



# Flexible Packaging an introduction

**Mike Fairley**

Strategic Consultant

Labelexpo Global Series



24 - 27 September • Brussels  
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# Flexible Packaging – an introduction

What is flexible packaging?

What materials are used?

What factors come into design, graphics and pre-press?

What printing and converting processes are used?

What about inks and coatings?

How big is the market?

What are the main types of flexible packaging?

How are they formed and filled?

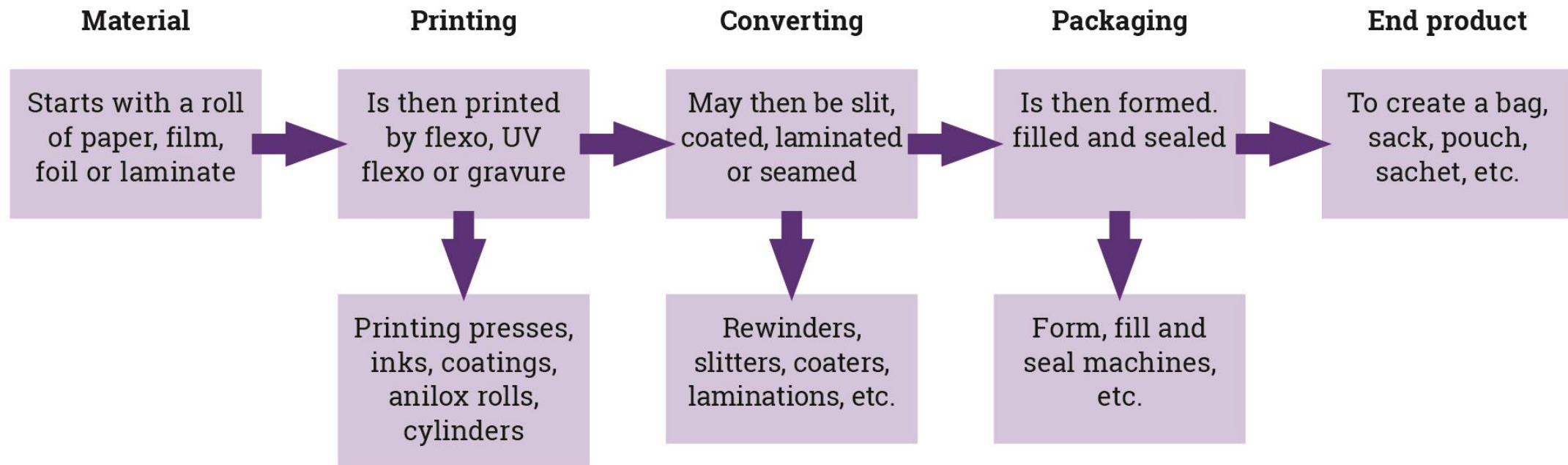
What are the challenges and opportunities?



