

SERVICES SCIENCE AND SERVICE OPERATIONAL MANAGEMENT

UNIT 02

LECTURE 03

Unit-2 New Service Development

2.1	Innovation in Services
2.2	Service Blueprinting
2.3	Service Process Design
2.4	Service System Design
2.5	Service Facility Design and Layout
2.6	Strategic Location Considerations

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21MGH402T SERVICES SCIENCE AND SERVICE OPERATIONS MANAGEMENT SYLLABUS

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Unit-1 - Service – Definition	9 Hour
<i>Characteristics, Stages of economic development, Role of services in economy, Experience economy, Service science, Service dominant logic, Service systems, Service operations, Open system view of service operations, Service package, Strategic service vision, Competitive service strategies, Strategic analysis, Sustainability in services, Competitive role of information in services</i>	
Unit-2 - New Service Development	9 Hour
<i>Innovation in services, Service blueprinting, Service process design, Service system design, Service facility design and layout, Strategic location considerations, Service process analysis, Service encounter triad - Service organization, Contact personnel and Customer, Service profit chain, Technology in service encounter</i>	
Unit-3 - Service Quality Dimensions	9 Hour
<i>Measuring service quality – SERVQUAL gap model, walk through audit, Service quality by design, achieving service quality, Quality and productivity improvement process, Quality tools, Benchmarking, Improvement programs</i>	
Unit-4 - Strategies	9 Hour
<i>Strategies for managing service demand and service capacity, Forecasting service demand, Forecasting models – Subjective models, Causal models and Time-series models, Yield management and its application, Queuing systems, Essential features of queuing systems</i>	
Unit-5 - Managing Service Projects	9 Hour
<i>Characteristics of project, Project management – Principles, Process, and Building team, Selecting the project manager, Roles and responsibilities of project manager, Techniques for project management – PERT, CPM and Gantt charts, Monitoring project performance, Globalization of services, Global service strategies, Domestic growth and expansion strategies, Franchising</i>	

SSSOM Syllabus

Unit-1 Service – Definition

1.1	Characteristics
1.2	Stages of Economic Development
1.3	Role of Services in Economy
1.4	Experience Economy
1.5	Service Science
1.6	Service Dominant Logic
1.7	Service Systems
1.8	Service Operations
	Open System View of Service
1.9	Operations
1.1	Service Package
1.11	Strategic Service Vision
1.12	Competitive Service Strategies
1.13	Strategic Analysis
1.14	Sustainability in Services
	Competitive Role of Information in
1.15	Services

Unit-2 New Service Development

2.1	Innovation in Services
2.2	Service Blueprinting
2.3	Service Process Design
2.4	Service System Design
2.5	Service Facility Design and Layout
2.6	Strategic Location Considerations
2.7	Service Process Analysis
	Service Encounter Triad – Service
2.8	Organization, Contact Personnel and
	Customer
2.9	Service Profit Chain
2.10	Technology in Service Encounter

Unit-3 Service Quality Dimensions

3.1	Measuring Service Quality
3.2	SERVQUAL Gap Model
3.3	Walk Through Audit
3.4	Service Quality by Design
3.5	Achieving Service Quality
	Quality and Productivity Improvement
3.6	Process
3.7	Quality Tools
3.8	Benchmarking
3.9	Improvement Programs

Unit-4 Strategies

4.1	Strategies for Managing Service Demand and Service Capacity
4.2	Forecasting Service Demand
4.3	Forecasting Models – Subjective Models
4.4	Forecasting Models – Causal Models
4.5	Forecasting Models – Time-Series Models
4.6	Yield Management and its Application
4.7	Queuing Systems
4.8	Essential Features of Queuing Systems

Unit-5 Managing Service Projects

5.1	Characteristics of Project
5.2	Project Management – Principles, Process and Building Team
5.3	Selecting the Project Manager
5.4	Roles and Responsibilities of Project Manager
5.5	Techniques for Project Management – PERT
5.6	Techniques for Project Management – CPM
5.7	Techniques for Project Management – Gantt Charts
5.8	Monitoring Project Performance
5.9	Globalization of Services
5.1	Global Service Strategies
5.11	Domestic Growth and Expansion Strategies
5.12	Franchising

Lecture 03 Topics

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Unit-1 Service – Definition

1.1	Characteristics
1.2	Stages of Economic Development
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1.6	Service Dominant Logic
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1.8	Service Operations
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1.1	Service Package
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1.12	Competitive Service Strategies
1.13	Strategic Analysis
1.14	Sustainability in Services
1.15	Competitive Role of Information in Services

Unit-2 New Service Development

2.1	Innovation in Services
2.2	Service Blueprinting
2.3	Service Process Design
2.4	Service System Design
2.5	Service Facility Design and Layout
2.6	Strategic Location Considerations
2.7	Service Process Analysis

2.8	Service Encouraging Customer Organization
2.9	Service Profits
2.10	Technology in Service Development

Unit-3 Service Quality

3.1	Measuring Service Quality
3.2	SERVQUAL Gap Model
3.3	Walk Through
3.4	Service Quality
3.5	Achieving Service Quality
3.6	Quality and Productivity Improvement Process
3.7	Quality Tools
3.8	Benchmarking
3.9	Improvement Programs

Unit-4 Strategies

4.1	Strategies for Managing Service Demand and Service Capacity
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4.7	Queuing Systems

2.1 Innovation in Services

2.2 Service Blueprinting

2.3 Service Process Design

2.4 Service System Design

2.5 Service Facility Design and Layout

2.6 Strategic Location Considerations

5.8 Monitoring Project Performance

5.9 Globalization of Services

5.1 Global Service Strategies

5.11 Domestic Growth and Expansion Strategies

5.12 Franchising

2.1.1 Innovation in Services

Innovation refers to the introduction of new ideas, technologies, processes, or services that **create value** for customers and organizations.

Service innovation is critical because customer expectations continuously evolve



2.1.2 Innovation in Services Sources of Service Innovation

1. Information Technology

Examples:

- Online banking
- Mobile payment systems
- E-commerce platforms

2. Changing Customer Needs

Examples :

- Food delivery apps
- Telemedicine services

3. Competitive Pressure

Organizations innovate to survive and differentiate themselves.

4. Globalization

Services are redesigned to serve international customers.

2.1.3 Innovation in Services

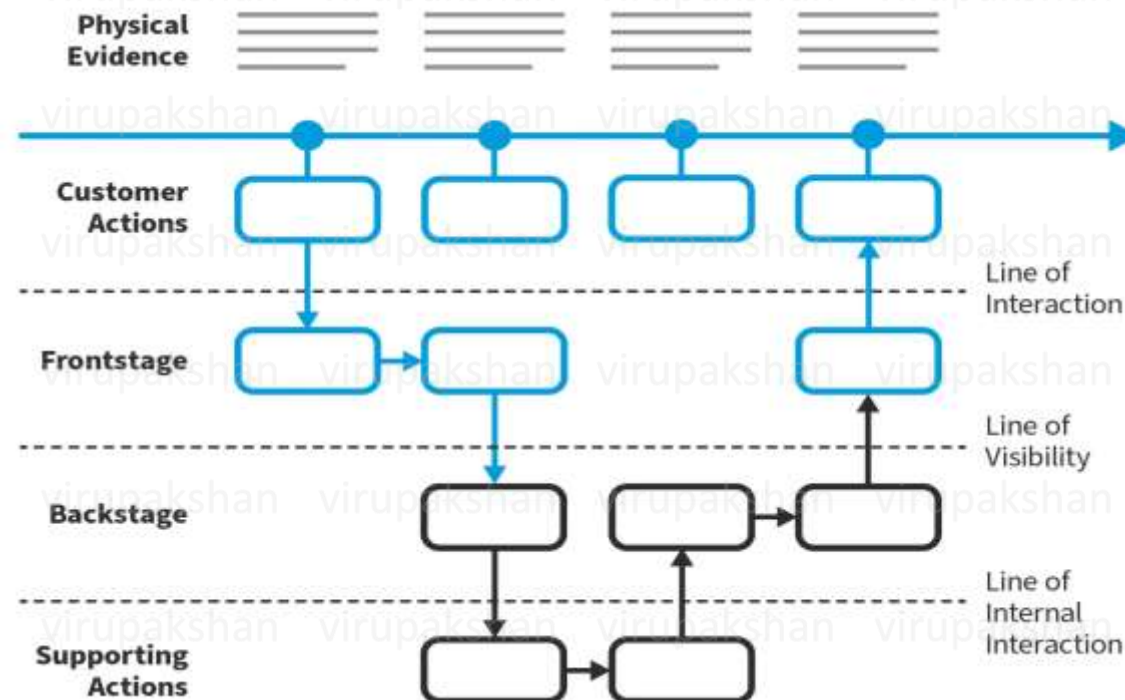
Examples of Service Innovation

Industry	Innovation
Banking	Internet Banking
Healthcare	Telemedicine
Education	Online Learning
Retail	Self-checkout
Transport	Ride-sharing Apps

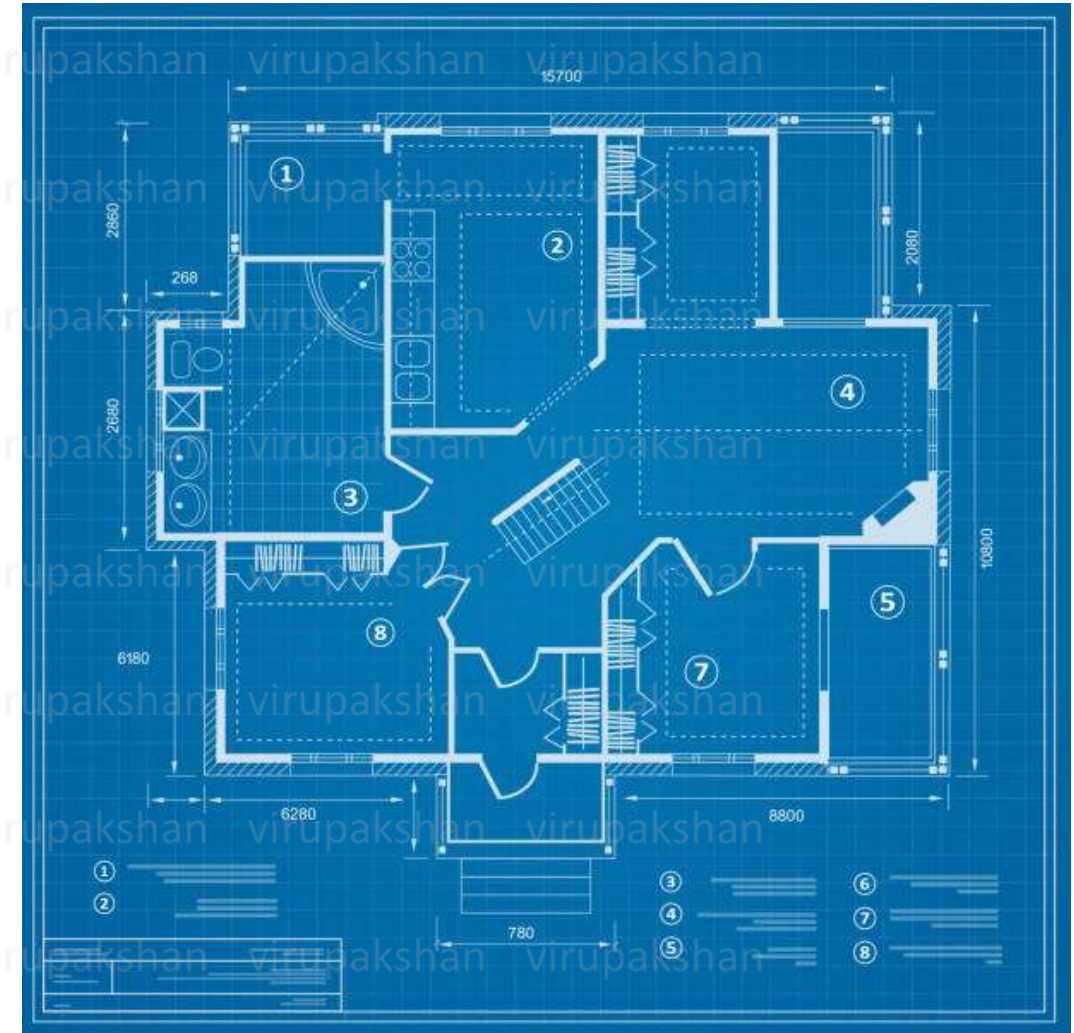
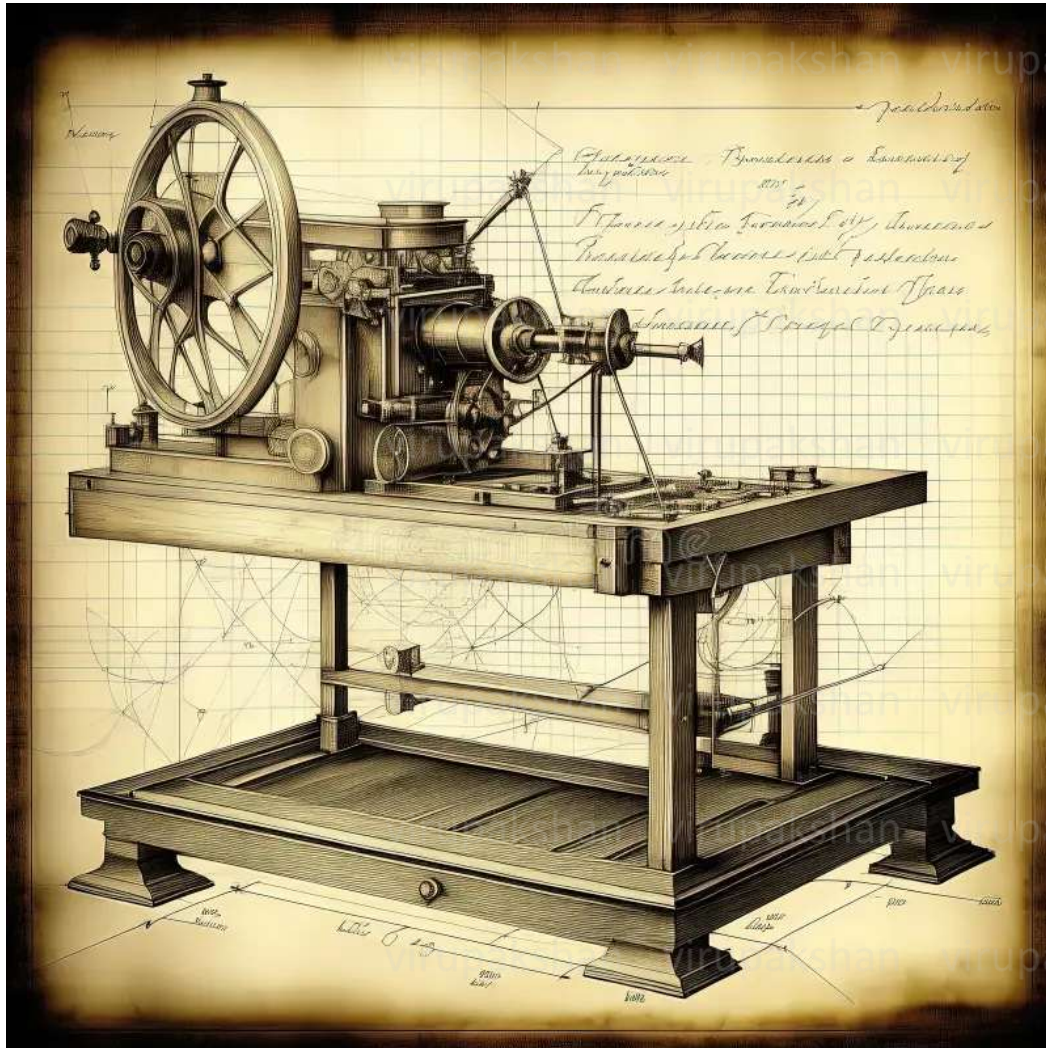


2.2 Service Blueprinting

It is a visual diagram that accurately maps out the steps in a service process.

