ensures uniform service quality across all
- **Speed:** Faster service delivery due to aligned
- **Cost Control:** Prevents waste, delays, and poor-quality
- **Reliability:** Minimizes service failures caused by supplier lapses
- **Customer Satisfaction:** Smooth backend supply boosts customer experience

VEHICLE ROUTING PROBLEM (VRP)

The **Vehicle Routing Problem (VRP)** focuses on planning the **most efficient routes** for vehicles that deliver services or goods, aiming to **minimize travel time, distance, and cost** while meeting customer requirements.

OBJECTIVE-

- **Reduce Travel Distance:** Minimize total kilometers traveled by service vehicles.

- **Lower Operational Cost:** Reduce fuel, labor, and maintenance expenses.
- **Improve Service Speed:** Ensure faster response and timely deliveries.
- **Enhance Customer Satisfaction:** On-time visits improve reliability.
- **Optimize Resource Utilization:** Use vehicles, drivers, and capacity effectively.

TYPES OF VEHICLE ROUTING PROBLEMS (VRP)

VRP Type	Key Point	Description	Example
1. Capacitated VRP (CVRP)	Capacity Limit	Vehicle load must not exceed **weight/volume** capacity.	A delivery van carrying **max 80 parcels.**
2. VRP with Time Windows (VRPTW)	Time Restrictions	Each customer must be served within a **specified time slot.**	Technician visits between **10 AM–12 PM.**
3. Multiple Depot VRP (MDVRP)	Multiple Start Points	Vehicles operate from **more than one depot.**	Courier company with **3 city hubs.**
4. Pickup & Delivery VRP (PDVRP)	Two-Way Routing	Must match each **pickup** with the correct **drop-off.**	Cab picking & dropping **multiple riders.**
5. Open VRP (OVRP)	One-Way Route	Vehicle **does not return** to the depot after last stop.	Gas cylinder truck ends at **final delivery.**

APPLICATION IN SERVICES

- **Field Service Management:** Technicians visiting homes for repairs
- **Healthcare Services:** Ambulances choosing the fastest emergency route.
- **E-Commerce Delivery:** Optimizing parcel drop-offs
- **Public Transport Routing:** Shuttle buses mapping shortest paths
- **After-Sales Service:** Engineers visiting customers based on priority & location.

TECHNIQUES FOR OPTIMIZING ROUTES

- **Shortest Path Algorithms:** Use **Dijkstra / Floyd-Warshall** to compute minimum distance
- **Heuristics:** Fast methods like **Nearest Neighbor** and **Savings Algorithm** for quick routing
- **Meta-heuristics:** Advanced optimization using **Genetic Algorithms**, **Tabu Search**, **Simulated Annealing**.
- **GIS & GPS Integration:** Real-time tracking and dynamic rerouting based on traffic
- **Route Planning Software:** Tools like **Google Maps API**, **Route4Me**, **OR-Tools** automate VRP.

Example

*A broadband company must send **5 technicians** to **30 customer locations**. Using VRP software, routes are planned such that:*

- ***Total travel distance** is minimized,*
- *All visits fall within **promised time windows**,*
- *No technician is assigned more customers than capacity.*