PACKAGING GUIDE SUMMARY FOR SMEs & START-UP BUSINESSES

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YOUTH EMPOWERMENT PROJECT

UNLOCKING POTENTIAL TO CREATE WEALTH

WHAT IS PACKAGING

There are many definitions of packaging

- Packaging is the process of enclosing or protecting products for distribution, storage, sale, and use.
- A package must sell what it protects and protect what it sells.
- The fundamental role of packaging is to deliver the product to the consumer in prefect condition.
- Packaging protects your product; great packaging protects your brand
- All the activities of designing and producing the container for a product (Philip Kotler, & Armstrong. G. (2010)

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Packaging System Levels

Primary packaging (normally the package that directly surrounds the product, not including any intermediate cushioning material or wrapping)

Secondary packaging (any collation or grouping package such as a multi-pack)

Tertiary packaging (all elements of the transport package, whether a fibreboard case, a wood crate or a shrink-wrapped pallet)

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Packaging System Levels

Ex : Mineral water

Primary ***Secondary*** ***Tertiary***

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Introduction : Packaging functions

The basic packaging functions

→ ***First function***: to contain the product

→ ***Second function***: to protect the product

→ ***Third function***: to facilitate handling and distribution

→ ***Fourth function***: to position the product and promote sales

→ ***Fifth function***: to inform customers

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The Functions of Packaging

Contain the product

- Contain a defined quantity of product (by volume, weight, or count)
- Use the available pack volume efficiently
- Be tight to prevent any leakage of the product or ingress of the contaminating materials
- Keep the pack size to a minimum to save cost and to optimize package strength

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The Functions of Packaging

Protect the product

- To keep the product in perfect condition until it reaches the intended destination or end user
- Avoid spoilage, breakage, moisture, damage, contamination, pilferage and theft

Blister packs to protect fragile halogen light bulbs

What you don't want to happen and packaging must protect

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The Function of packaging

Facilitate handing and distribution

- From the time of packaging until its reception by the end user… until disposal
- Reduce health and safety issues
- Minimize handling costs
- Suitable with mechanical handling techniques
- Satisfy handling requirements related to safety, recycling and disposal

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The Function of packaging

Position the product and promote sales

Structural and graphic design of package optimised to attract and help sell the package