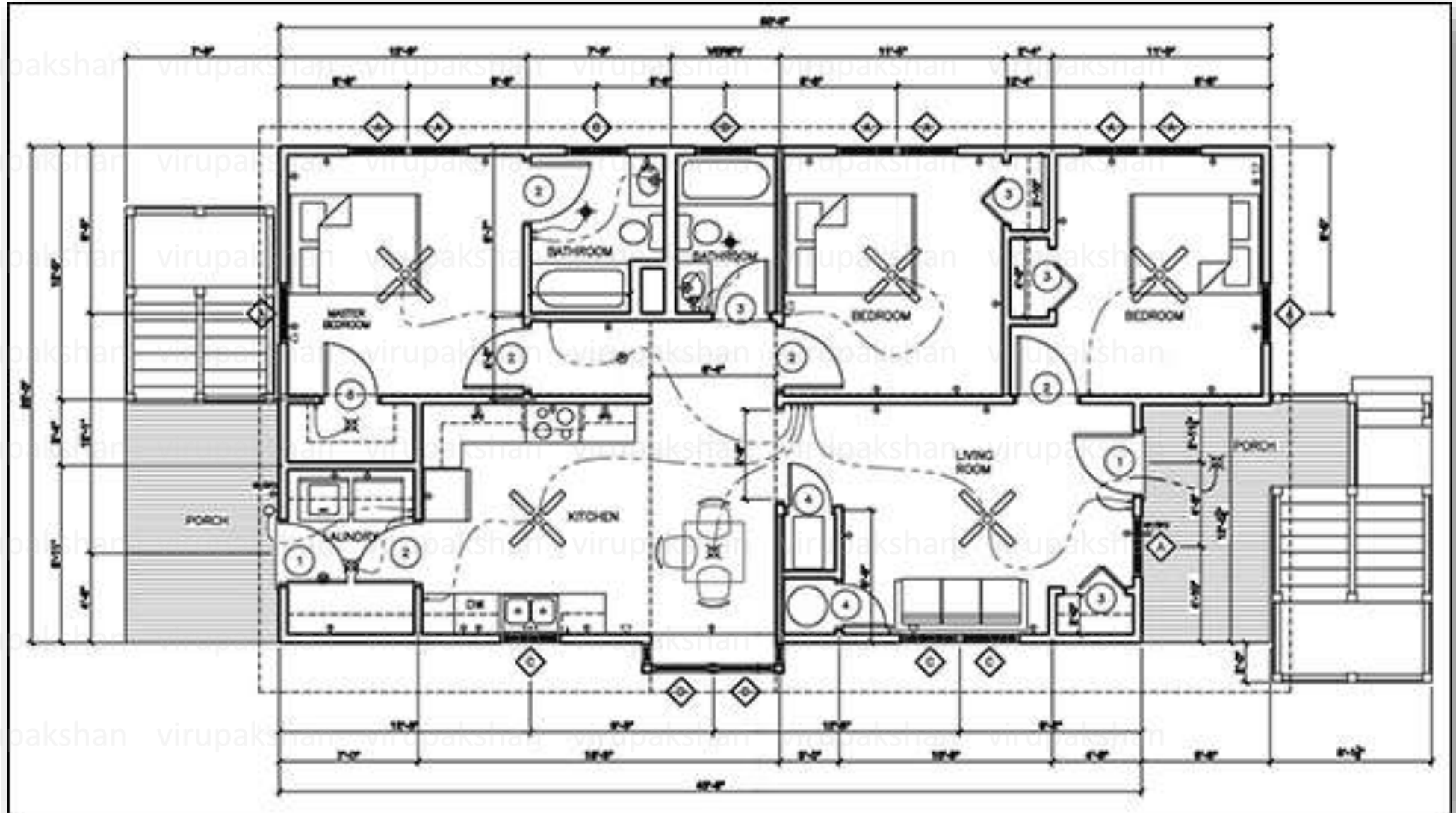
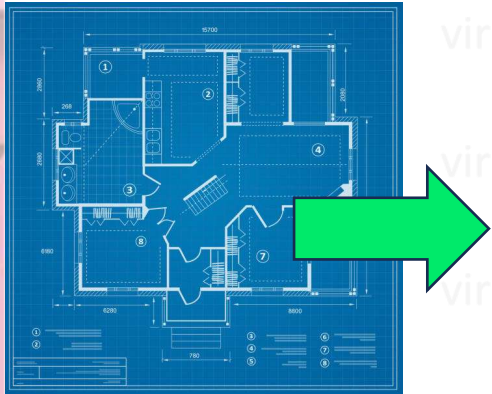


2.2.1 BLUEPRINT - History

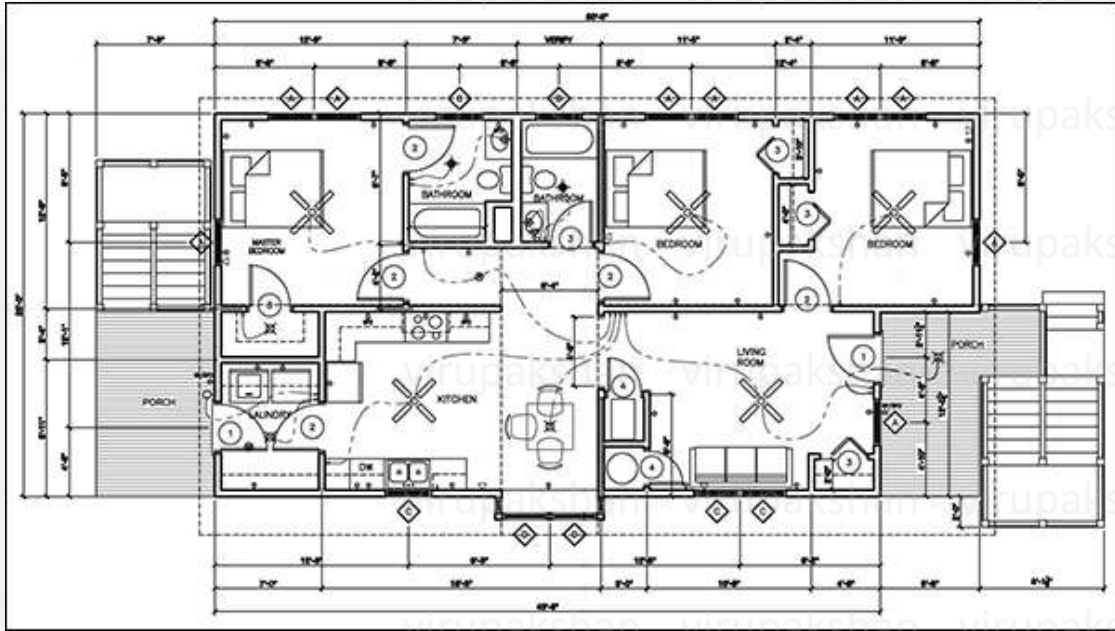


2.2.2 BLUEPRINT – Replaced by AUTOCAD (white-print?)

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2.2.3 BLUEPRINT – Used in Construction – even today!



2.2.4 SERVICE BLUEPRINT – KEY ELEMENTS

Service Blueprint provides a clear picture of how an organization's service is delivered, from end to end, front to back, and across channels.

The key elements are:

- 1. Physical evidence:** This includes what customers (and employees) come in contact with, such as physical locations (e.g., a store), company websites, signage, receipts, and confirmation emails.
- 2. Customer actions:** These are the actions customers take during the service experience.

2.2.5 SERVICE BLUEPRINT – KEY ELEMENTS

KEY ELEMENTS

```
graph TD; KE[KEY ELEMENTS] --> PE[PHYSICAL EVIDENCE]; KE --> CA[CUSTOMER ACTIONS];
```

PHYSICAL EVIDENCE

This includes **what customers** (and employees) **come in contact** with, such as **physical locations** (e.g., a store), **company websites**, **signage**, **receipts**, and confirmation emails.

CUSTOMER ACTIONS

These are the actions customers take during the service experience.

2.2.6 SERVICE BLUEPRINT- EXAMPLE

Hotel check-in process

Customer Actions:

1. **Arrival:** The customer arrives at the hotel.
2. **Approach Front Desk:** The customer approaches the front desk.
3. **Provide Information:** The customer provides reservation details and identification.
4. **Receive Room Key:** The customer receives the room key.
5. **Go to Room:** The customer goes to their room.

Front-Stage Actions (Visible to the Customer):

1. **Front Desk Staff Greeting:** The front desk staff greets the customer.
2. **Check Reservation:** The staff checks the reservation system.
3. **Issue Room Key:** The staff issues the room key.

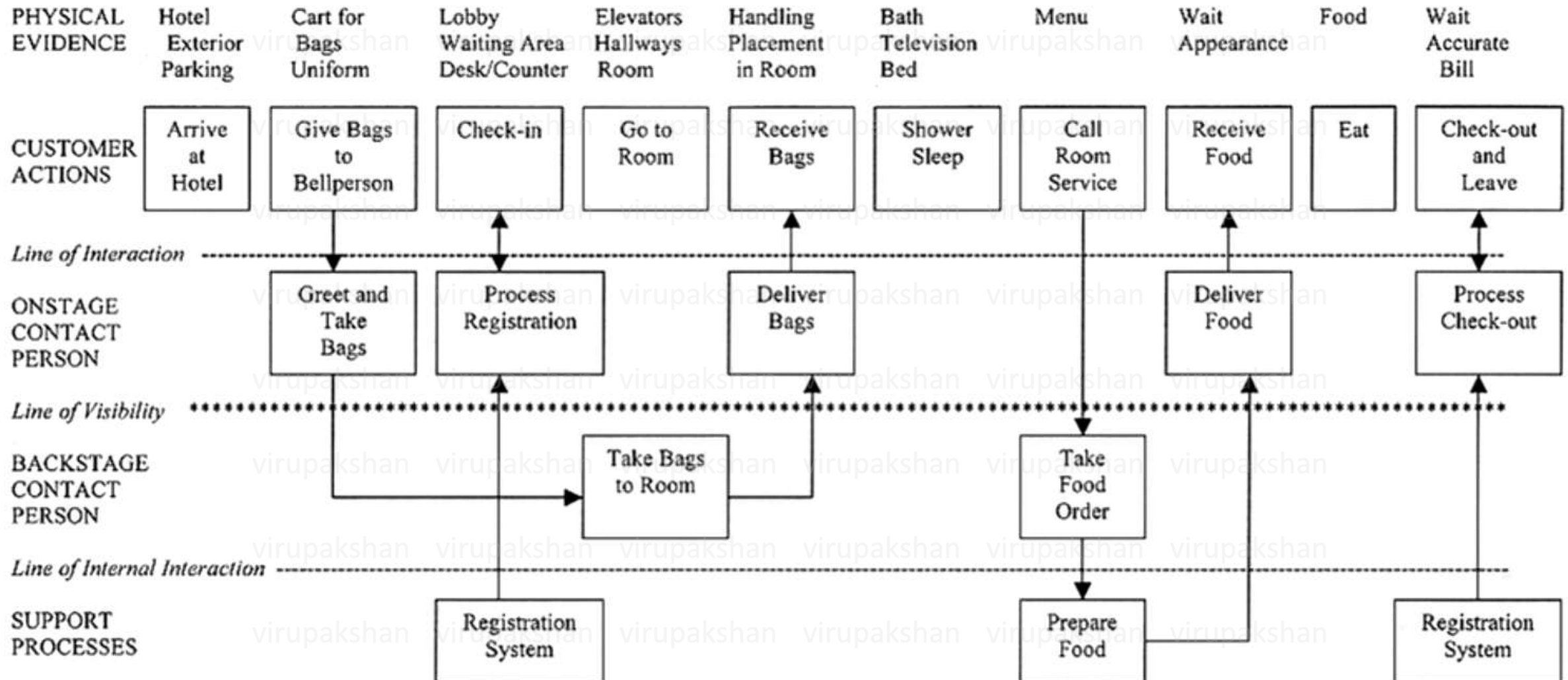
Back-Stage Actions (Not Visible to the Customer):

1. **Reservation System Update:** The staff updates the reservation system.
2. **Room Assignment:** The staff assigns a room.
3. **Key Preparation:** The staff prepares the room key.

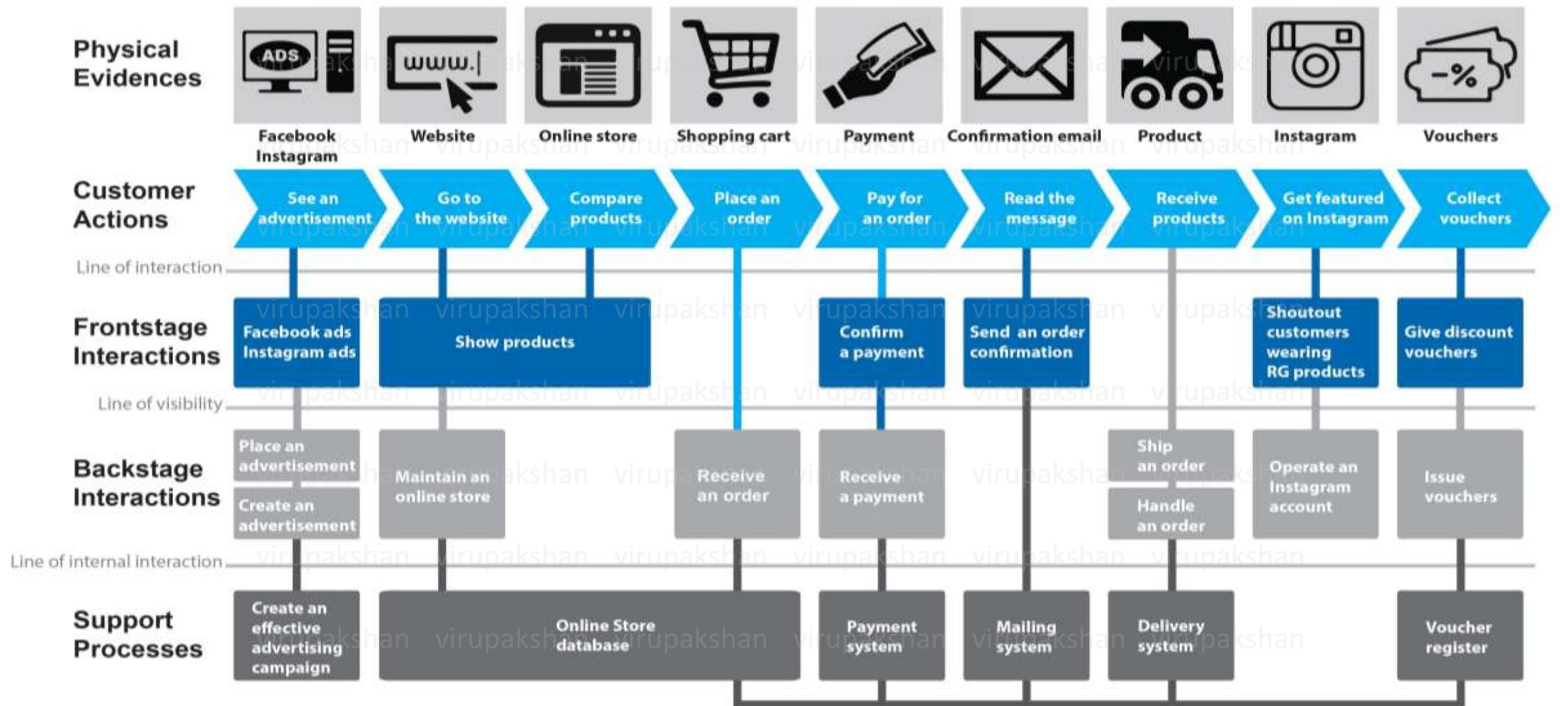
Physical Evidence:

1. **Front Desk Area:** The physical location where the customer interacts with the staff.
2. **Room Key:** The tangible item provided to the customer.

