



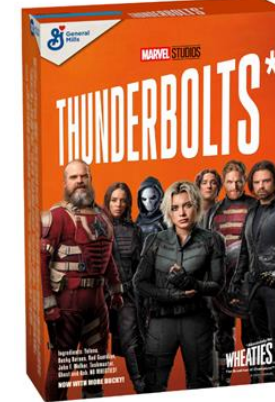
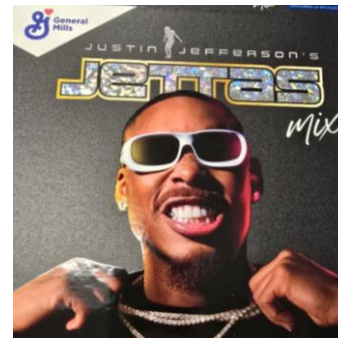
Access to Packaging



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Introduction - Chris Dumont



4AP Food Academy

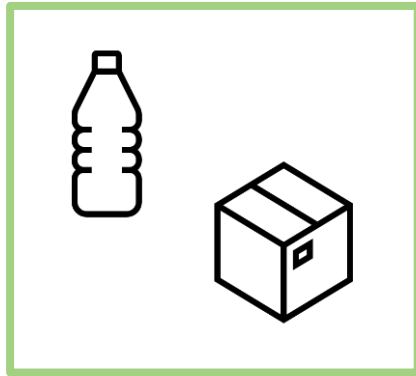


Access to Packaging



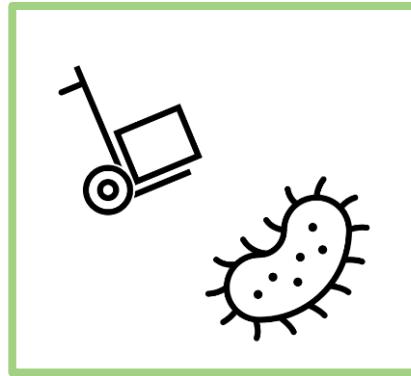
Functions of Packaging

1



Contain

2



Protect

3



Communicate

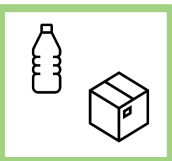


Packaging Function: Contain

Provides consistent unit size of product

Groups product into a saleable unit

Makes product transferable





Functional Layers of Packaging

Functional Packaging Systems:

Typically consist of multiple packaging elements that serve different functions

Goal is to provide proper product protection, allow products to get to stores/consumers & market products

Common functional layers include primary, secondary, tertiary & unitization

Systems can vary depending on the needs of the product



Functional Layers of Packaging

Functional Packaging System Example:



Product



Primary



Secondary



Tertiary



Unitized



Primary Packaging



- 1 Direct contact with the product
- 2 Provides product protection
- 3 Material selection dependent on product protection needs
- 4 Can be sale unit or contained within additional packaging



Secondary Packaging

- 1 Commonly the sale unit on shelf
- 2 Provides graphics/communication to customers at point of purchase
- 3 Groups collections of primary packaging
- 4 Physical structure of package offering
- 5 Material / design influenced by product & primary package needs





Tertiary Packaging

- 1 Groups collections of secondary packaging
- 2 Creates unit for distribution
- 3 Provides strength to survive the various distribution legs / modes
- 4 Can also be used as a display unit on shelf to help reduce retailer labor





Types of Packaging

Fiber:



Resin:



Glass/ Metal:



Apply the Learning

Refer to your Packaging worksheet



Contain

BRONZE	SILVER	GOLD	PLATINUM
Sales Unit Would your current package work in retail?	Case What is your case count (units per case)? What is your case size (dimensions)? What does your primary package look like in a case?	Pallet Is your product transported on a standard shipping pallet? If not, will it fit on pallet and will it function on a pallet?	Pallet Efficiency Is your package optimized for full, efficient pallets? Can it be stacked 2 high? 3 high?