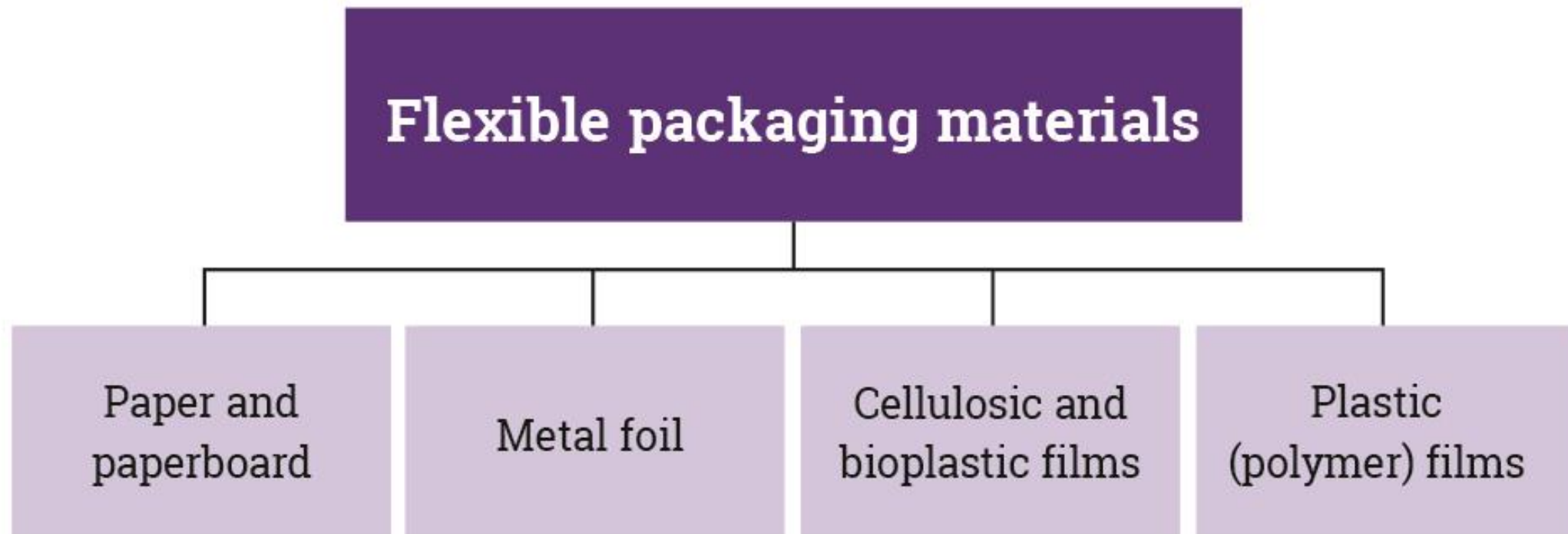
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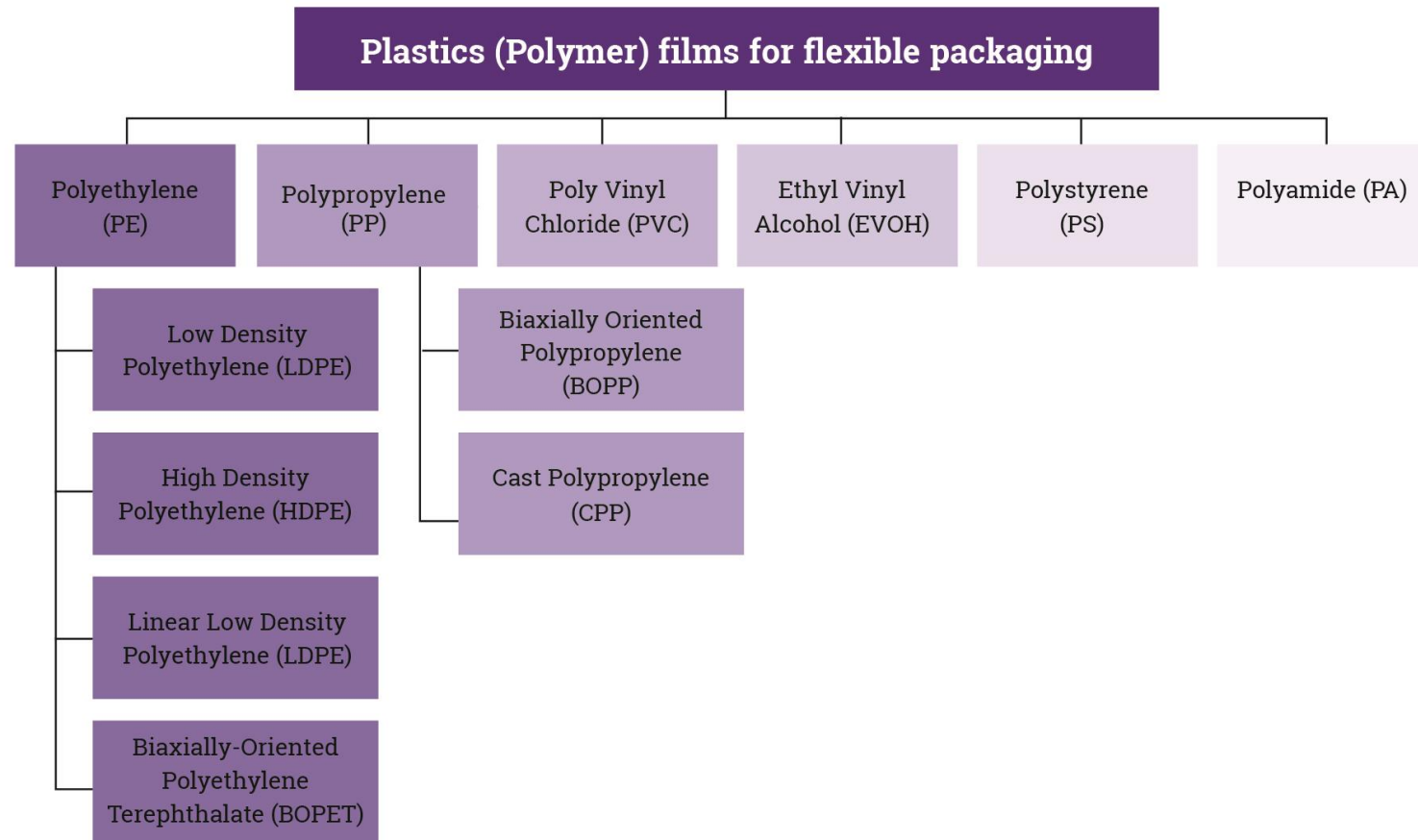
## Print and packaging – flexible packaging