The Functions of Packaging

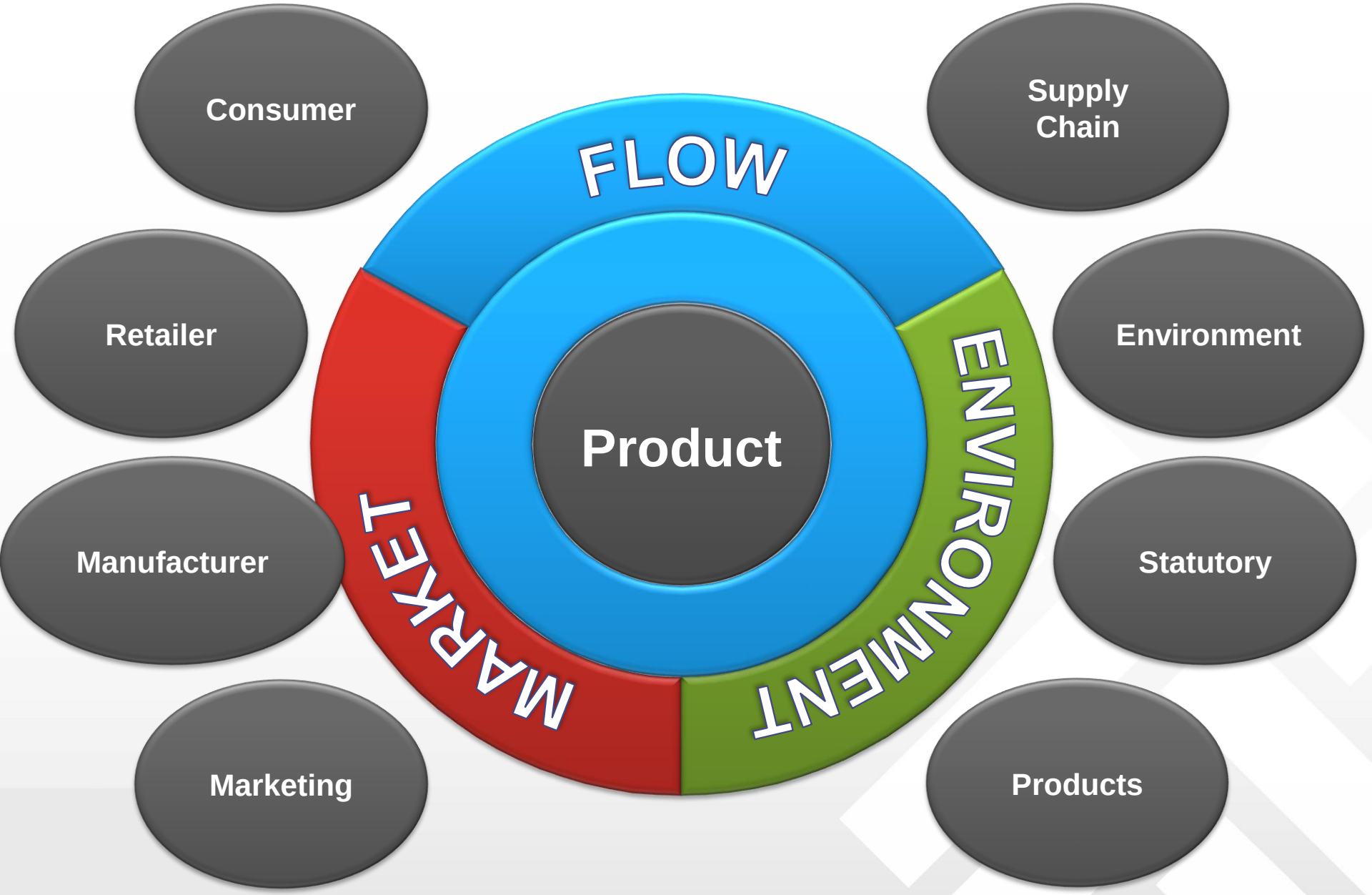
Inform

Packages carry information about:

- product (e.g. what it is; ingredients)
- **mandatory** regulatory information i.e. sell by date, name of manufacturer, nutritional values etc.

Nutrition information

Main Demands on the Packaging System



Unit n°2

Packaging Design

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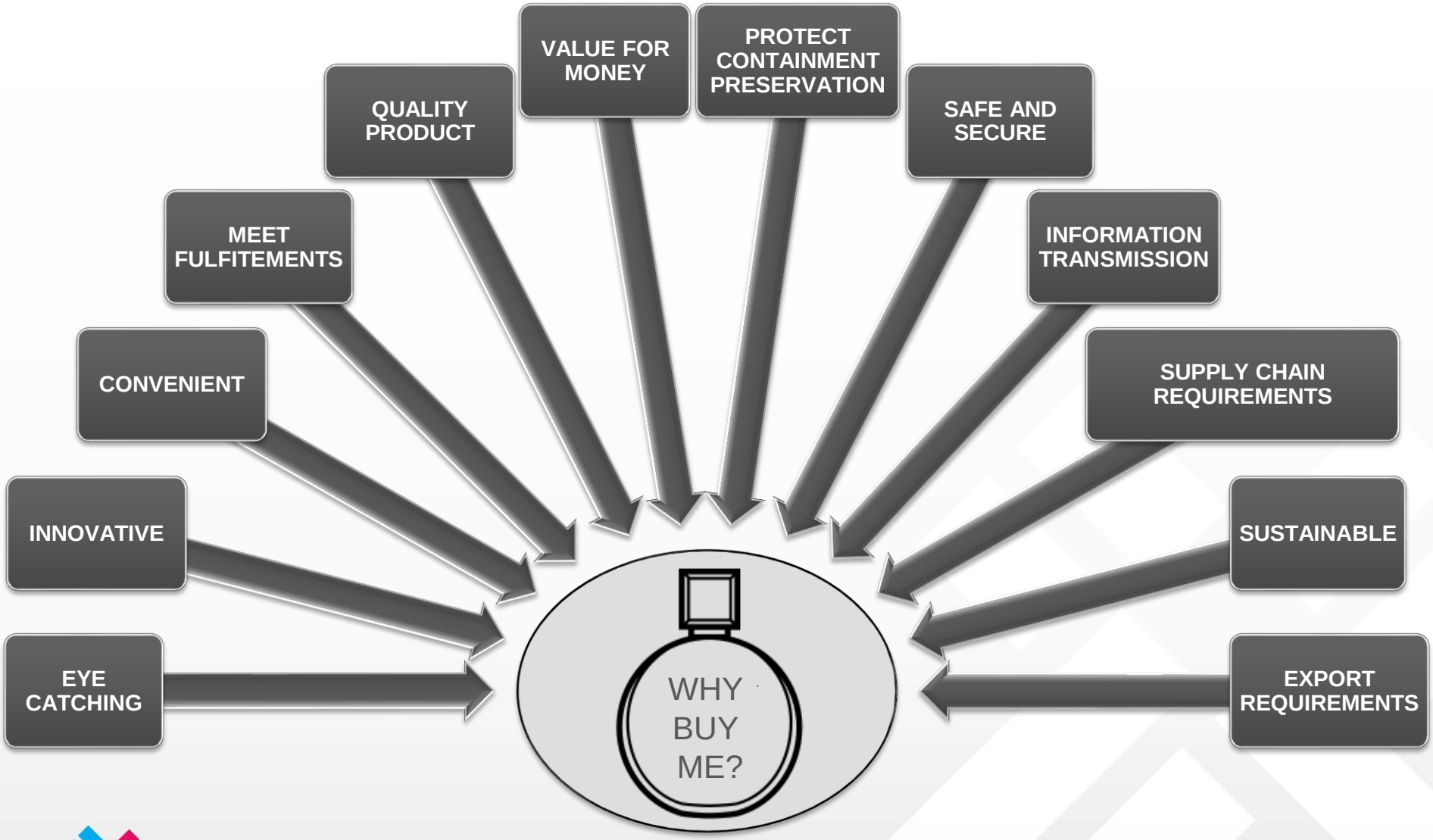
Criteria to select a Design