Packaging Function: Protect

Product Failure Modes:



Texture Changes



Flavor Loss



Off Flavors



Nutrition Loss



Breakage



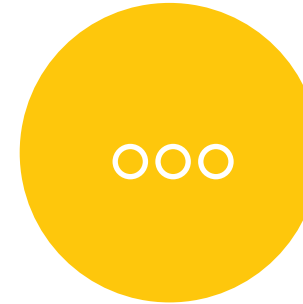
Yeast / Mold



Pathogens



Foreign Material



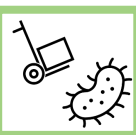
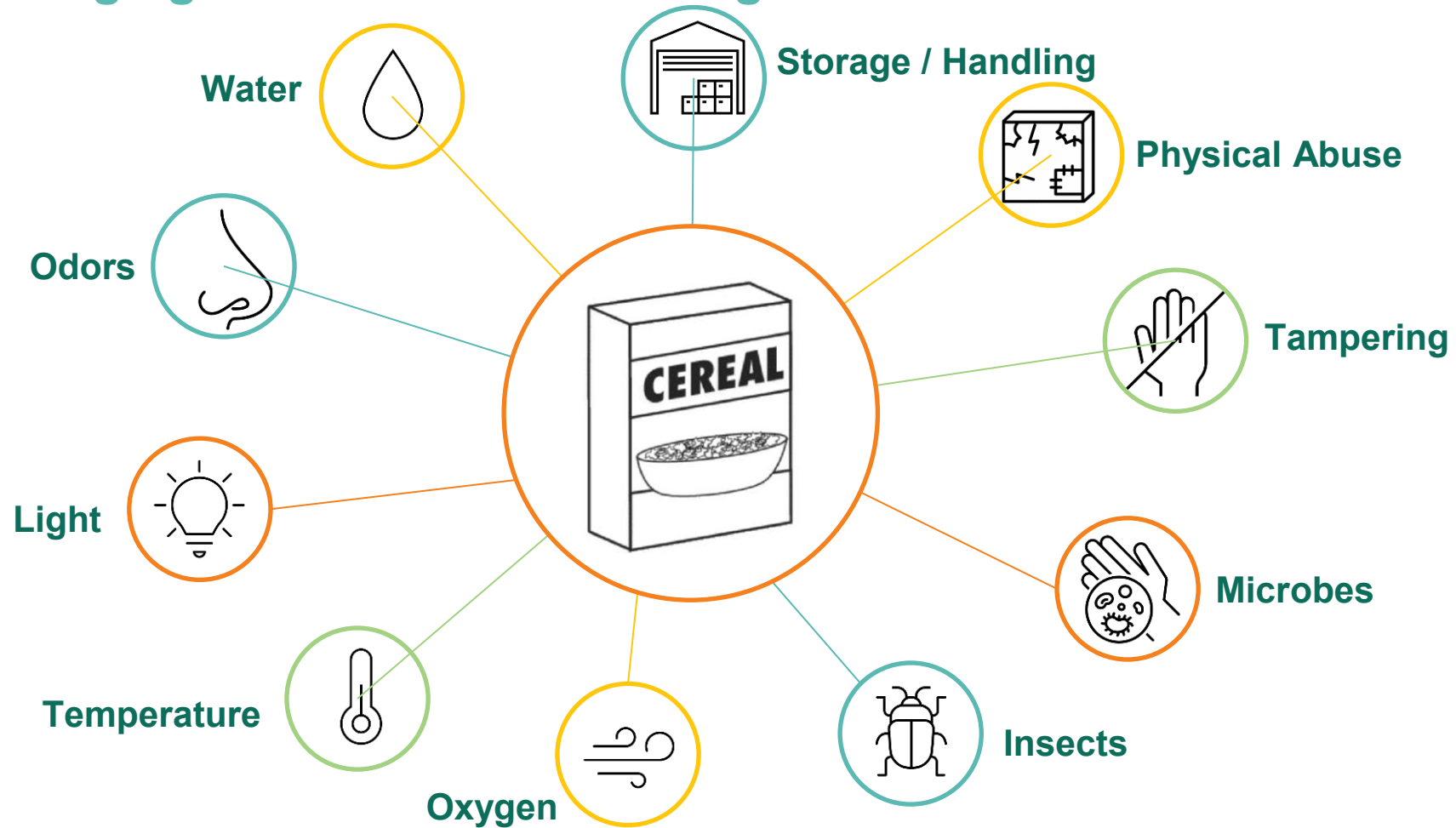
Etc.





