SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution
Coimbatore – 35

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DEPARTMENT OF FOOD TECHNOLOGY

19FTT401 FOOD PACKAGING TECHNOLOGY

IV– YEAR VII SEMESTER

UNIT I FUNCTIONS OF FOOD PACKAGING AND FLEXIBLE PACKAGING MATERIALS

TOPIC – Importance of packaging: Functions , scope and requirements

PACKAGING

Packaging is the process of designing, evaluating, and producing packages that enclose and protect products for distribution, storage, sale, and use. It is the science, art, and technology of enclosing or protecting products for distribution, storage, sale, and use

SIGNIFICANCE OF PACKAGING

•**Product Protection:**Packaging serves as a critical barrier that safeguards products from external elements, ensuring they reach the consumer in optimal condition.
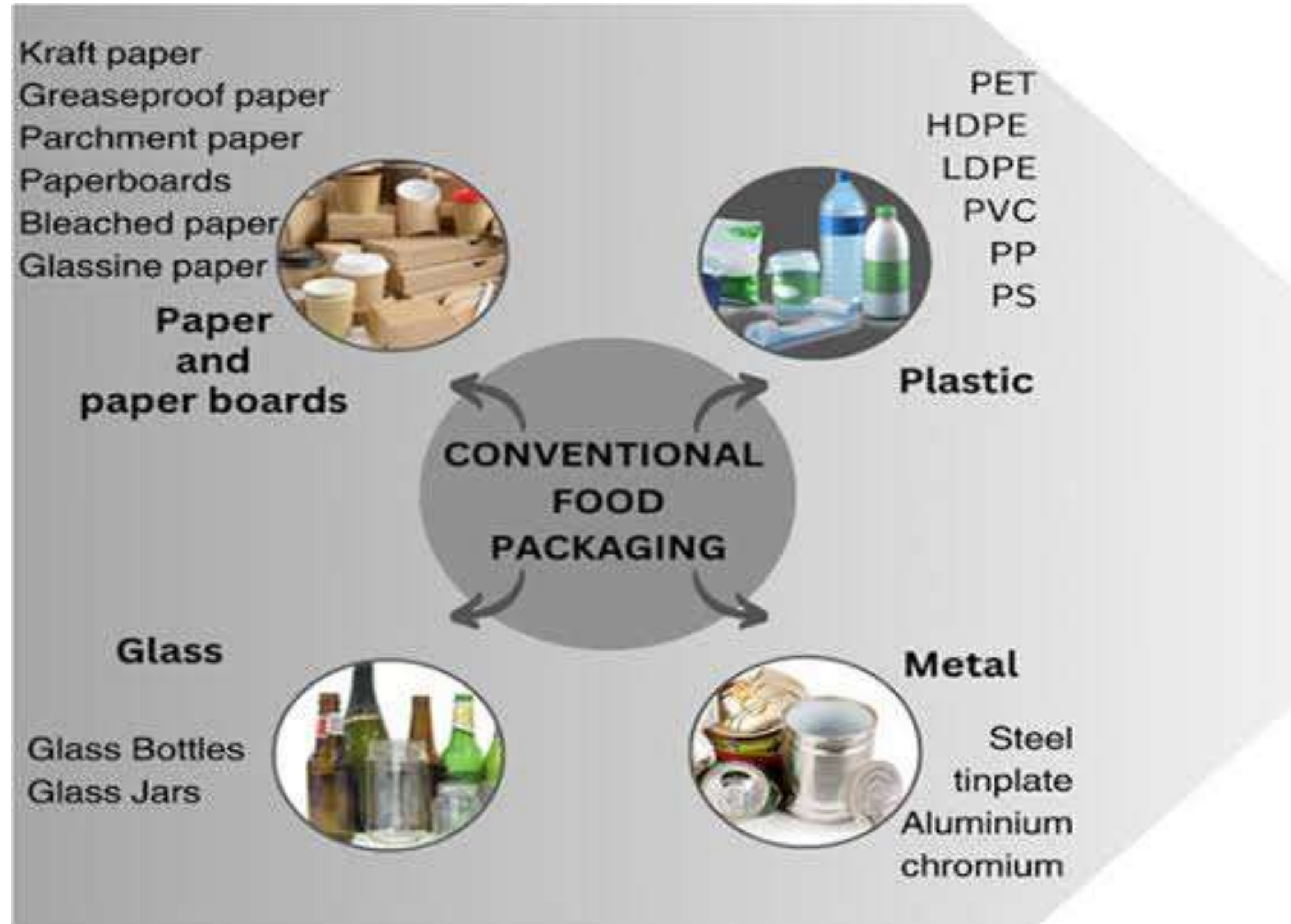
•**Consumer Attraction and Engagement:**Effective packaging grabs consumer attention on crowded shelves, communicates brand identity, and often influences purchasing decisions. Packaging design can differentiate a product from competitors, creating a unique brand image.

Information Conveyance: Packaging provides essential information such as product contents, usage instructions, safety warnings, and expiration dates. This ensures consumers are informed and confident in their purchasing decisions.

•**Sustainability and Environmental Impact:**With increasing awareness of environmental issues, packaging plays a key role in sustainability. Brands are now focusing on reducing packaging waste, using recyclable materials, and creating eco-friendly designs to appeal to environmentally conscious consumers.

Primary Packaging:

•**Definition:** Direct contact with the food product; the first layer of packaging that encloses the food.

•**Examples:**

- **Plastic Containers:** Used for yogurt, butter, and ready-to-eat meals.
- **Glass Jars/Bottles:** Ideal for jams, sauces, and beverages.
- **Metal Cans:** Commonly used for canned vegetables, soups, and soft drinks.
- **Flexible Pouches:** For products like juices, sauces, and snacks.
- **Paperboard Cartons:** Used for milk, juice, and dry foods like cereals.