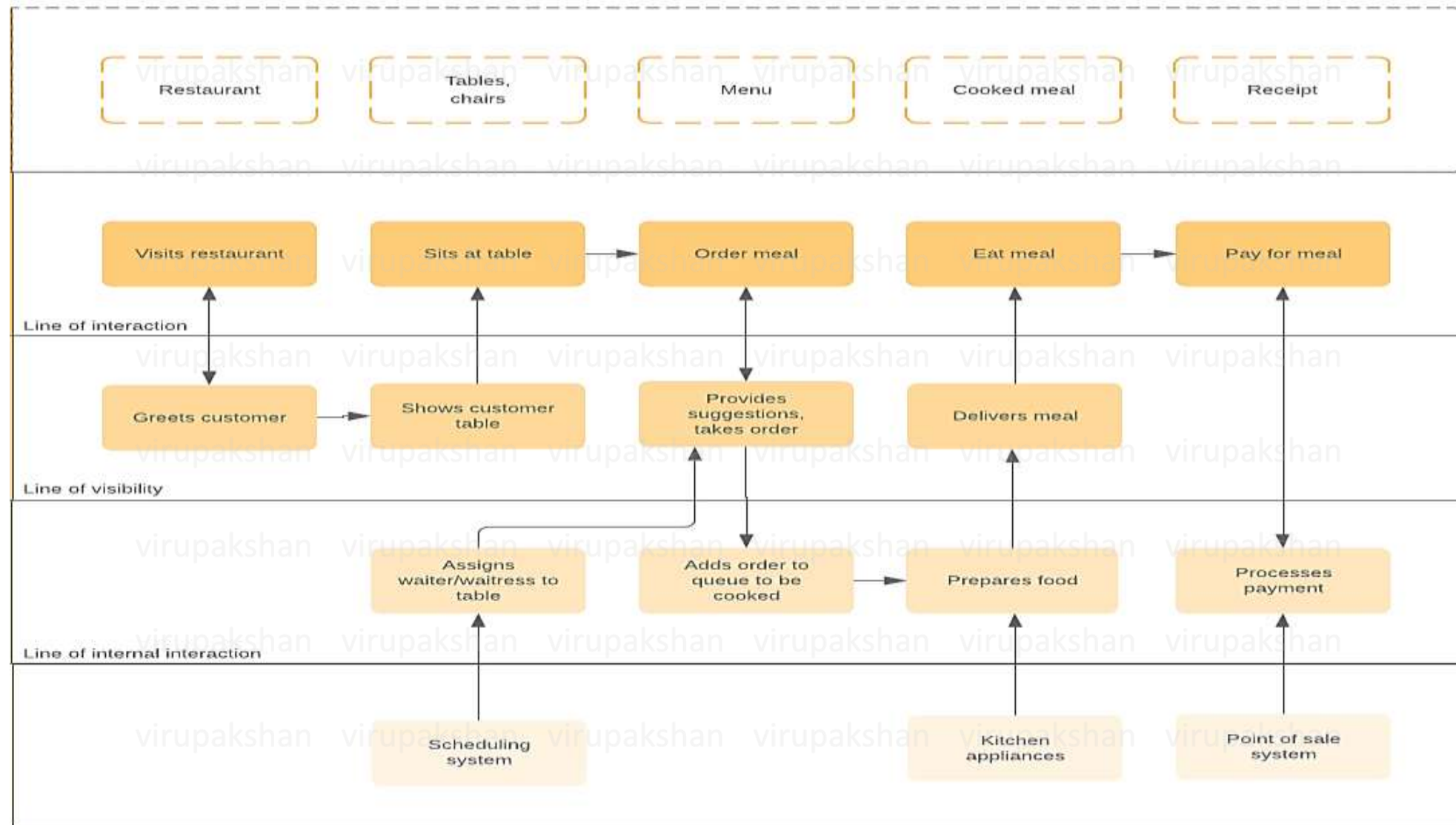
2.2.7 SERVICE BLUEPRINT – OF LUXURY HOTEL



2.2.8 SERVICE BLUEPRINT – OF ONLINE STORE



2.2.9 SERVICE BLUEPRINT – OF A RESTAURANT



2.2.9.1 SERVICE BLUEPRINT – OF A RESTAURANT

Physical Evidence

Customer Actions

Onstage Actions

LINE OF INTERACTION

Backstage Actions

LINE OF VISIBILITY

Support Actions

LINE OF INTERNAL INTERACTION

2.2.9.2 SERVICE BLUEPRINT – OF A RESTAURANT

Physical Evidence

RESTAURANT

Customer Actions

VISITS

Onstage Actions

GREETES

Backstage Actions

Support Actions

LINE OF INTERACTION

LINE OF VISIBILITY

LINE OF INTERNAL INTERACTION



2.2.9.3 SERVICE BLUEPRINT – OF A RESTAURANT

Physical Evidence

RESTAURANT

TABLE & CHAIRS

Customer Actions

VISITS

SITS & SEE MENU

Onstage Actions

GREETS

SHOW TABLE

Backstage Actions

ASSIGN
WAITRESS

Support Actions

SCHEDULE
SYSTEM

LINE OF INTERACTION

LINE OF VISIBILITY

LINE OF INTERNAL INTERACTION



2.2.9.4 SERVICE BLUEPRINT – OF A RESTAURANT

Physical Evidence

RESTAURANT

TABLE & CHAIRS

MENU

Customer Actions

VISITS

SITS & SEE MENU

ORDER MEAL

Onstage Actions

GREETS

SHOW TABLE

GIVE SUGGESTIONS

LINE OF INTERACTION

Backstage Actions

ASSIGN WAITRESS

ADD ORDER TO QUEUE

LINE OF VISIBILITY

Support Actions

SCHEDULE SYSTEM

LINE OF INTERNAL INTERACTION



2.2.9.5 SERVICE BLUEPRINT – OF A RESTAURANT

Physical Evidence

RESTAURANT

TABLE & CHAIRS

MENU

COOKED MEAL

Customer Actions

VISITS

SITS & SEE MENU

ORDER MEAL

EAT MEAL

Onstage Actions

GREETS

SHOW TABLE

GIVE SUGGESTIONS

DELIVER MEAL

LINE OF INTERACTION

Backstage Actions

ASSIGN WAITRESS

ADD ORDER TO QUEUE

PREPARE FOOD

LINE OF VISIBILITY

Support Actions

SCHEDULE SYSTEM

LINE OF INTERNAL INTERACTION

KITCHEN APPLIANCES



2.2.9.6 SERVICE BLUEPRINT – OF A RESTAURANT

Physical Evidence

RESTAURANT

TABLE & CHAIRS

MENU

COOKED MEAL

RECEIPT

Customer Actions

VISITS

SITS & SEE MENU

ORDER MEAL

EAT MEAL

PAY FOR MEAL

Onstage Actions

GREETS

SHOW TABLE

GIVE SUGGESTIONS

DELIVER MEAL

LINE OF INTERACTION

Backstage Actions

ASSIGN WAITRESS

ADD ORDER TO QUEUE

PREPARE FOOD

PROCESS PAYMENT

LINE OF VISIBILITY

Support Actions

SCHEDULE SYSTEM

LINE OF INTERNAL INTERACTION

KITCHEN APPLIANCES

POS



2.3.1 Service Process Design

Service processes can be classified using the **concept of divergence**, the **object** toward which the service activity is directed, and the **degree of customer contact**.

Services are broadly divided into **low divergence** (i.e., standardized service) and **high divergence** (i.e., customized service).

Within these two categories, the **object of the service** process is identified as goods, information, or people.

The degree of **customer contact** ranges from no contact to indirect contact to direct contact (and is divided further into self-service and personal interaction with the service worker).

2.3.2 Service Process Design TAXONOMY - TABLE

		Low Divergence (Standardized Service)			High Divergence (Customized Service)		
<i>Processing of</i>		<i>Goods</i>	<i>Information</i>	<i>People</i>	<i>Goods</i>	<i>Information</i>	<i>People</i>
No customer contact		Dry Cleaning	Check processing		Auto repair Tailor	Computer programming, building design	
Indirect customer contact			Internet purchase			Air traffic control	
Direct Customer contact	No interaction (self-service)	Buying form vending machine	ATM transaction	Operating an elevator	Bagging of groceries	Documenting medical history	Using a health club
	Customer-service worker interaction	Food service in a restaurant	Class lectures	Mass transportation systems	Landscaping service	Counseling	Haircut Taxi service

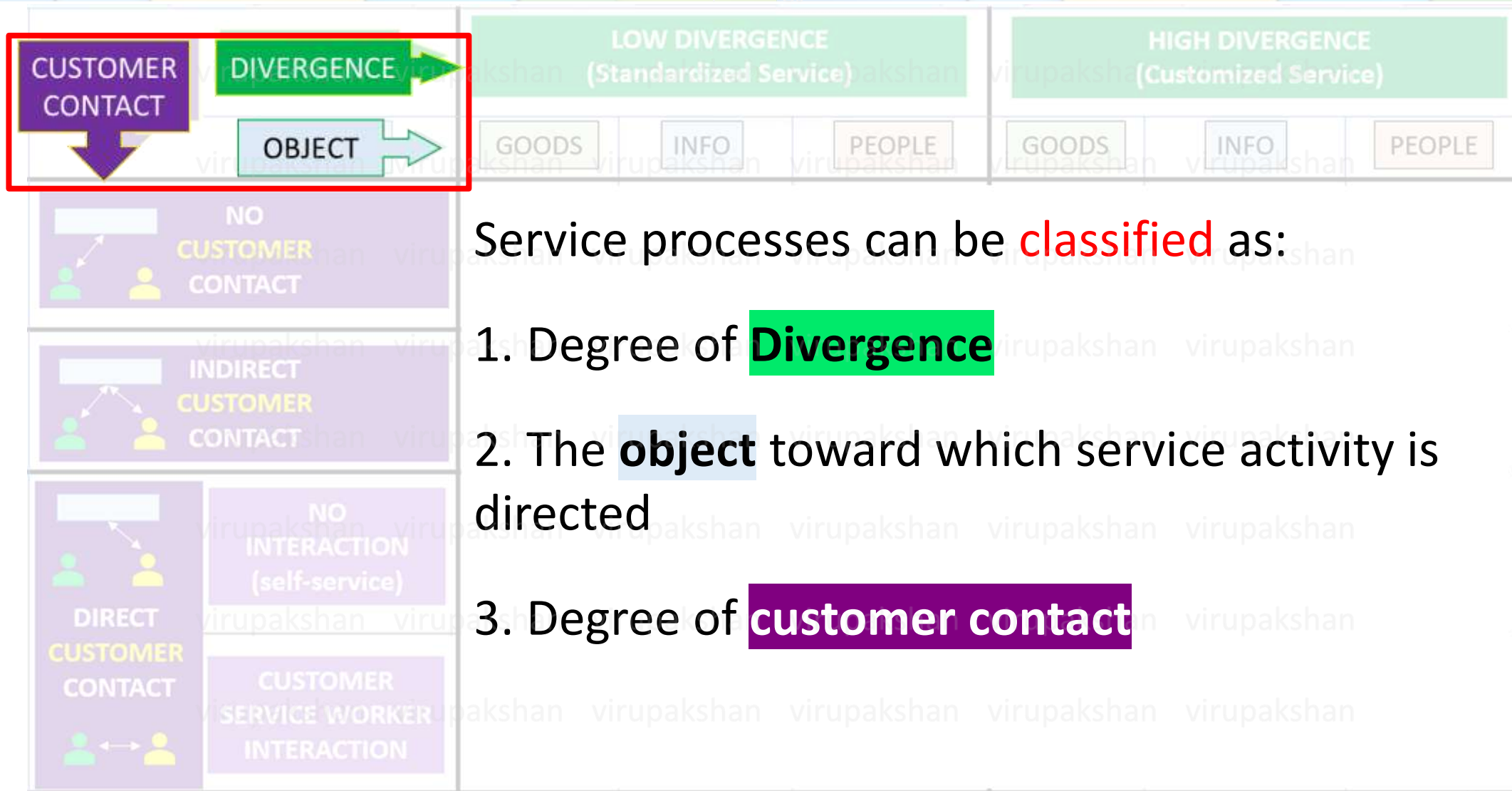
2.3.2a Service Process Design TAXONOMY - TABLE

		LOW DIVERGENCE (Standardized Service)			HIGH DIVERGENCE (Customized Service)		
OBJECT		GOODS	INFO	PEOPLE	GOODS	INFO	PEOPLE
 NO CUSTOMER CONTACT		Restocking a vending Machine	Bank Standing Instruction		Tailoring a shirt	Software Developer	
	 INDIRECT CUSTOMER CONTACT		Order food online			Air Traffic Control	
 DIRECT CUSTOMER CONTACT	NO INTERACTION (self-service)	Buying from a vending machine	ATM Transaction	Operating a Lift	Eating a Buffet Dinner	Search for info at Library	Using a gym
	CUSTOMER SERVICE WORKER INTERACTION	Food service in hotel	Giving a Lecture	Providing public transportation.	Home carpet cleaning.	Counseling	Haircutting

2.3.2v Service Process Design TAXONOMY - TABLE

CUSTOMER CONTACT DIVERGENCE OBJECT		LOW DIVERGENCE (Standardized Service)			HIGH DIVERGENCE (Customized Service)		
		GOODS	INFO	PEOPLE	GOODS	INFO	PEOPLE
NO CUSTOMER CONTACT							
	INDIRECT CUSTOMER CONTACT						
DIRECT CUSTOMER CONTACT	NO INTERACTION (self-service)						
	CUSTOMER SERVICE WORKER INTERACTION						