Packaging Function: Protect

Packaging Provides Protection Against:



Apply the Learning

Refer to your Packaging worksheet



Protect

BRONZE	SILVER	GOLD	PLATINUM
<p>What will cause your product to lose its quality (light sensitive, humidity, etc)?</p> <p>Can your product survive distribution & transportation (self distribution vs distributor)?</p> <p>Is it temperature sensitive? What temperature state does your product need?</p> <p>Do you know your shelf life?</p>	<p>Does your packaging protect your product for a minimum of 3 months?</p>	<p>Does your packaging protect your product for 3-6 months?</p>	<p>Have you established when your product fails? Can the packaging protect your product for that length of time?</p>

Packaging Function: Communicate



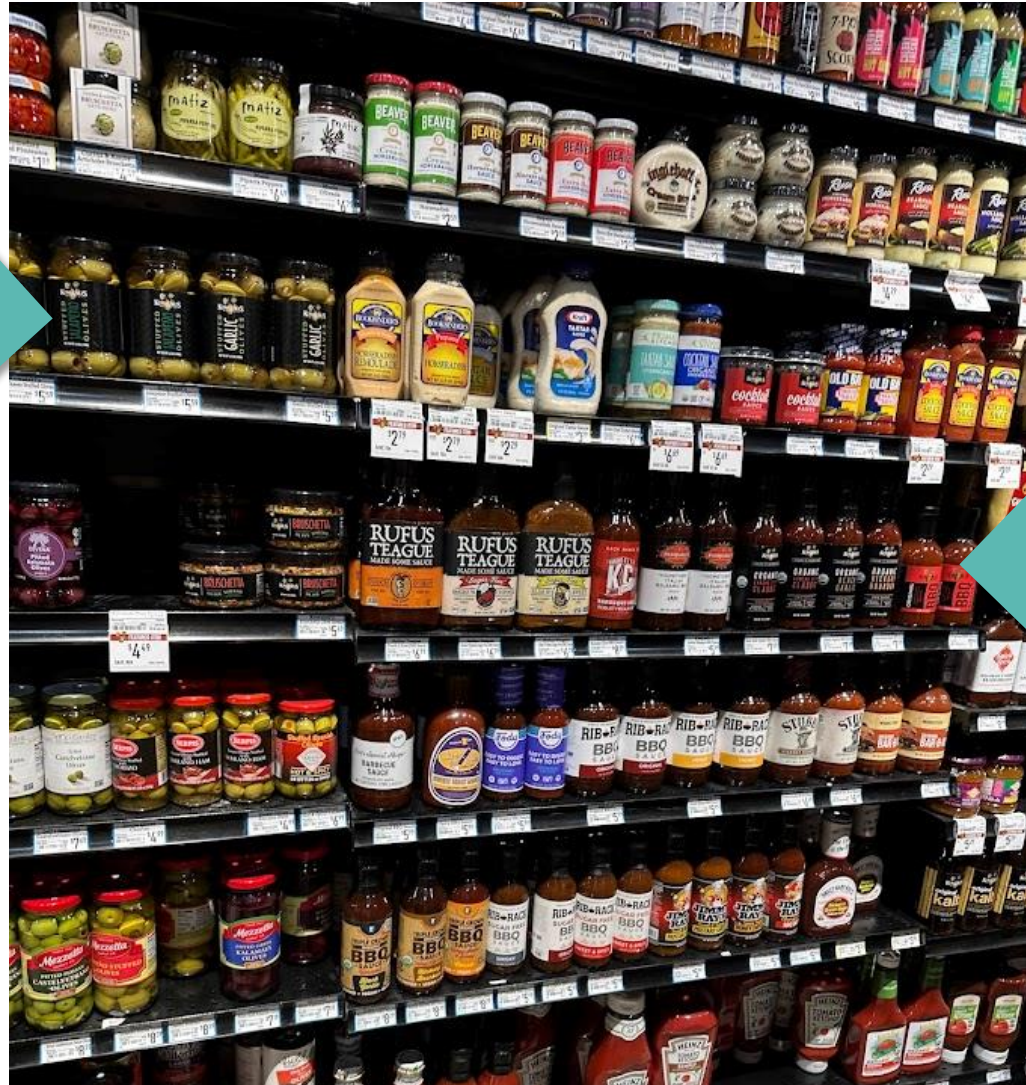
- 1 Product Identification
- 2 Brand Messaging
- 3 Nutritional Information
- 4 Use By & Product Traceability Information
- 5 Opportunity to Influence Consumer Purchasing





Packaging Function: Communicate

Picture your
product on
the shelf



Can you win in
5 seconds?

Think:
Color, shape, numbers, words.