Tertiary Packaging:

•**Definition:** Used for the bulk handling, storage, and transportation of products. It groups secondary packages into a single unit.

•**Examples:**

- **Pallets:** Stacks of goods arranged on a flat structure for easy transport.
- **Stretch Wrap:** A plastic film used to secure products on a pallet.
- **Wooden Crates:** Provides protection and support for heavy or fragile items during shipping

Specialty Packaging:

•**Active Packaging:** Incorporates components that interact with food to extend shelf life (e.g., oxygen absorbers, moisture regulators).

•**Modified Atmosphere Packaging (MAP):** Alters the atmosphere within the packaging to extend the freshness of the product (commonly used for fresh meat, fruits, and vegetables).

•**Vacuum Packaging:** Removes air from the package to prevent the growth of bacteria and mold, used for products like deli meats, cheeses, and coffee.

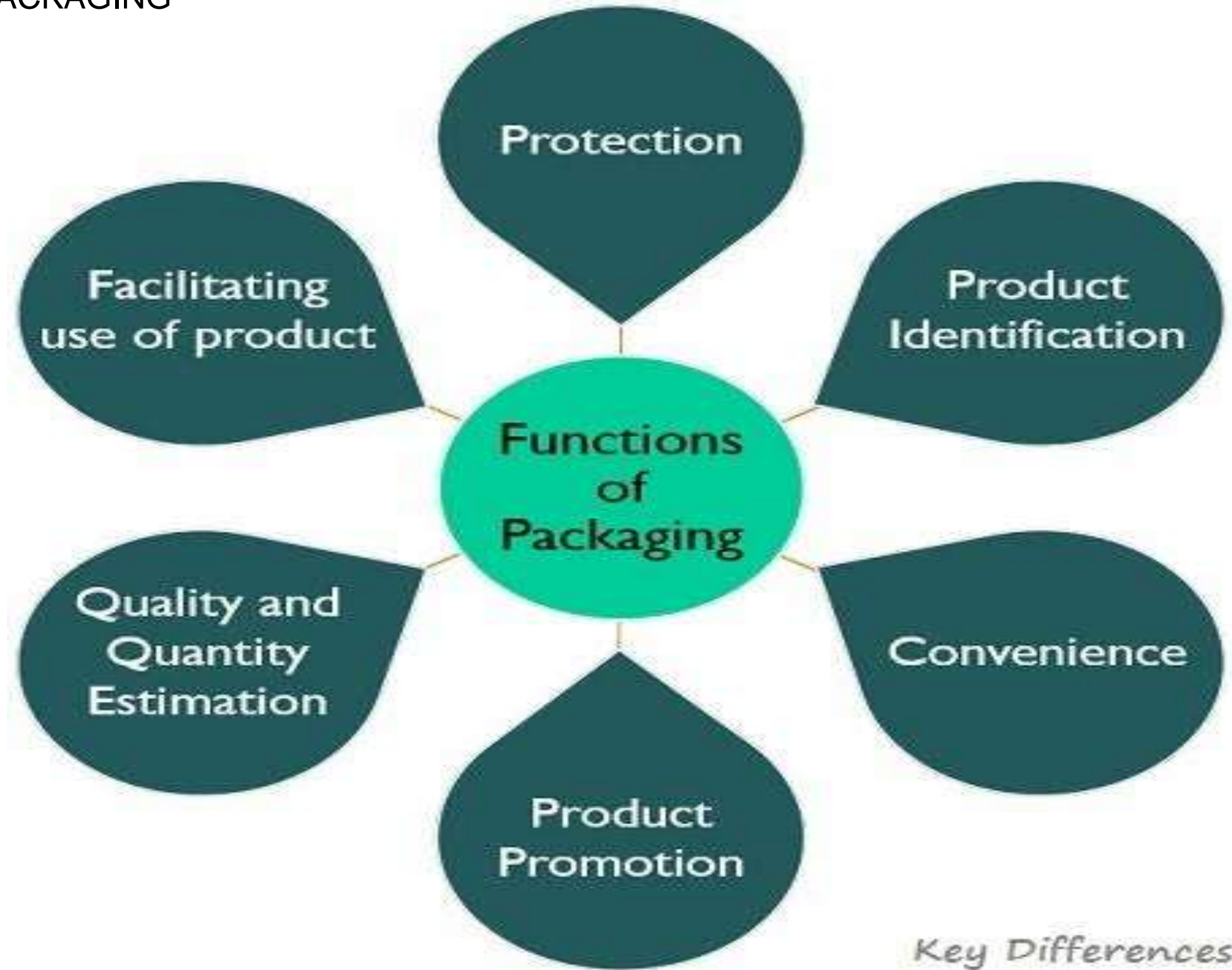•**Eco-Friendly Packaging:** Made from biodegradable or recyclable materials, used to reduce environmental impact

Innovative & Smart Packaging:

Smart Packaging: Includes sensors or indicators that provide information about the product's condition, such as freshness or temperature exposure.

Edible Packaging: Packaging that can be consumed along with the product, often made from natural materials like seaweed or rice.

Functions of Packaging
- Protection
- Product Identification
- Convenience
- Product Promotion
- Quality and Quantity Estimation
- Facilitating use of product

Key Differences

Scope of Packaging:

•The scope of packaging extends beyond just the physical product. It includes considerations such as supply chain management, technological advancements, and cultural differences in global markets. Packaging must adapt to these varied demands to be effective.

THANK YOU