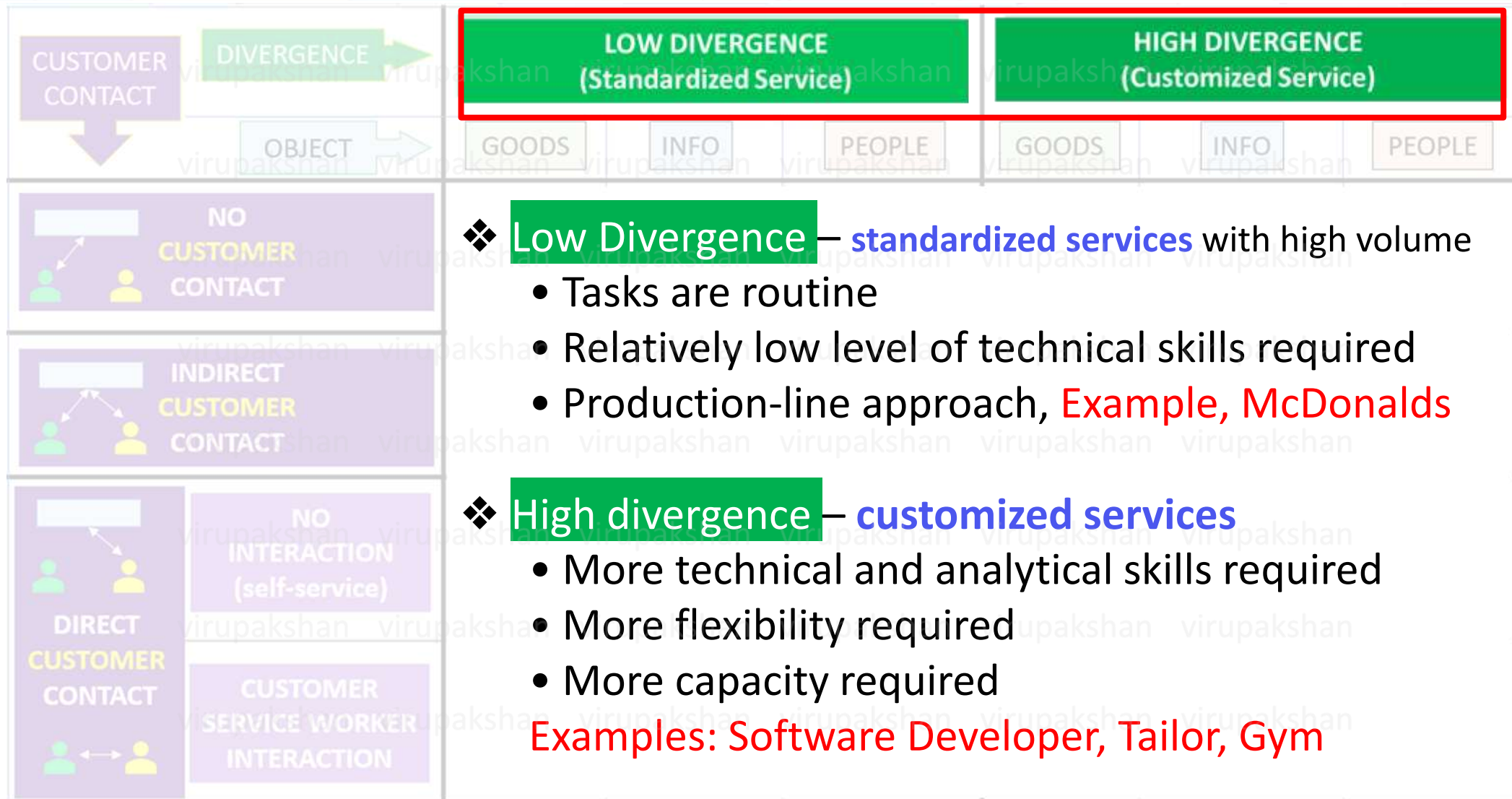
2.3.3 Service Process Design - CLASSIFICATION



Service processes can be **classified** as:

1. Degree of **Divergence**
2. The **object** toward which service activity is directed
3. Degree of **customer contact**

2.3.4a Service Process Design : DEGREE OF DIVERGENCE



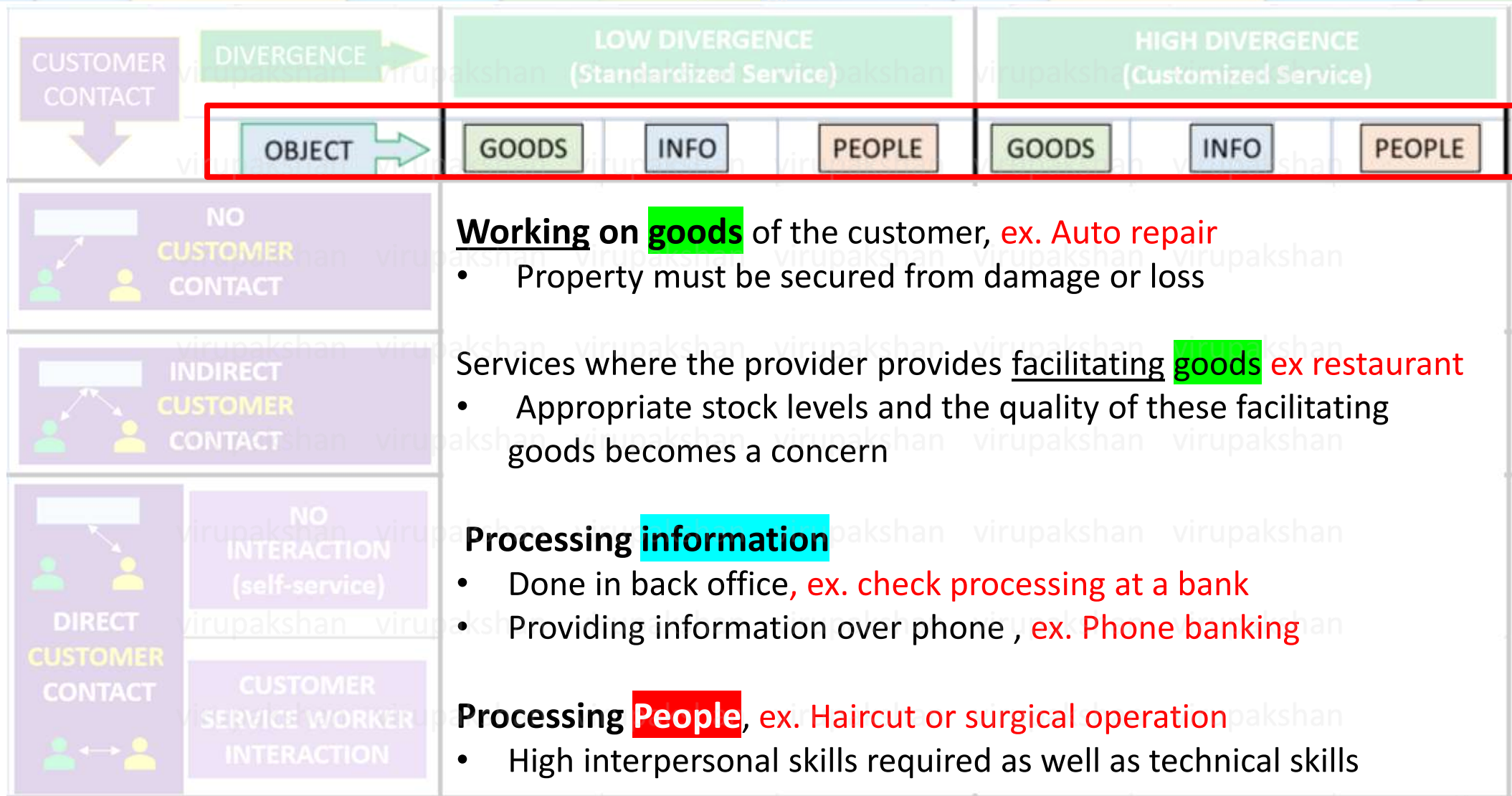
2.3.4b Service Process Design OBJECT OF SERVICE PROCESS

When **goods are processed**, a distinction must be made between goods that belong to the customer and goods that are provided by the service firm (i.e., **facilitating goods**). For services such as dry cleaning or auto repair, the service is performed on the property of the customer; in this case, the property must be secured from damage or loss. Other services such as restaurants supply facilitating goods as a significant part of the service package. Therefore, appropriate stock levels and the quality of these facilitating goods become a concern, as illustrated by McDonald's attention to the purchase of food items.

Processing information (i.e., receiving, handling, and manipulating data) occurs in all service systems. In some cases, this is a back-office activity, such as check processing at a bank. For other services, the information is communicated indirectly by electronic means, as with telephone-based account balance verification. Customer service representatives in call centers may spend hours before a video screen performing routine tasks, and motivation becomes a challenge. There are services such as counseling, however, in which information is processed through direct interactions between the client and the project team. For highly skilled employees in these services, the challenge of dealing with unstructured problems is important to job satisfaction.

Processing people involves physical changes (e.g., a haircut or a surgical operation) or geographic changes (e.g., a bus ride or a car rental). Because of the "high-touch" nature of these services, workers must possess interpersonal as well as technical skills. Attention also must be paid to service facility design and location, because the customer is physically present in the system.

2.3.4v Service Process Design OBJECT OF SERVICE PROCESS



2.3.5 Service Process Design : CUSTOMER CONTACT TYPES

The degree of customer contact ranges from

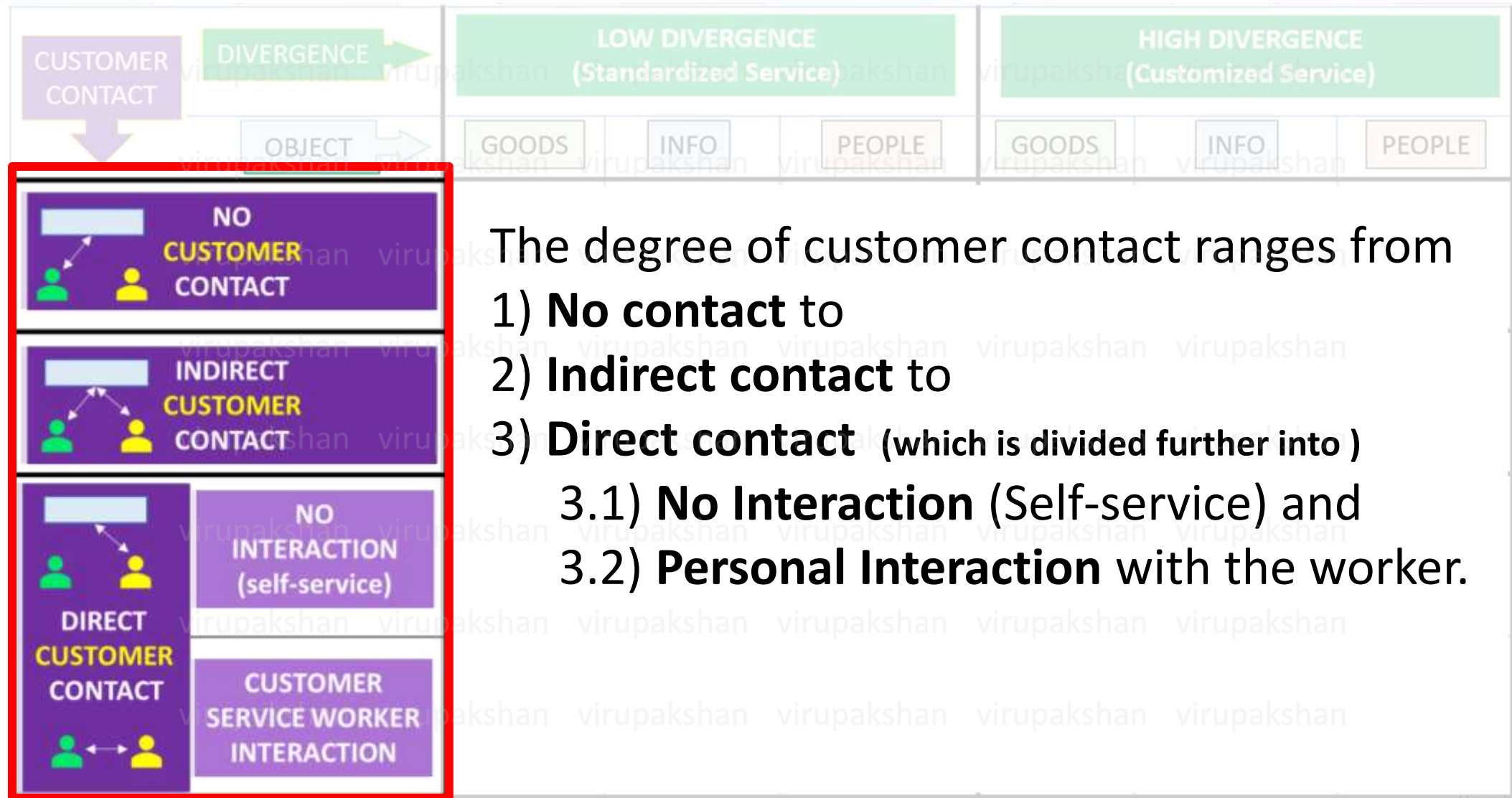
- 1) No contact to
- 2) Indirect contact to
- 3) Direct contact

(and is divided further into)

3.1) Self-service and

3.2) Personal interaction with the service worker.

2.3.5v Service Process Design: CUSTOMER CONTACT TYPES

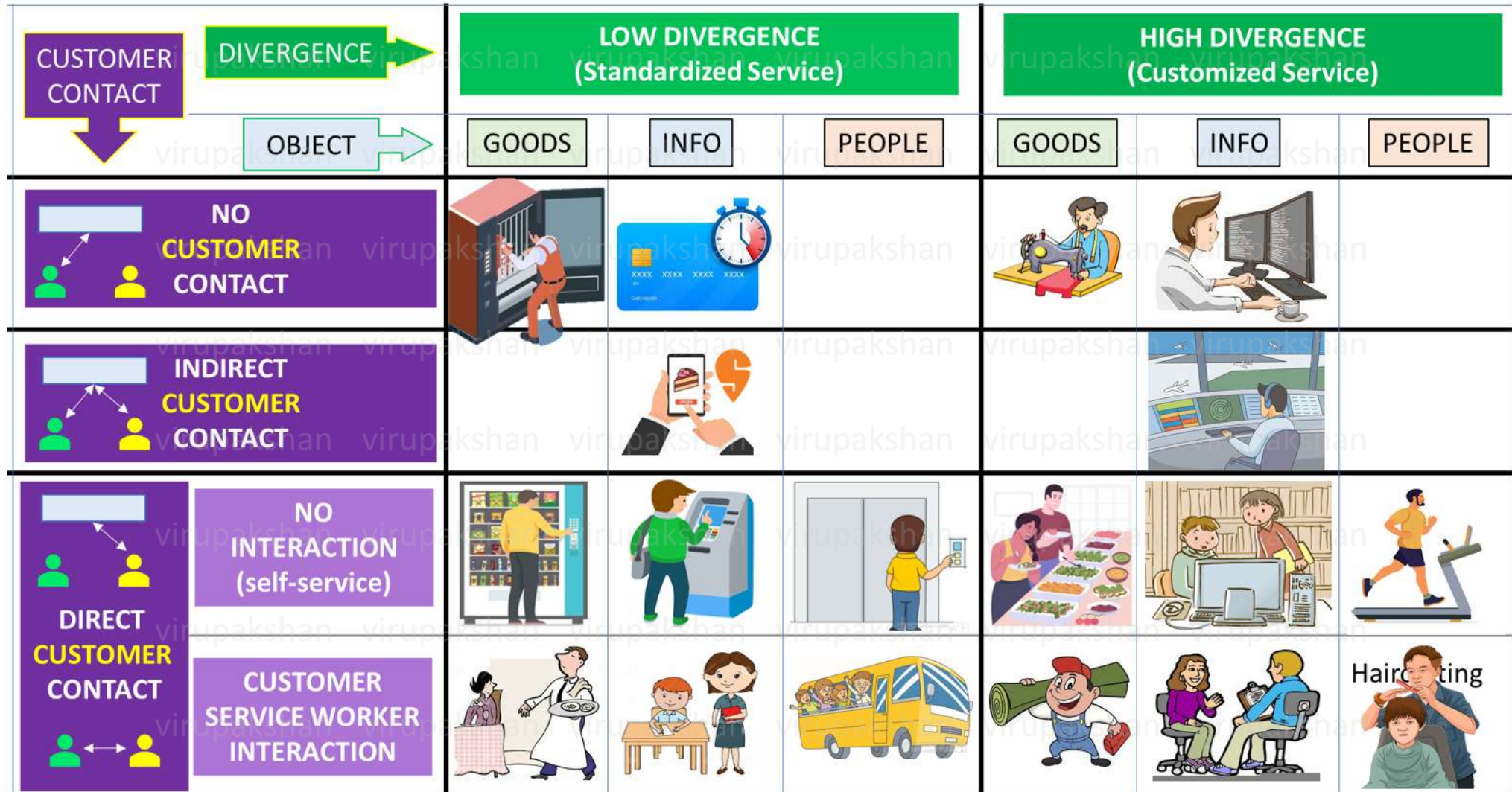


The degree of customer contact ranges from

- 1) **No contact** to
- 2) **Indirect contact** to
- 3) **Direct contact** (which is divided further into)
 - 3.1) **No Interaction** (Self-service) and
 - 3.2) **Personal Interaction** with the worker.