# Flexible Packaging – an introduction



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# Flexible Packaging – an introduction

What are the main types of flexible packaging materials used for?

## Usage of flexible packaging materials

### Plastic films

Used for wrapping fresh produce, dry foods, meat and cheese, freezer packs, carrier bags, or foods on high-speed packaging lines

### Aluminum foils

Used for confectionery, ready meals, pharmaceuticals, soups and sauces, preserved foods and liquid foods

### Paper and paperboard materials

Used for a wide range of paper bags and sacks

### Cellophane film

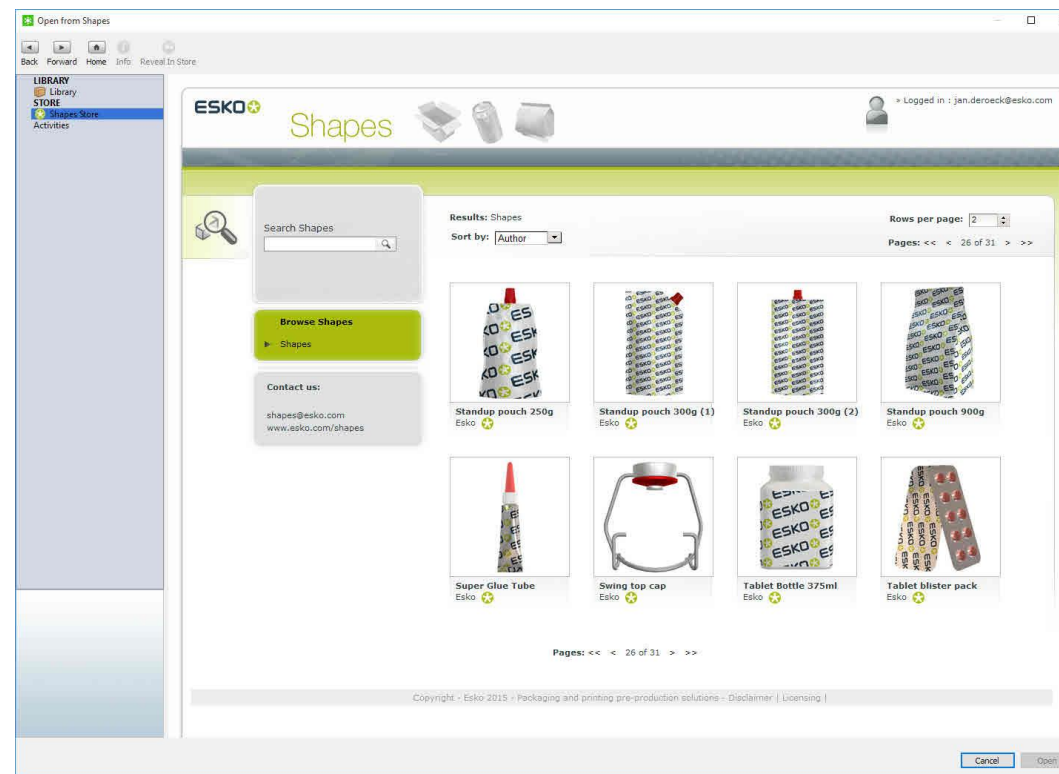
Chocolate, toys, gifts, pharmaceuticals and cigars