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The main types of packaging materials


Paper and Board


Plastics


Metals


Glass


Wood


Textiles


Composites (combinaison of different materials)

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Plastic Packaging Materials

Plastic materials include bottles, jars and bags pouches. Plastic like glass provides visibility to the products they contain.

It exists hundreds of plastic materials, all of them have different properties (barrier to Oxygen or water, resistance to high temperature, melting temperature, transparency

Advantages of plastic containers:

- Low cost
- Easy to manufacture

Disadvantage:

- Carbon footprint

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Glass Packaging Materials

Advantages of Glass

- Chemically **inert** (doesn't react with a food)
- Glass is strong vertical resistance
- Does not deteriorate with age and is excellent barrier to solid, liquid, gasses
- Excellent protection against odour and flavour contaminants,
- Transparency of glass provides excellent product visibility
- **Reusable & Recyclable**

Disadvantages of Glass Container

- Breaks easily
- Heavy
- Expensive to buy and to transport

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Selecting a printing Methods

In selecting a printing method for a particular package or packaging material, the following points should be considered:

- ✓ Which methods are suitable for the package or packaging material, taking account its form, characteristics and surface texture?
- ✓ Which methods are available in plant or from local printers?
- ✓ How many colours can the printing press apply in one pass through the machine?
- ✓ The length of the production runs?
- ✓ The required printing quality level?

Economic aspects of alternative printing methods, assessing relative costs to achieve the required quality and output levels

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Digital printing suitable for?

→ **Prototyping for product testing**

→ Design is not finalized & testing is required

→ **Some fields of the label will vary from one label to another**

→ If sequential number (lot number or unit number)
→ No plate to change, done automatically by a software, cheaper solution

→ **Short set-up time required**

→ Very short set-up time between 2 orders, shorter cycle time, no printing plates

→ **Very small details to be printed or color gradient**

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Traditional printing suitable for?

- → **When metallic ink is required or printing on films**
- → **Large batch size**
  - → Digital printing is always less expensive for small quantities (but low speed process, no set-up of parameters). Traditional printing is a very fast process thus saving time and costs
- → **Better consistency of colors**
- → **For special effects and coating**