CUSTOMER CONTACT DIVERGENCE OBJECT		LOW DIVERGENCE (Standardized Service)			HIGH DIVERGENCE (Customized Service)		
		GOODS	INFO	PEOPLE	GOODS	INFO	PEOPLE
NO CUSTOMER CONTACT		Restocking a vending Machine	Bank Standing Instruction		Tailoring a shirt	Software Developer	
INDIRECT CUSTOMER CONTACT			Order food online			Air Traffic Control	
DIRECT CUSTOMER CONTACT	NO INTERACTION (self-service)	Buying from a vending machine	ATM Transaction	Operating a Lift	Eating a Buffet Dinner	Search for info at Library	Using a gym
	CUSTOMER SERVICE WORKER INTERACTION	Food service in hotel	Giving a Lecture	Providing public transportation.	Home carpet cleaning.	Counseling	Haircutting

2.3.5 Service Process Design



2.4.1 SERVICE SYSTEM DESIGN – WHAT IS IT?

Service System Design or Service Design is the process of **planning and arranging** various components—such as



people, infrastructure, **communication**, & **materials**
- within a service **to enhance** its **quality** and improve
interactions between the **service provider** and **users**

2.4.2.q SERVICE SYSTEM DESIGN – Q&A

Consider two adjacent Coffee shops providing the same service.

Shop A – No “Token System”;

Shop B – “Token System”



Few Customers

Many Customers

WHY?



2.4.2.A SERVICE SYSTEM DESIGN – Q&A

Consider two adjacent Coffee shops providing the same service.

Shop A – **No “Token System”**;

Shop B – **“Token System”**



A

Few Customers

Many Customers

No Service Design implemented



B

Service Design implemented

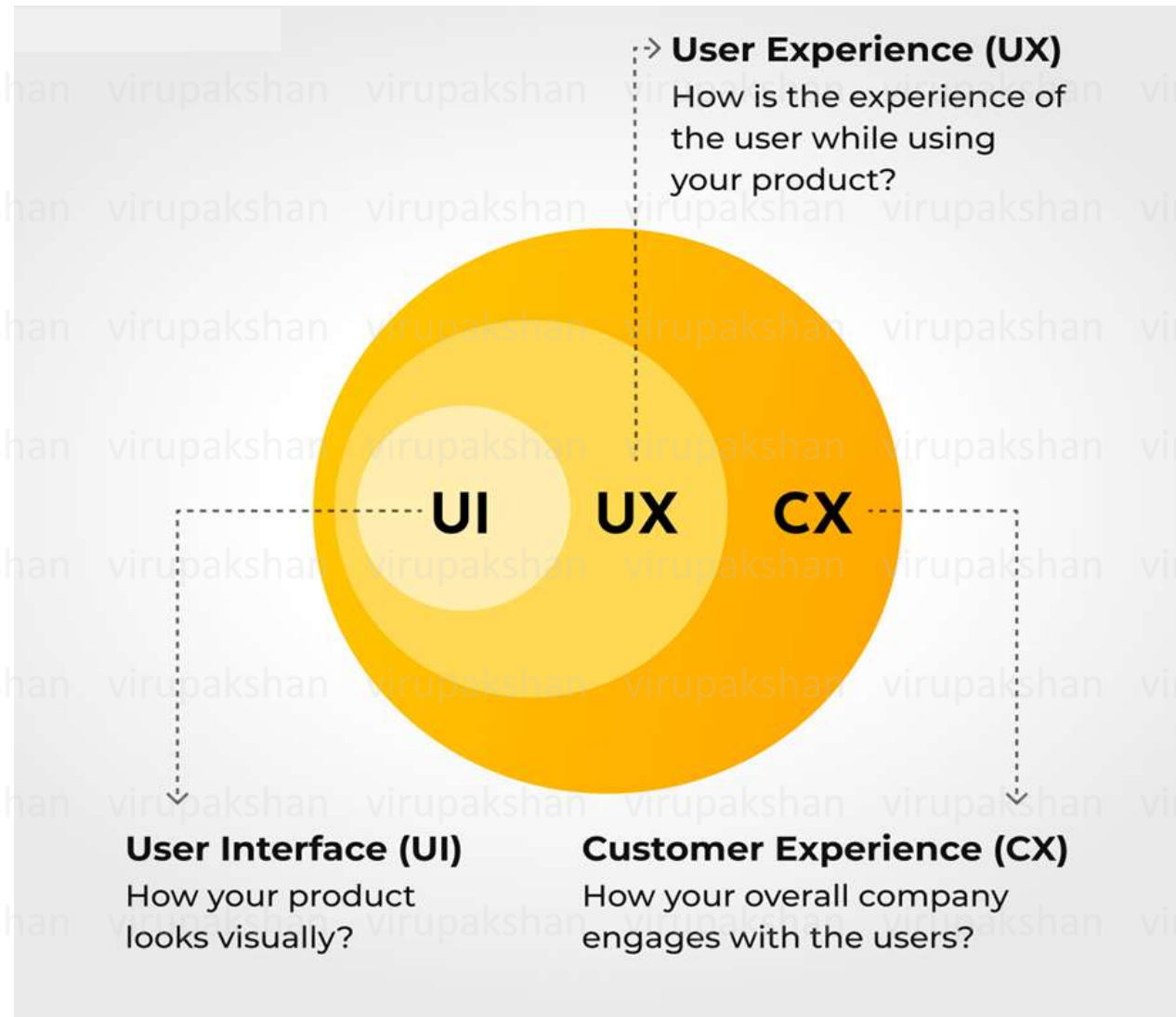
ANSWER

2.4.3 SERVICE SYSTEM DESIGN – KEY POINTS

- 1. Holistic Approach:** Service design considers the entire ecosystem, including user experience (UX) and customer experience (CX). It looks beyond individual touchpoints and focuses on the complete journey.
- 2. User-Centered:** Designers use qualitative research to create solutions that address the needs of all users. This involves understanding the relationships between service receivers (e.g., customers) and service providers (e.g., drivers in a ride-sharing service).
- 3. Co-Creative:** Relevant stakeholders (such as customers, employees, and partners) actively participate in the design process. Collaboration ensures diverse perspectives are considered.
- 4. Sequencing:** Complex services are broken down into separate processes and user journey sections. This helps identify pain points and opportunities for improvement.

CX > UX > UI (fyi)

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2.4.4a SERVICE SYSTEM DESIGN – HOLISTIC APPROACH

Service Design **considers the entire ecosystem**, including user experience (UX) and customer experience (CX).

It looks beyond individual touchpoints and **focuses on the complete journey.**



2.4.4b SERVICE SYSTEM DESIGN – USER-CENTERED

Designers use qualitative research to create **solutions that address the needs of all users.**



This involves understanding the relationships between **service receivers** (e.g., customers) and **service providers** (e.g., drivers in a ride-sharing service).

Example:



Uber / OLA apps are “User Centered”

2.4.4c SERVICE SYSTEM DESIGN – CO-CREATIVE

Relevant stakeholders
(such as customers, employees, and partners)
actively participate in the design process.

Collaboration ensures diverse perspectives are considered.

Example:



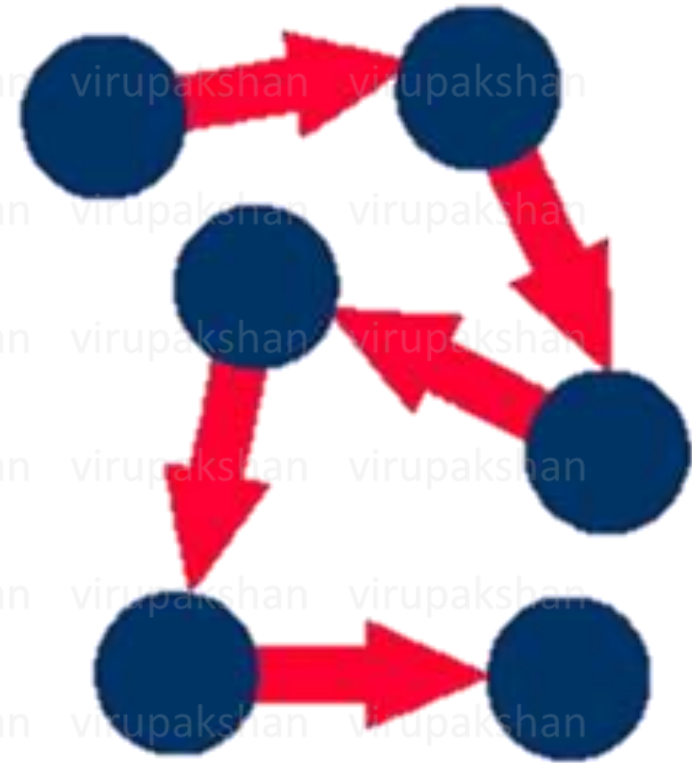
Management, Students, Professors, etc design courses, pedagogy, etc in a Deemed University.



2.4.4d SERVICE SYSTEM DESIGN – SEQUENCING

Complex services are **broken down** into separate processes and user journey sections.

This helps identify pain points and opportunities for improvement.



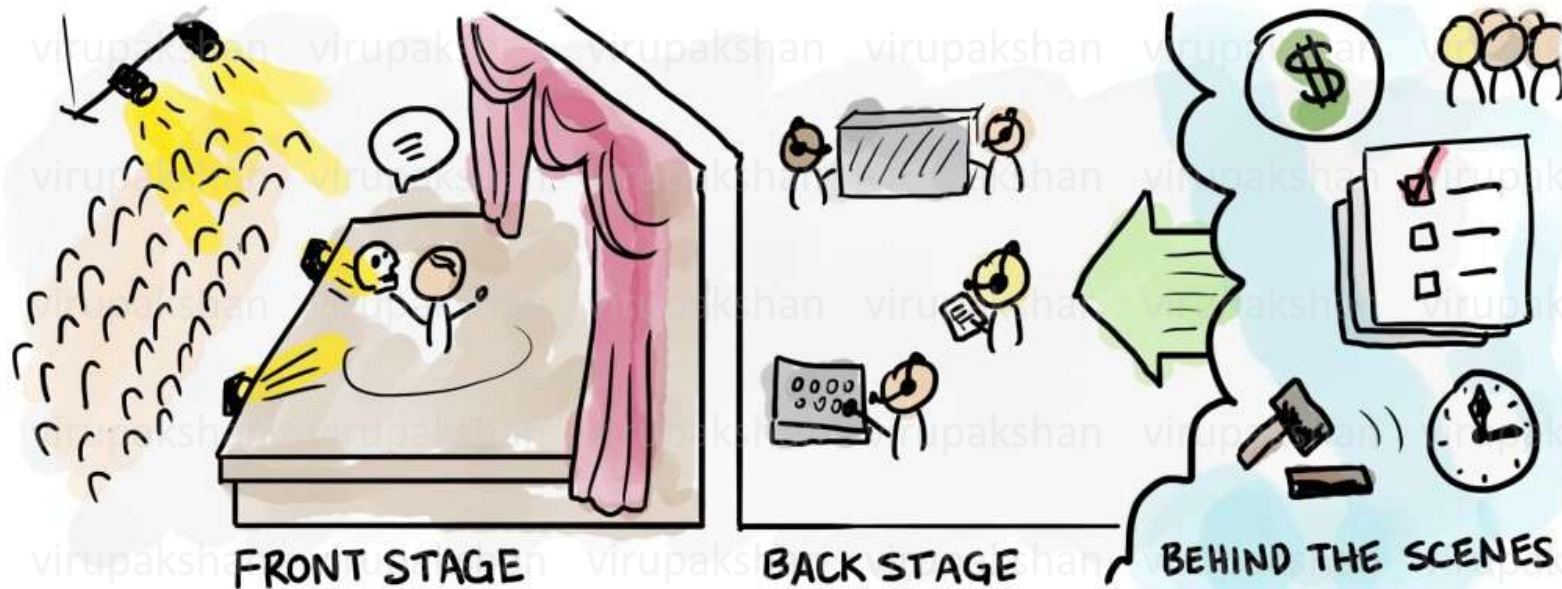
2.4.4e SERVICE SYSTEM DESIGN – SEQUENCING - EXAMPLE

RESTAURANT SERVICE DESIGN



2.4.5 SERVICE SYSTEM DESIGN – FRONT STAGE & BACK STAGE

Service Design uses a concept called the **stage theory**, which consists of the front and back stages



The front stage is what customers can see, and the back stage is responsible for creating the front stage.

Q) Which is “Front Stage” and “Back Stage” in this?

A) Customer **uses** a token system **and** Service provider had **setup** the token system to communicate with all.



B) Customer **sets up** a token system **and** Service provider **uses** the token system to communicate with all.

2.4.6 APPROACHES FOR SERVICE DESIGN

- 1. Production Line Approach:** Inspired by manufacturing, this approach focuses on standardization and efficiency. Services are treated like products, with predefined steps and minimal customization.
- 2. Customer as a Co-producer Approach:** Recognizes that customers actively participate in service delivery. Involves collaboration and co-creation between service providers and users.
- 3. Customer Contact Approach:** Emphasizes interactions between customers and service staff. Design considers touchpoints where users directly engage with the service.
- 4. Information Empowerment Approach:** Leverages technology to empower users. Provides self-service options, information access, and personalized experiences.

2.4.6a SERVICE DESIGN - PRODUCTION LINE APPROACH

Inspired by manufacturing, this approach **focuses on standardization and efficiency.**



Services are **treated like products**, with predefined steps and **minimal customization.**

Example:

Whether you're at a **McDonald's** outlet in Chennai or Bangalore, the **services provided by McDonald's remain the same.**



2.4.6b SERVICE DESIGN – CUSTOMER AS A CO-PRODUCER APPROACH

Recognizes that **customers actively participate** in service delivery.

Involves collaboration and co-creation between service providers and users.

Example:
Buffet Dinner at Hotel
'Customer' is the 'server'.



2.4.6c SERVICE DESIGN – CUSTOMER CONTACT APPROACH

Emphasizes **interactions between customers and service staff.**

Design considers touchpoints where users directly engage with the service.

Example:
Customer interaction at a Bank



2.4.6d SERVICE DESIGN – INFORMATION EMPOWERMENT APPROACH

Leverages **technology to empower users.**

Provides self-service options, information access, and personalized experiences.

Example:

**Amazon giving suggestions..
.... after buying a product.**



2.5.1 Service Facility Design and Layout

Service operations can be directly affected by the **design of the facility**.

For example, a restaurant with inadequate ventilation for diners may discourage many customers.

In addition to facility design, the **layout, or arrangement**, of the **service delivery system** is important for the convenience of the customer as well as the service provider.

A **poor layout** can be costly in time that is wasted when service workers are engaged in unproductive activity.

2.5.2 FACILITY DESIGN

Service operations can be directly affected by the **design of the facility**.

For example, a restaurant with inadequate ventilation for diners may discourage many customers.

Several factors influence design:

- (1) Nature and objectives of the service organization,
- (2) Land availability and space requirements,
- (3) Flexibility,
- (4) Security,
- (5) Aesthetic factors, and
- (6) the community and environment.

For example, a fire station must have a structure that is large enough to house its vehicles, on-duty personnel, and maintenance equipment. A bank must be designed to accommodate some type of vault.

Physicians' offices come in many shapes and sizes, but all must be designed to afford patients some degree of privacy.

The land that is available for a service facility often comes with many constraints, such as costs, zoning requirements, and actual area. Good design must accommodate all these constraints.