# Flexible Packaging – an introduction

## FLEXIBLE PACKAGING SOFTWARE

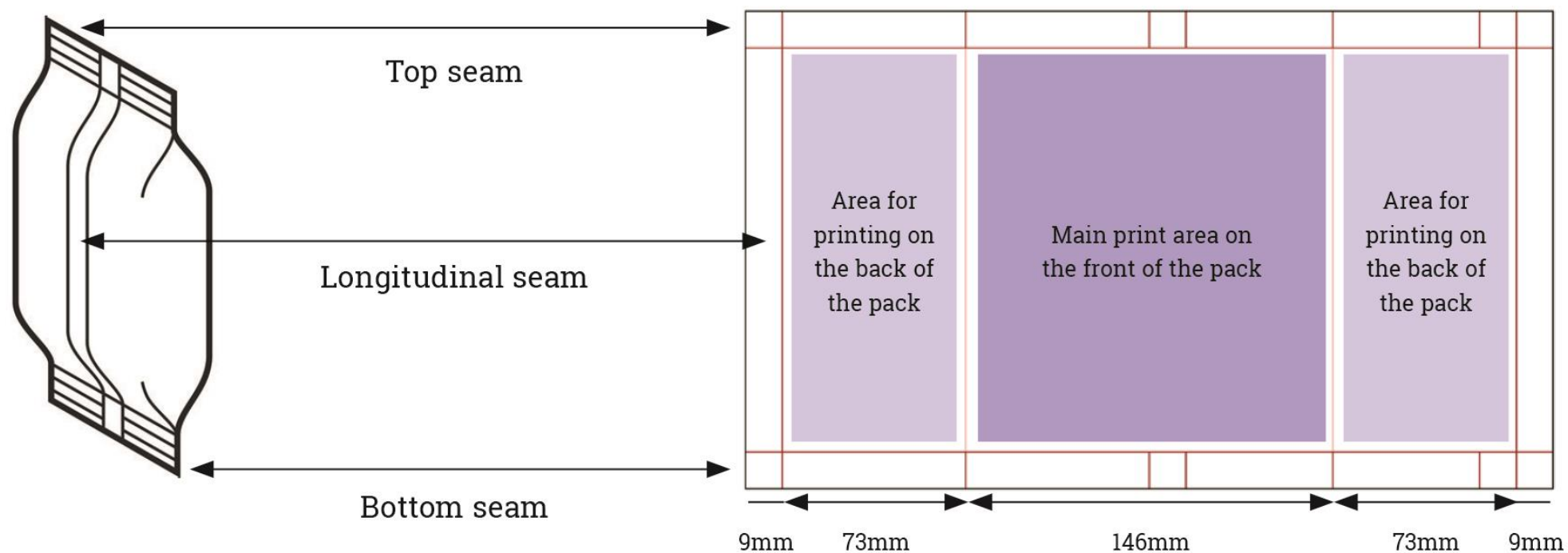
Availability of 3D shapes and structures, filling requirements, and 3D pack previews