Consumer Processing Order



058223172535940812
117450284102701938

word (wûrd) *n.* *Abbr. wd.* **1.** A sound or a combination of sounds, or its representation in writing or printing, that symbolizes and communicates a meaning and may consist of a single morpheme or of a combination of morphemes. **2.** Something said;



Understanding Category Conventions

Colors:

What colors dominate the category? What do the colors convey? Which brands “own” a color? Is anyone using color in an interesting way to break through?

Shapes/Symbols:

What are the dominant packaging structures in the category? Do different structures mean different things?

What shapes are “standard” in the packaging design? Are any competitors using unique shapes to break through?

What logos, symbols and/or imagery do you see?

Numbers:

What is the range of prices that you see in the category? What cues are used to communicate premium? Cues for value?

Are any competitors breaking direct comparison to price up? What are the different sizes?

Words:

How does the category communicate the Job to Be Done for the Consumer?

Are any specific packages communicating how they are different or better than the competition?



Packaging Function: Communicate

Required Labeling Elements

**Product
Information
(Name &
Code)**

**Contents
(Net Weight,
count, etc.)**

**Nutritional
Information**

**Distributed
by
Information**

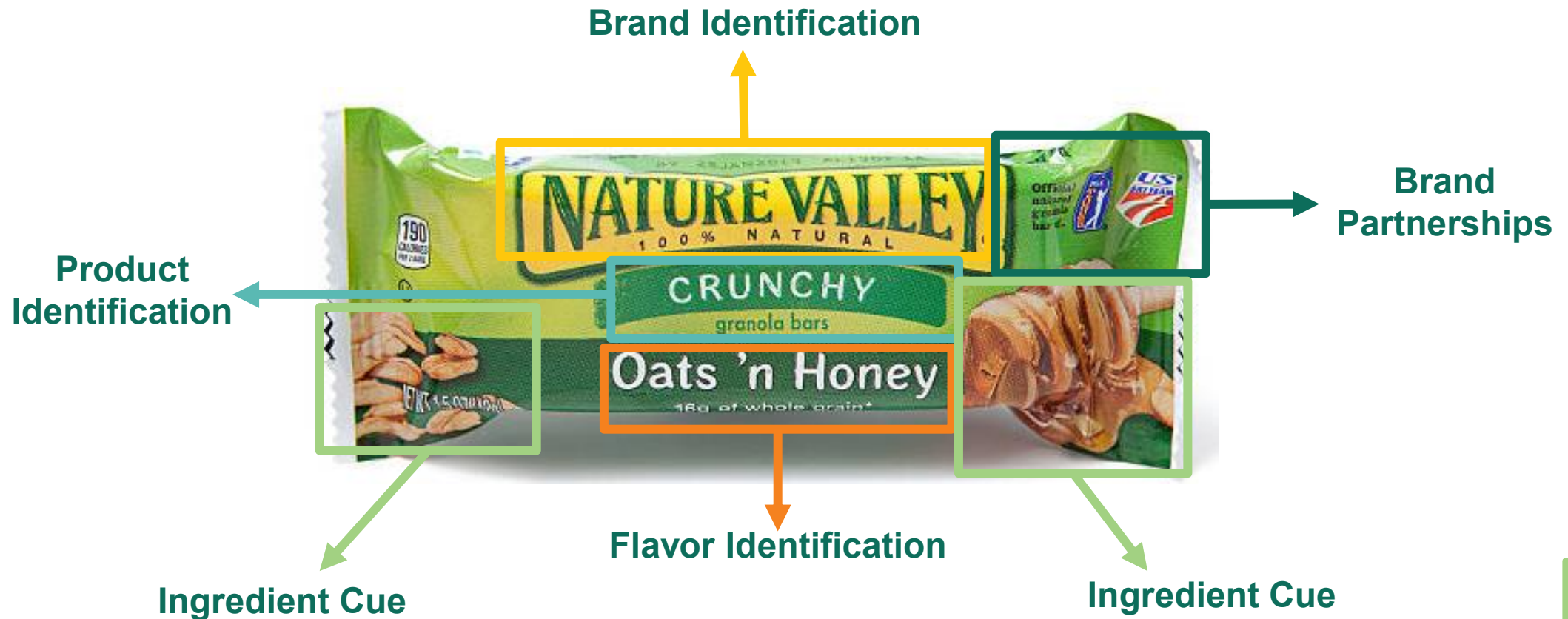
**Date/Lot
Tracking**

Communication on Packaging Influences Consumer Purchases!