How well a service can adapt depends greatly on the flexibility that has been designed into it. Flexibility also might be called "designing for the future."

Security in facilities can be enhanced by installing surveillance cameras.

The aesthetic aspects of a design have a marked effect on the consumer's perceptions and behaviors, but they also affect the employees and the service they provide.

The design of a service facility may be of greatest importance where it affects the community and its environment.

2.5.3 FACILITY LAYOUT

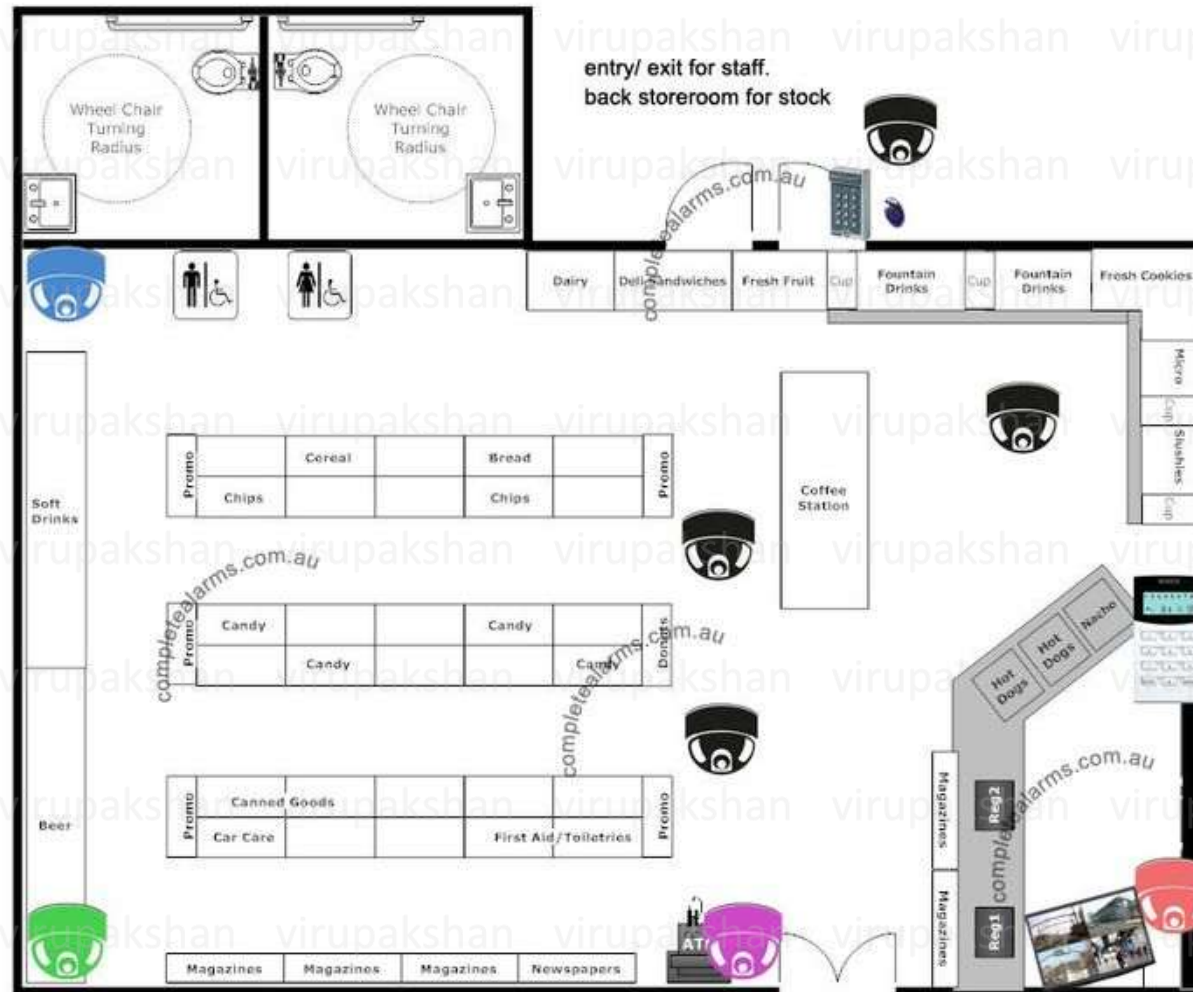
In addition to facility design, the **layout, or arrangement**, of the **service delivery system** is important for the convenience of the customer as well as the service provider.

A **poor layout** can be costly in time that is wasted when service workers are engaged in unproductive activity.