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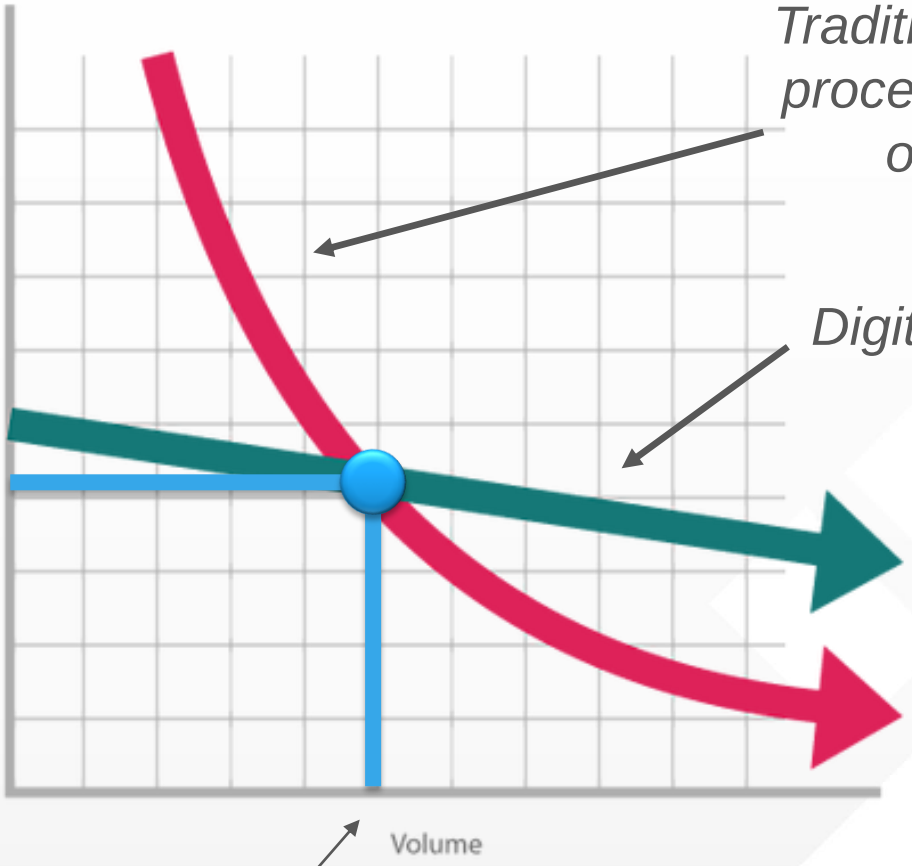
Traditional vs. Digital printing processes: cost analysis

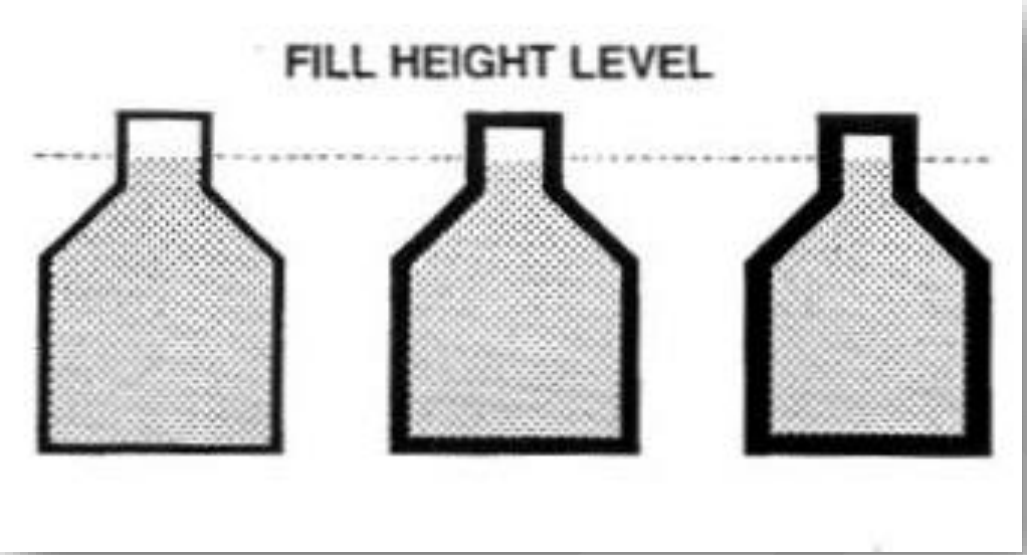


Constant-level filling

→ Customer satisfaction generally demands that all containers be filled to the same level

→ Used for most low- or moderate-cost products where accurate volume is not as important as keeping a **visually constant fill level**

→ Constant-level filling achieves this regardless of the actual volume of product



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Labelling

Should clearly contain
(NOT an exhaustive list / List varies depending on the country and the product)

- Country of origin
- Manufacturer’s name and contact address
- Product designation, quality, grade, model, size etc.
- Composition of the product, including all ingredients, additives etc
- Nutritional values, in the case of foodstuffs
- Quantity of the product expressed in the units employed for this product
- Data on product shelf life, ‘use by’ date, holding temperature, etc
- Manufacturer’s guarantee, certification, etc
- Additional information, like nutritional labelling, and etc.

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Labelling: the Marketing function

→ Labels promote and differentiate products

→ Identify the actual product or brand

→ Silent salesperson - communicates to a potential consumer

"Look at Me!", "Read all about Me!" and "Choose Me!"