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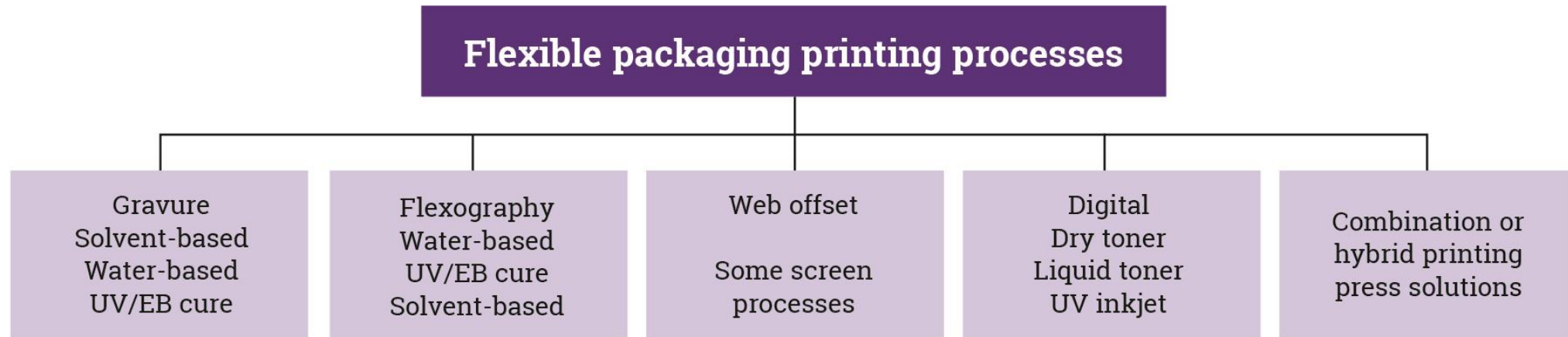
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## Pack design and formation considerations