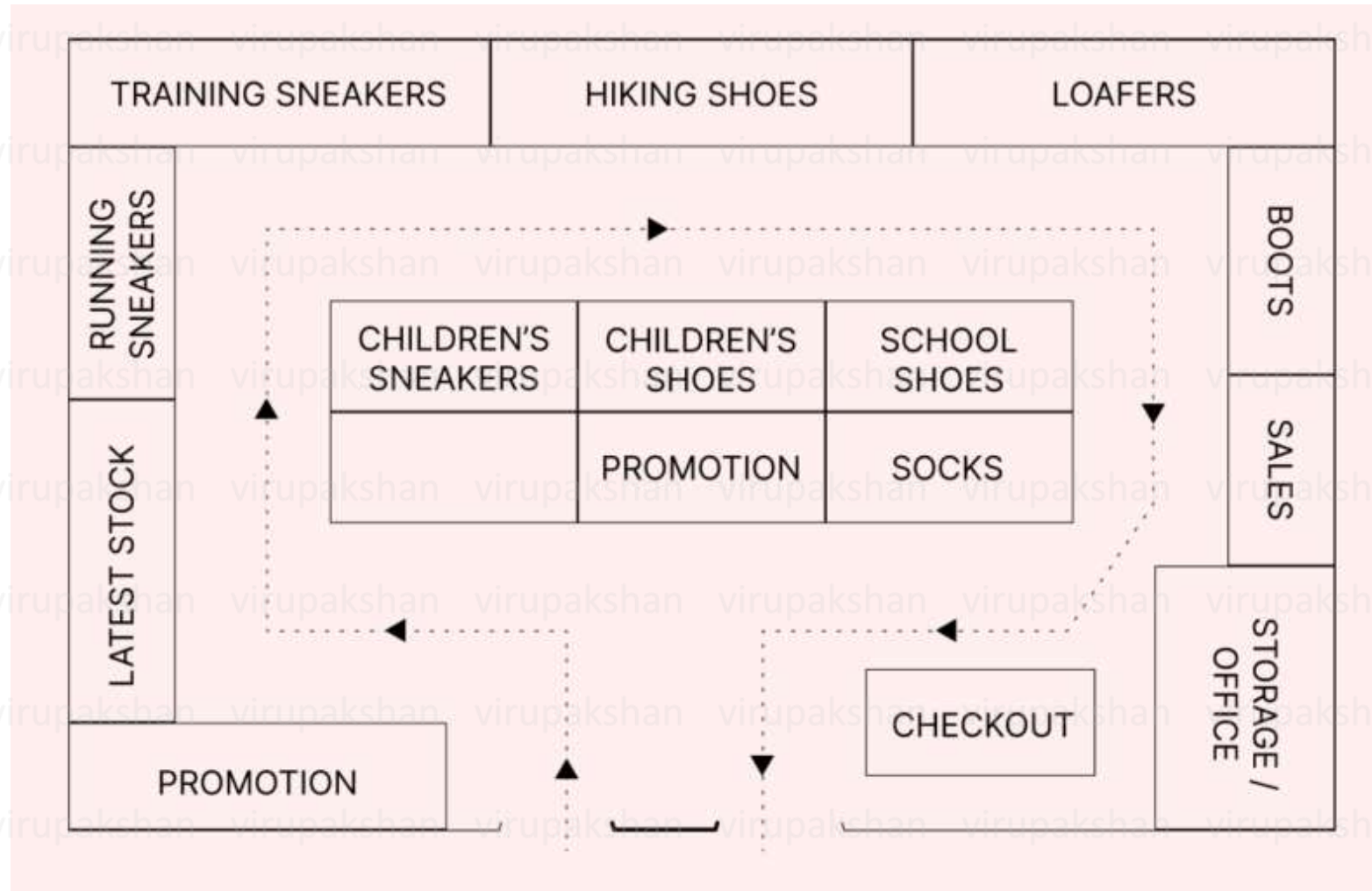
2.5.3B FACILITY LAYOUT

Grocery Store



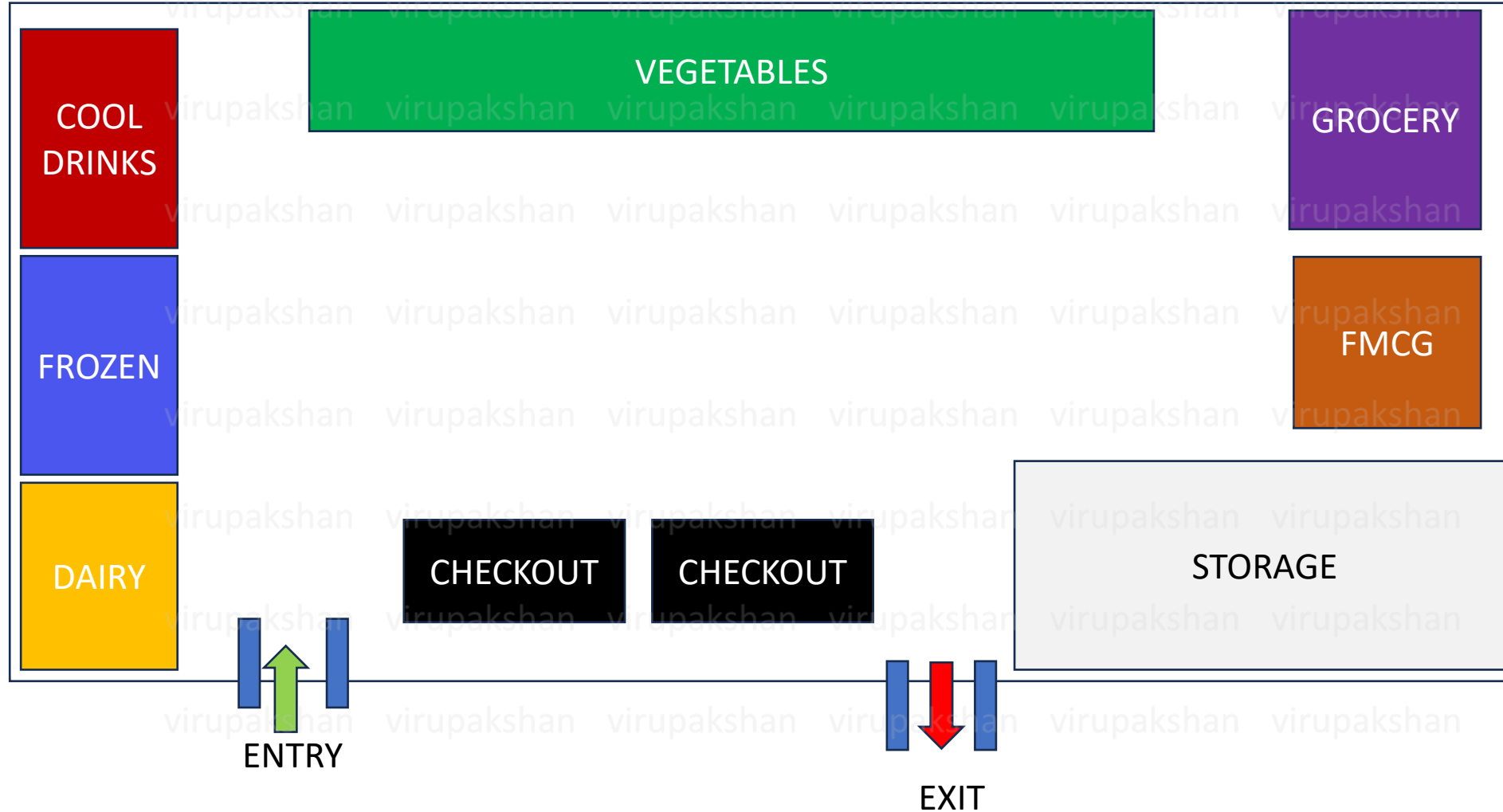
2.5.3C FACILITY LAYOUT

Shoe Store



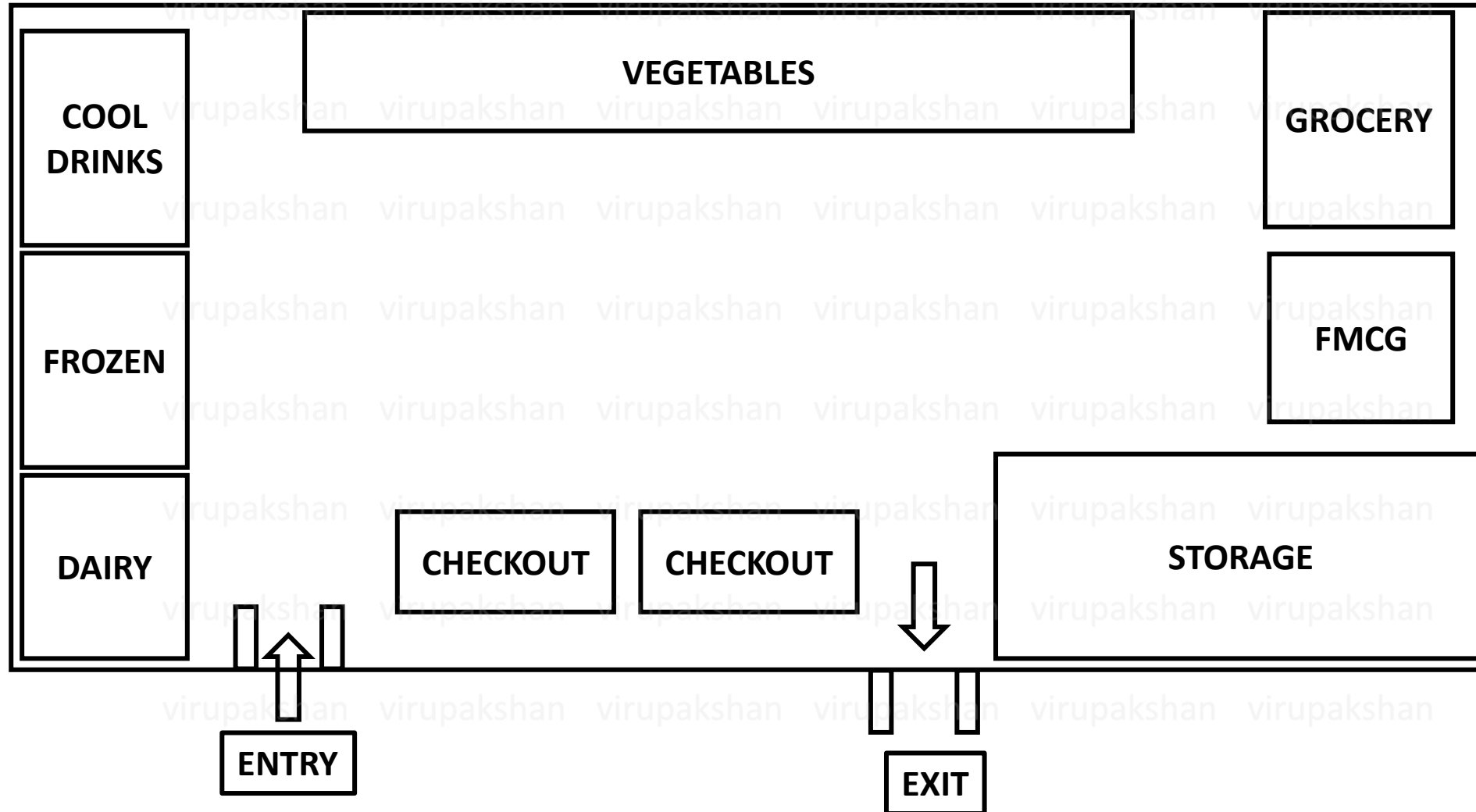
2.5.3D FACILITY LAYOUT

My Store

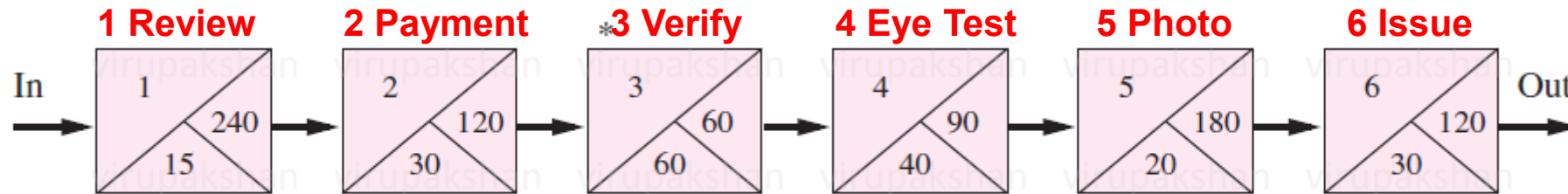


2.5.3E FACILITY LAYOUT

Small Grocery Store



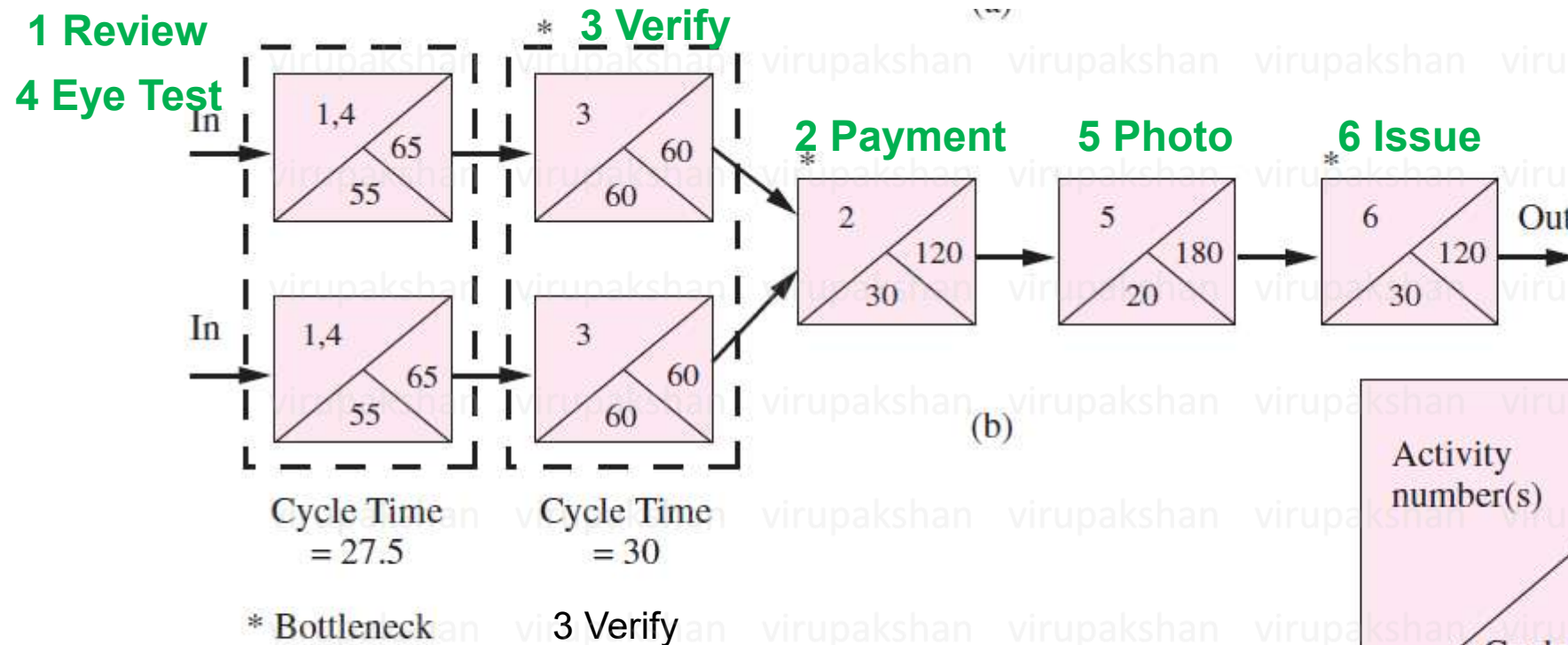
2.5.4A FACILITY LAYOUT – RTO OFFICE LAYOUT *OPTIMIZE*



BEFORE

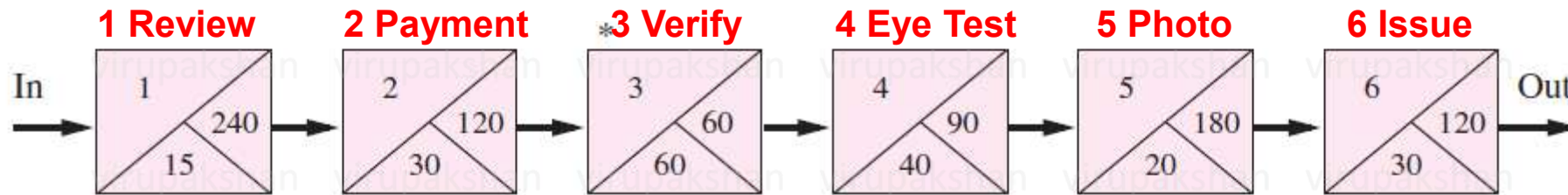
(a)

2.5.4B FACILITY LAYOUT – RTO OFFICE LAYOUT OPTIMIZE

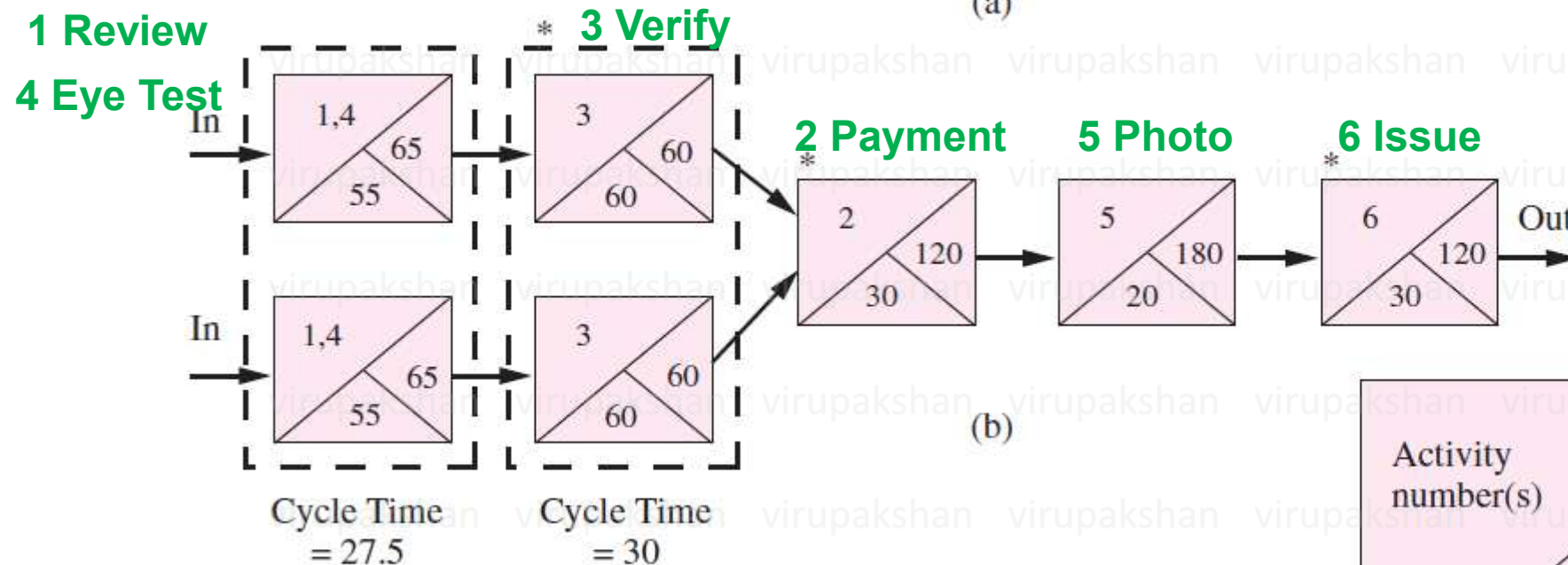


AFTER

2.5.4C FACILITY LAYOUT – RTO OFFICE LAYOUT OPTIMIZE



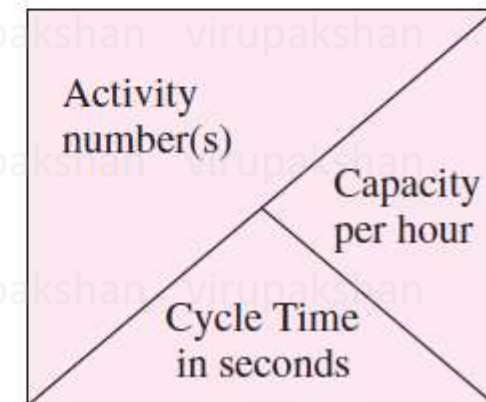
BEFORE



AFTER

* Bottleneck

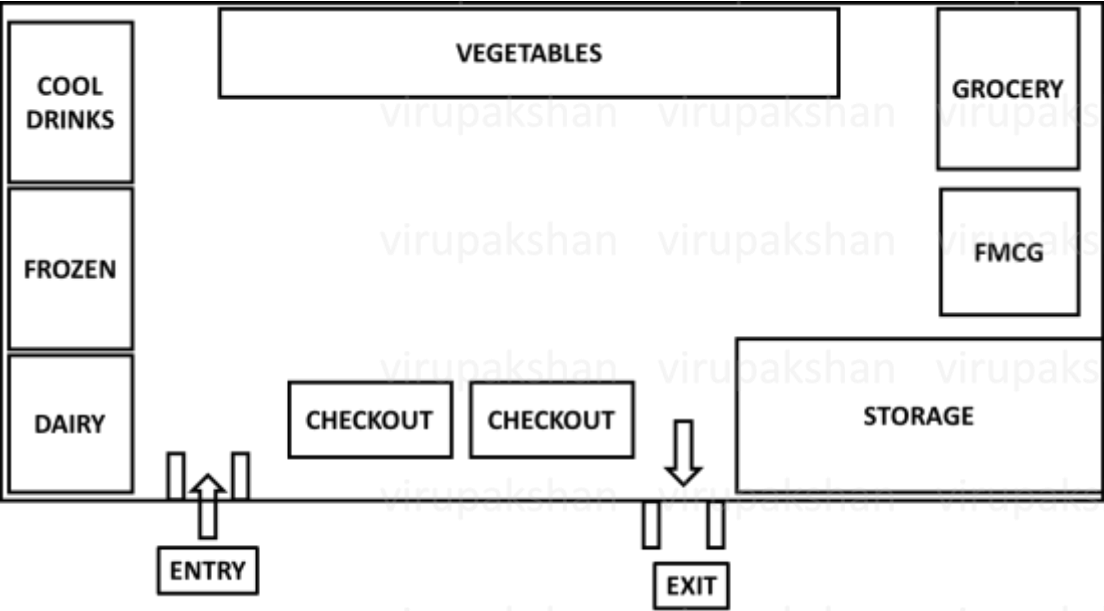
3 Verify



Q13. Draw a facility layout of a small grocery store.
Which parameters are mostly used to optimize the layout?

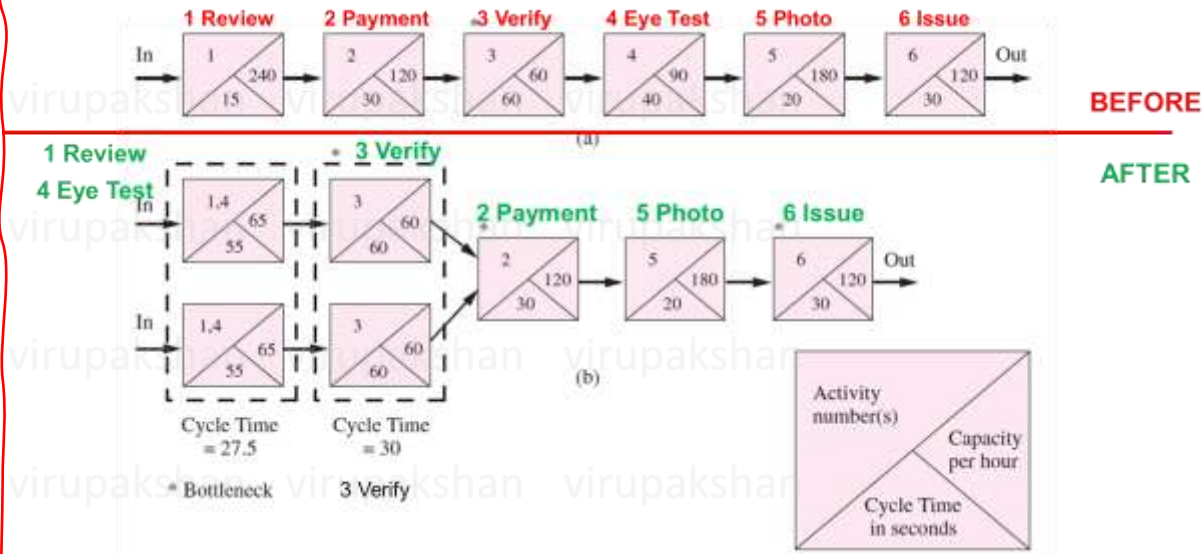
Answer:

a. Facility Layout of a Grocery Store:



b. Parameters used to optimize layout:
Activity Number, Cycle Time (CT) and Capacity are the most used parameters to optimize layout.