→ Labels can be incorporated to portray a socially responsible manufacturer and to secure a competitive advantage

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Traceability

- ISO has defined traceability as the “the ability to trace the history, application or location of an entity by means of recorded identifications”
- Traceability includes both trace back and trace forward.
- Trace back (or tracing): ability to trace a food product from the retail shelf back to the farm.
- Trace forward (or tracking): ability to trace a food product from the farm to the retail shelf or end usurer.

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Traceability

Traceability is an ordered and intricated system requiring accuracy and

A traceability system requires:

- Clear identification of production lots or batches including date, time and process details,
- Clear identification of raw materials and ingredients including manufacturer, specifications, lot/batch numbers and date and time of delivery,
- Details of packaging (specifications, quality records, etc.) especially packaging in direct contact with food and pharmaceuticals,
- Details of all transport, storage and distribution processes

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Barcodes

- The main purpose of barcodes is to carry information
- Barcodes compliant with ISO standards are issued by GS1 organization
- Buy barcodes: see GS1 website https://www.gs1.org

For Secondary packaging

For Primary packaging (unit for sale)

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GS1 Barcodes – GTIN examples

GTIN-12
(UPC-12)

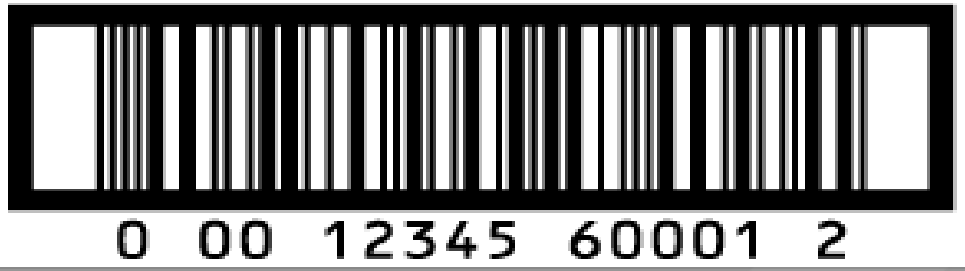
For product for sale

GTIN-13
(EAN / UCC-13)

GTIN-8
(EAN / UCC-8)

GTIN-14
(GS1-128 or ITF-14)

For boxes



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Shelf-life of products

Determined by manufacturer

Quality of the product is guaranted **IF**

- Package not opened
- and Shelf-life respected

Shelf-life is over once the package is opened

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Shelf-life of products: Terminology

- **End date / expiry date** = Limit date to use the product (in a recipe or to eat) for perishable products (microbiology)

- **Best before** = Optimal Limit date

  For product which are stable microbiologically speaking

  Ex: biscuits, chips, chocolat, …

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Food grade materials

Why ?

→Ensure the protection of the health of the consumers

Benefits?

- ✓ Conformity to regulation and mandatory requirements in the country where the product is sold
- ✓ Supply customers with safe and tested products
- ✓ Increase confidence to customers regarding the quality and safety of the product

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Food grade materials

What ?

Food contact materials are all materials and articles intended to come into contact with foodstuffs, including:

- packaging materials
- processing machines, containers
- Ink, varnish
- cutlery, dishes, etc.
- materials and articles which are in contact with water intended for human consumption
  - But NOT fixed public or private water supply equipment

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Food grade materials

What?

- Guided by regulation
- Conformity assessed against

→ testing

or risk assessment

Severity \ Likelihood	1	2	3
1	Low	Low	Medium
2	Low	Medium	High
3	Medium	High	High

Not all countries have such a regulation but it remains a good practice

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Food grade materials

How to get a certificate for Your packaging material?

→ Request Your suppliers (paper or scanned copy)

→ Conduct migration testing in an accredited laboratory

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The Perfect Package

EUROPEN
The European Organization for Packaging and the Environment

The European Organisation for Packaging and the Environment (EUROPEN) provides an appropriate set of criteria for *the Perfect Package:*

- ✓ *Packaging should be designed holistically with the product in order to optimise overall environmental performance*
- ✓ *Packaging should be made from responsibly sourced materials*
- ✓ *Packaging should be designed to be effective and safe throughout its life cycle*
- ✓ *Packaging should meet market criteria for performance and cost*
- ✓ *Packaging should meet consumer choice and expectations*
- ✓ *Packaging should be recovered efficiently after use*

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FOR MORE INFORMATION
FOR THE ORGANIZATION OF TRAINING
FOR INDUSTRY GAP ANALYSIS
FOR ANY REQUIREMENT REGARDING PACKAGING

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