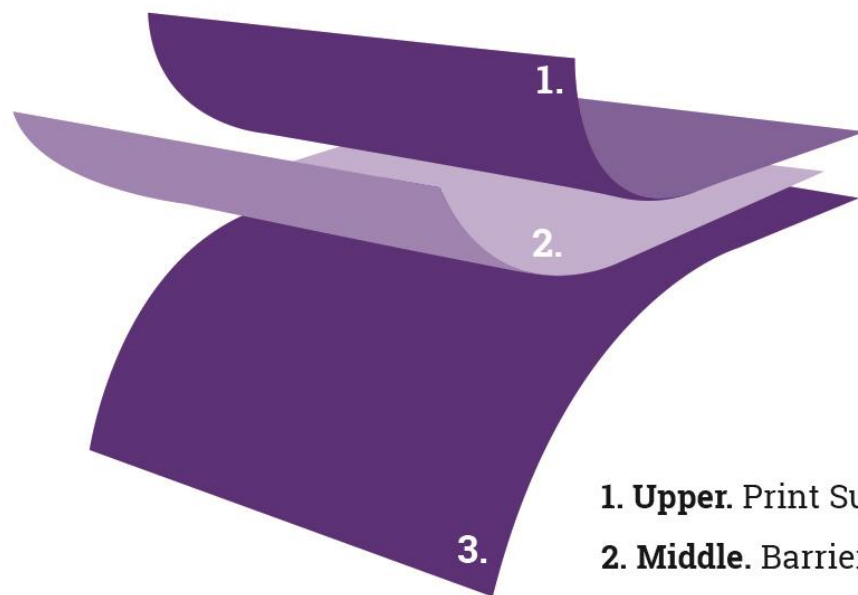
# Flexible Packaging – an introduction



# Flexible Packaging – an introduction

Laminate, barrier and sealing layers are widely used

## UPPER LAMINATE



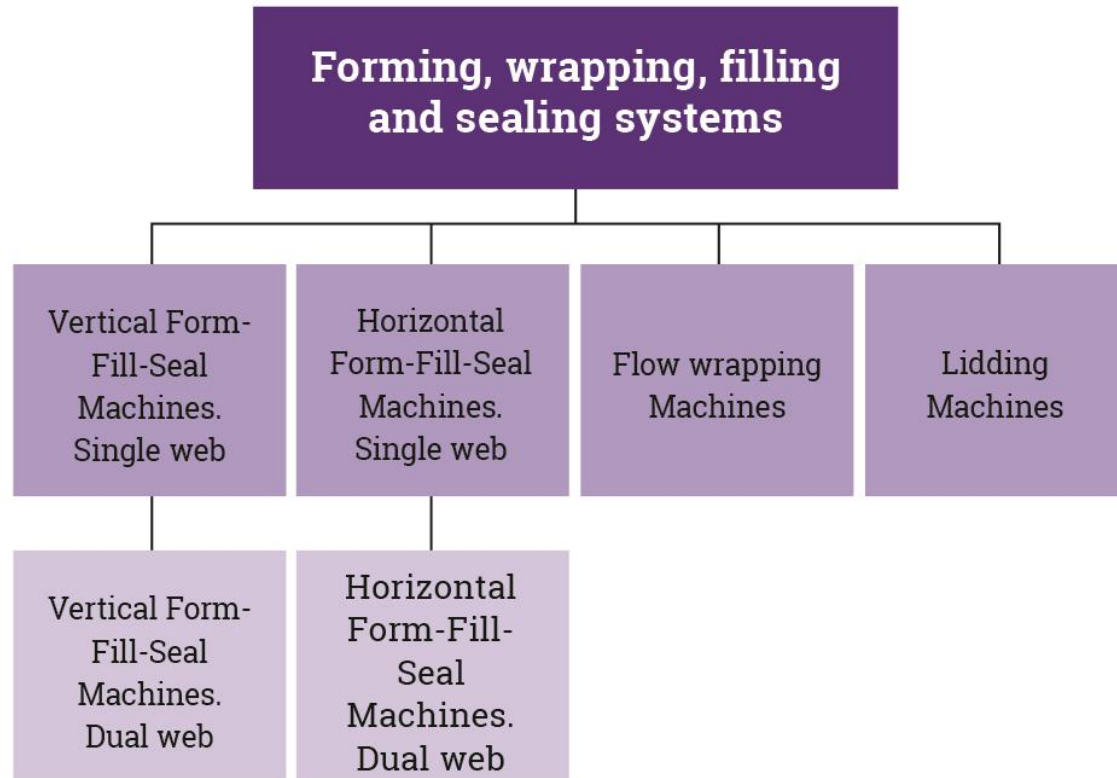
1. **Upper.** Print Surface
2. **Middle.** Barrier Layer
3. **Bottom.** Sealant layer



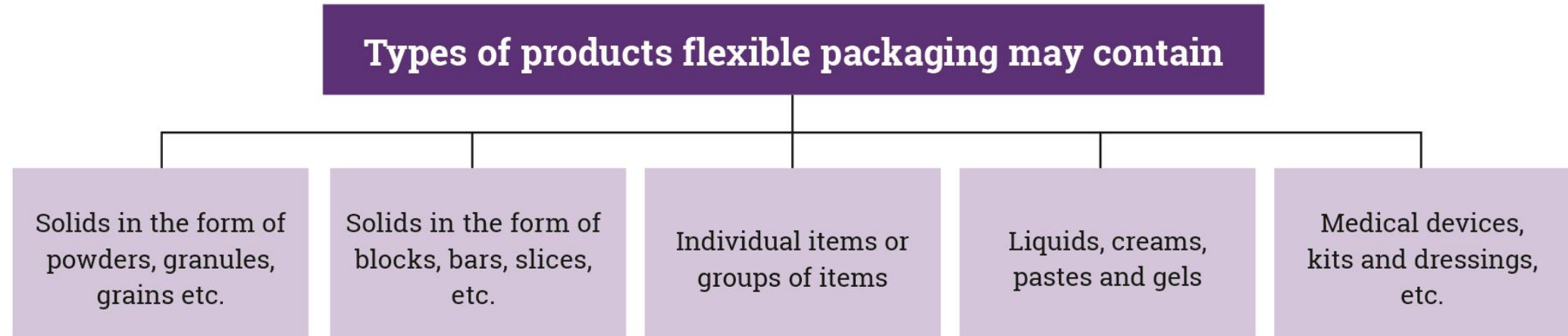
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After printing and converting the web passes to a packaging line