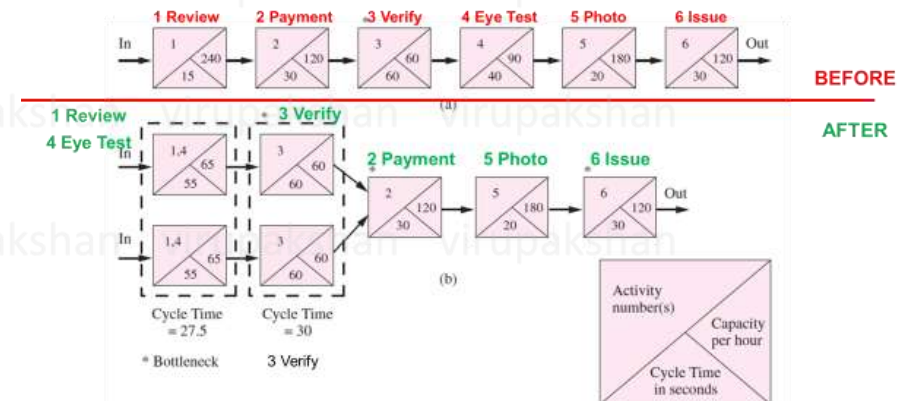
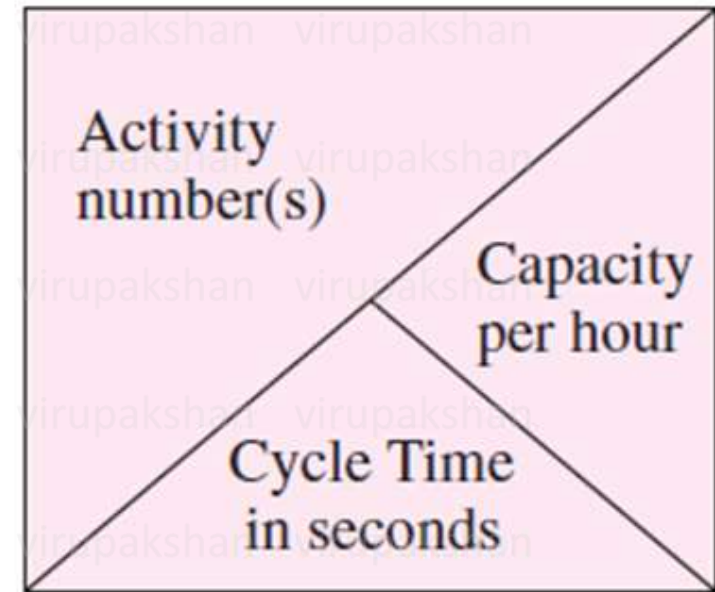
Example (optional)



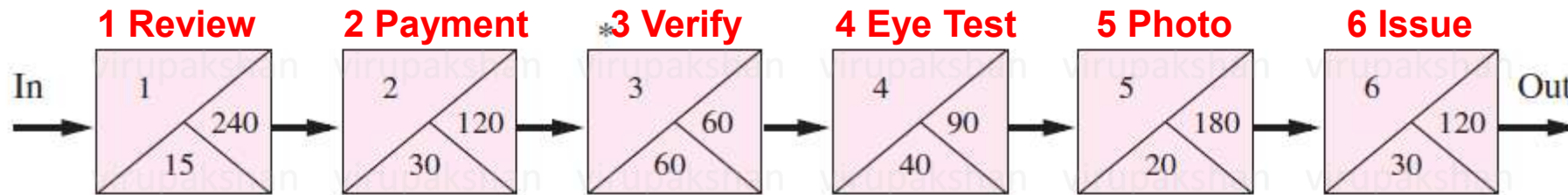
Q13. Draw a facility layout of a small grocery store.
Which parameters are mostly used to optimize the layout?

b. Parameters used to optimize layout:
Activity Number,
Cycle Time (CT)
and
Capacity
are the most used parameters to optimize layout.

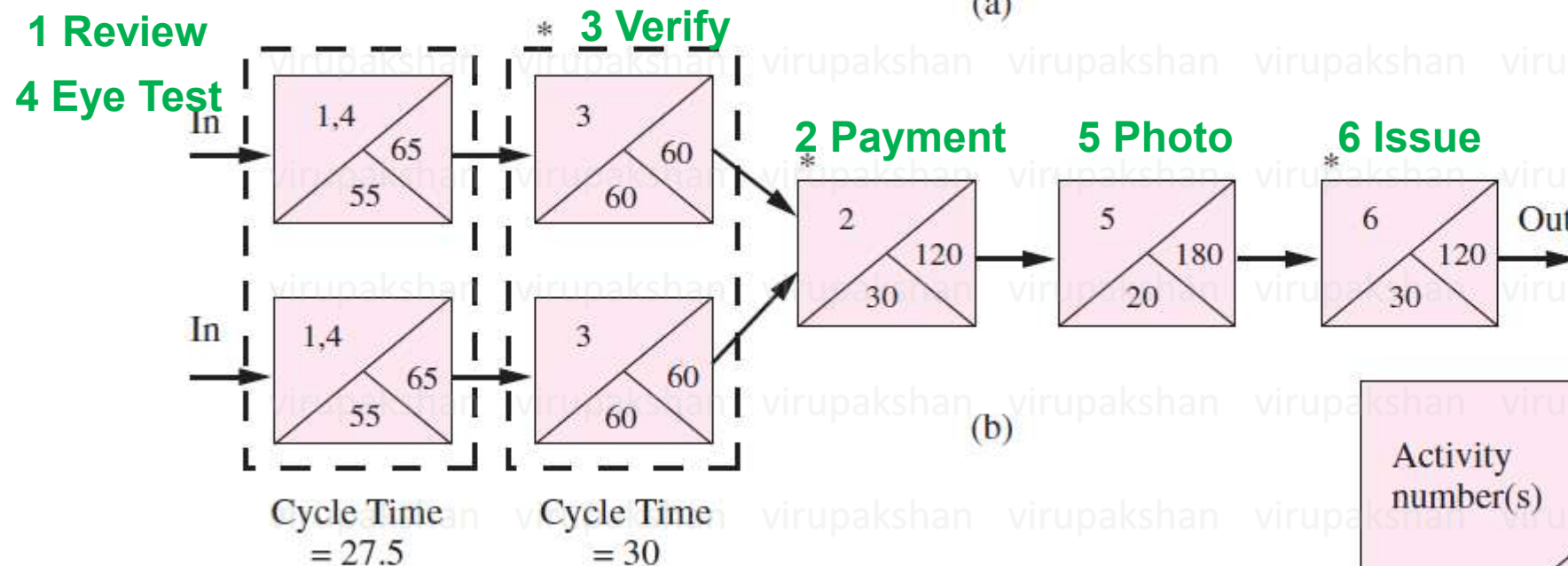
Example (optional)



2.5.4D FACILITY LAYOUT – RTO OFFICE LAYOUT OPTIMIZE



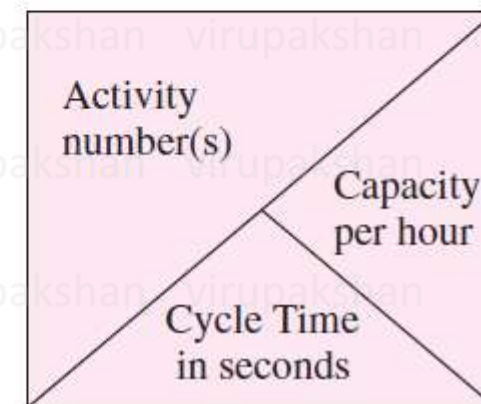
BEFORE



AFTER

* Bottleneck

3 Verify



2.6.1 Strategic Location Considerations

Location strategy determines where a service facility should be established.

Importance

Location affects:

- Customer accessibility
- Operating costs
- Revenue generation

Examples

Service	Preferred Location
Hospital	City center
Hotel	Tourist areas
Bank	Business districts
Retail Store	Shopping centers

Factors Influencing Location

Customer Convenience

Example: Bank branches near residential areas.

Competition

Example: Restaurants near commercial centers.

Transportation Access

Example: Airport hotels.

Cost of Land

Example: Shopping malls prefer suburban areas.

Labor Availability

Example: IT companies choose technology hubs.

2.6.2 Strategic Location Considerations

Factor	Simple Meaning	Example
Flexibility	Ability of a location to adapt to future changes in economy, population, and customer needs.	A hotel chain opening hotels in different states to reduce risk if one region faces economic problems.
Competitive Positioning	Using location to gain an advantage over competitors.	A store choosing a prime shopping area that competitors cannot easily access.
Demand Management	Selecting locations that help attract a steady flow of customers.	A hotel near business centers, tourist attractions, and airports to maintain occupancy.
Focus	Offering the same standardized service at multiple locations.	Fast-food chains providing similar services and layouts everywhere.

"FCDF" = Flexibility + Competition + Demand + Focus

2.6.3 Strategic Location Considerations: Approaches

- 1. Competitive Clustering**
- 2. Saturation Marketing**
- 3. Marketing Intermediaries**
- 4. Substitution of Communication for Travel**
- 5. Separation of Front Office and Back Office**
- 6. Impact of the Internet**

2.6.3a Strategic Location Considerations

1. Competitive Clustering

Businesses locate near competitors because customers prefer comparing alternatives in one place.

Examples:

- Subway, Burger King, Mc Donalds – close to each other
- Hotel chains located near competing hotels

Benefit: More customer traffic for all businesses in the cluster.



2.6.3b Strategic Location Considerations

2. Saturation Marketing

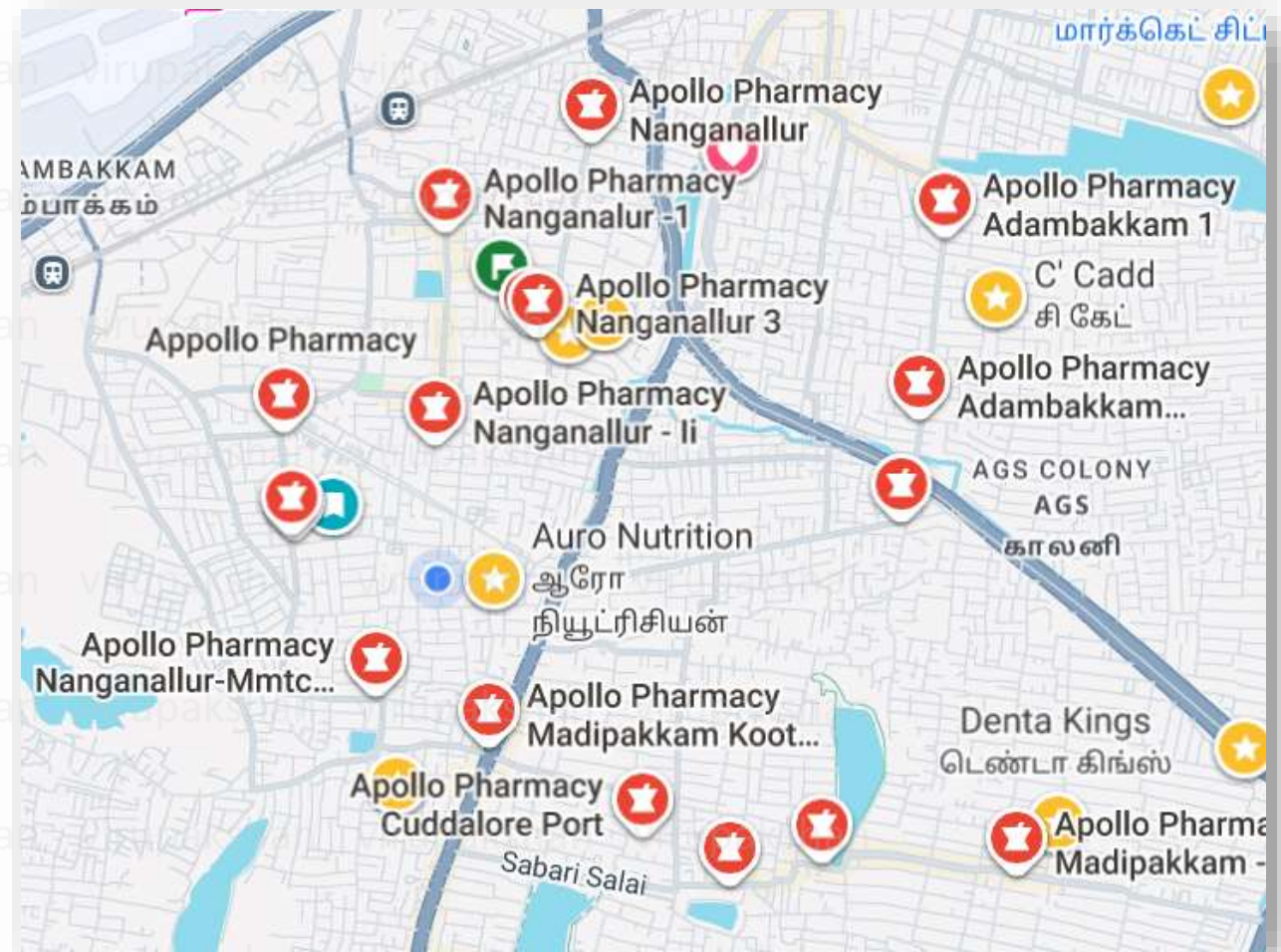
A company opens many outlets in the same area to dominate the market.

Example: Apollo Pharmacy placing several stores close together in a city.

Benefits:

- Increased brand visibility
- Easier supervision
- Lower advertising costs
- Greater market coverage

Risk: One outlet may take customers away from another



2.6.3c Strategic Location Considerations

3. Marketing Intermediaries

Organizations act as intermediaries to extend service reach.

Examples:

- Visa cards accepted by many merchants
- Health Maintenance Organizations (HMOs)
- Insurance distributed through employers

Benefit: Services can reach customers over a larger geographic area.



2.6.3d Strategic Location Considerations

4. Substitution of Communication for Travel

Technology replaces physical travel.

Examples:

- Online banking
- Telemedicine
- Video consultations

Benefit: Saves time and travel costs for customers and businesses



2.6.3e Strategic Location Considerations

5. Separation of Front Office and Back Office

Front Office	Back Office
Deals directly with customers	Performs support activities
Needs customer accessibility	Can be located where costs are lower

Example: A drive-through restaurant taking orders at a centralized call centre while food is prepared locally.



2.6.3f Strategic Location Considerations

6. Impact of the Internet

The Internet reduces the importance of physical location.

Examples:

- Online shopping websites
- Online stock brokers
- Global call centers

Benefits:

- Global reach
- 24/7 service availability
- Reduced dependence on physical storefronts



2.6.4 Strategic Location Considerations

Site Selection Considerations (Remember as AVTPEE CGLC)

When choosing a specific site, managers should evaluate:

- 1.Access** – Easy to reach, public transportation available.
- 2.Visibility** – Easy for customers to see.
- 3.Traffic** – High customer movement.
- 4.Parking** – Adequate parking space.
- 5.Expansion** – Room for future growth.
- 6.Environment** – Surroundings should support the business.
- 7.Competition** – Nearby competitors.
- 8.Government** – Zoning laws and taxes.
- 9.Labor** – Availability of skilled workers.
- 10.Complements** – Nearby complementary services.

Lecture 03 Topics

Unit-1 Service – Definition

1.1	Characteristics
1.2	Stages of Economic Development
1.3	Role of Services in Economy
1.4	Experience Economy
1.5	Service Science
1.6	Service Dominant Logic
1.7	Service Systems
1.8	Service Operations
1.9	Open System View of Service Operations
1.1	Service Package
1.11	Strategic Service Vision
1.12	Competitive Service Strategies
1.13	Strategic Analysis
1.14	Sustainability in Services
1.15	Competitive Role of Information in Services

Unit-2 New Service Development

2.1	Innovation in Services
2.2	Service Blueprinting
2.3	Service Process Design
2.4	Service System Design
2.5	Service Facility Design and Layout
2.6	Strategic Location Considerations
2.7	Service Process Analysis

2.8	Service Encouraging Customer Organization
2.9	Service Profits
2.10	Technology in Service Development

Unit-3 Service Quality

3.1	Measuring Service Quality
3.2	SERVQUAL Gap Model
3.3	Walk Through
3.4	Service Quality
3.5	Achieving Service Quality
3.6	Quality and Productivity Improvement Process
3.7	Quality Tools
3.8	Benchmarking
3.9	Improvement Programs

Unit-4 Strategies

4.1	Strategies for Managing Service Demand and Service Capacity
4.2	Forecasting Service Demand
4.3	Forecasting Models – Subjective Models
4.4	Forecasting Models – Causal Models
4.5	Forecasting Models – Time-Series Models
4.6	Yield Management and its Application
4.7	Queuing Systems

2.1 Innovation in Services

2.2 Service Blueprinting

2.3 Service Process Design

2.4 Service System Design

2.5 Service Facility Design and Layout

2.6 Strategic Location Considerations

5.8 Monitoring Project Performance

5.9 Globalization of Services

5.1 Global Service Strategies

5.11 Domestic Growth and Expansion Strategies

5.12 Franchising

SERVICES SCIENCE AND
SERVICE OPERATIONAL MANAGEMENT

UNIT 02

LECTURE 03

Doubts?

THANK YOU!

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