# Flexible Packaging – an introduction



# Flexible Packaging – an introduction

Different constructions are required for different products



Pillow Bag



Quattro seal Bag



Diaper Bag



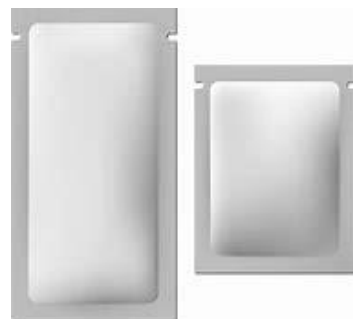
Sachet Bag



Cusseted Bag

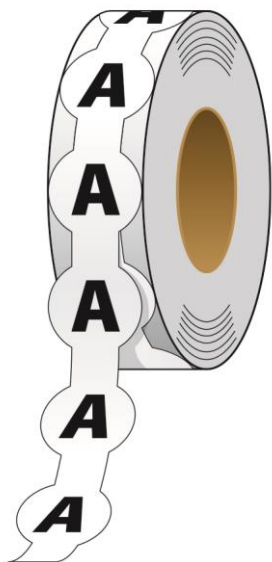


Stand-up Pouch



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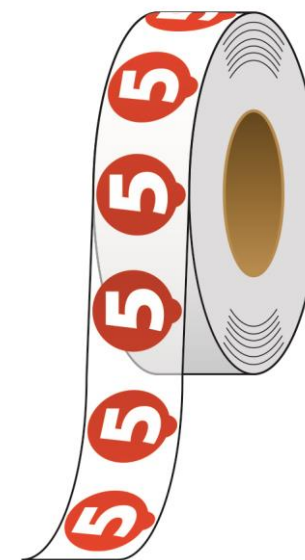
Lidding can be carried out in different ways



Daisy chain



Cut and stack



Continuous roll

# Flexible Packaging – an introduction

What is flexible packaging used for?

## Types

- Frozen food packs in supermarkets
- Candy (Sweet) wrappers
- Snack packs
- Garden center and horticultural packs
- DIY packs
- Agricultural packs
- Stand-up pouches
- Dry food packs
- Bread wrappers

## Applications

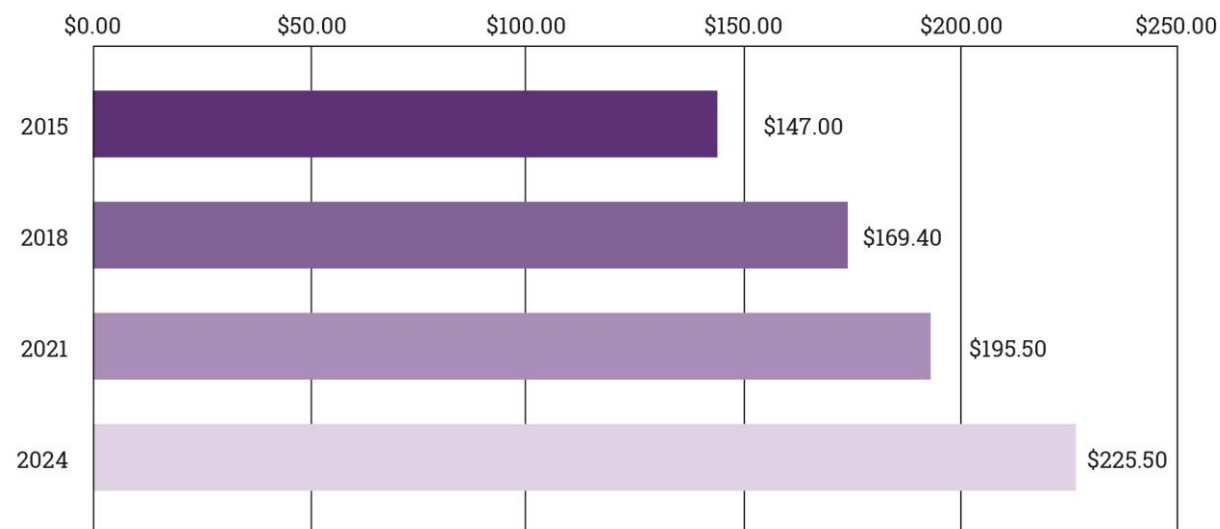
- Frozen vegetables, meat, fish, poultry, ready meals, etc.
- Mars, Twix, chocolate, etc., wrappers
- Cookies (biscuits), chips (crisps), nuts, savouries
- Fertilizer, bark, grass seed, lawn care
- Wallpaper paste, plaster, etc.
- Livestock feeds, pesticides, etc.
- Washing-up liquids, laundry detergents, etc.
- Soup, coffee, sauce and food mixes
- Bread, buns, cakes, etc



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## How big is the market?

VALUE OF GLOBAL FLEXIBLE PACKAGING MARKET  
2015 TO 2024 BY VALUE IN USD BILLION





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**Is digital printing having an impact?**

“Valued at \$18.6 billion in 2019, the digital print for packaging segment is expected to grow to \$31.6 billion by 2024, at an impressive compound annual growth rate of 11.1%.”

*Smithers Pira. July 2019*

# Flexible Packaging – an introduction

## Benefits and advantages of flexible packaging

- Flexible packaging materials are light in weight , easily transported and handled, easy to open, store and reseal
- They offer the lowest percentage of waste of almost all packaging materials
- Flexible packaging is widely converted into packaging for many diverse end-product categories – bags, sacks, sachets, pouches, wrappers, etc.
- It offers a variety of re-closure and dispensing options
- Flexible packaging requires less energy to manufacture and to transport than most other forms of packaging, and generates smaller quantities of greenhouse gases on its way to market
- High quality printing creates excellent shelf appeal and enables visibility of pack contents
- Flexible packaging offers consumer convenience
- Food packs indicate and maintain freshness, extending the shelf life of many products, especially food
- Flexible packaging provides an efficient product to pack ratio, uses less energy and creates fewer emissions



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## WHERE ARE THE OPPORTUNITIES IN FLEXIBLE PACKAGING

- Overall, reduction in volumes and print runs (and margins) tend to favor narrow and mid web presses vs. wide web machines
- Servo technology and new control systems on INLINE presses offer great possibilities to combine printing of PS labels, unsupported films, and folding cartons.
- Narrower web flexo pre-press cost and quality compete with the more expensive wide web solutions
- Combination presses (flexo, offset, gravure) and new hybrid solutions, plus the possibility to add finishing processes like inline lamination or cold foil raise the spectrum of printable products
- Fast delivery of special jobs as a way to increase margins and beat the competition



# Flexible Packaging – an introduction

## CHALLENGES FOR LABEL AND FLEXIBLE PACKAGING PRINTERS

- Package printing represents a chance for PS label converters to widen their product portfolio, in direct competition with CI flexo, gravure and sheet-feed offset printers.
- At the same time, wide web printers can take advantage of flexible INLINE narrow web presses, to compete on short runs.
- A wider understanding of the new technologies will help printers when approaching a different market segment