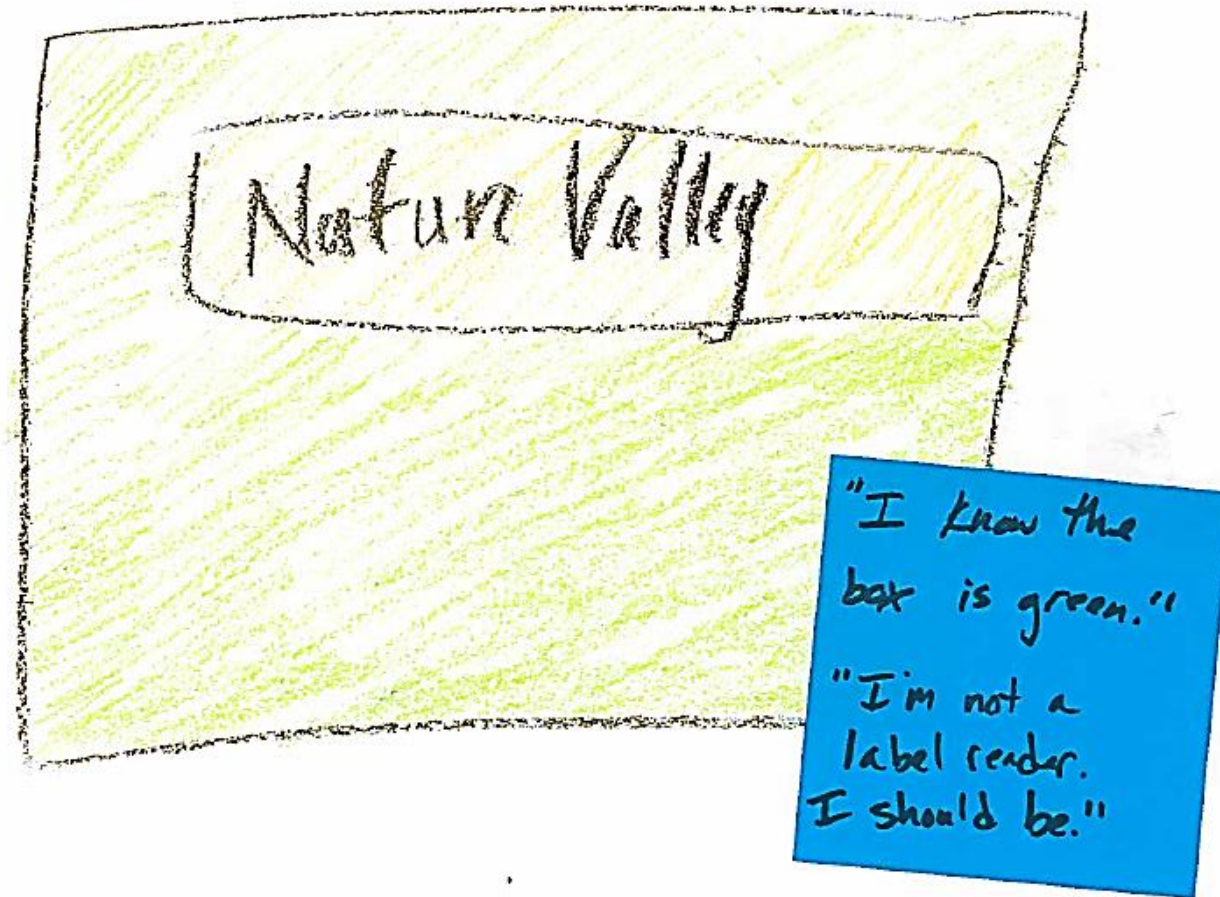
Packaging Function: Communicate

Product Identification & Brand Messaging





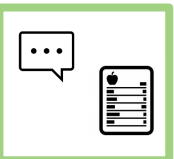
Consumers Prioritize Color / Logos





Packaging Function: Communicate

Product Identification & Brand Messaging





Packaging Function: Communicate

Nutritional Information



1

Identifies ingredients within products

2

Identifies any product allergens

3

Identifies nutritional implications of the product

4

Allows consumers to make purchasing decisions based on dietary needs





Packaging Function: Communicate

Use By & Product Traceability



- 1 Signifies consumption window to ensure highest quality product
- 2 Identifies production facility, production date & time, production line, etc.
- 3 Allows the product to be traced if there are any concerns



Apply the Learning

Refer to your Packaging worksheet



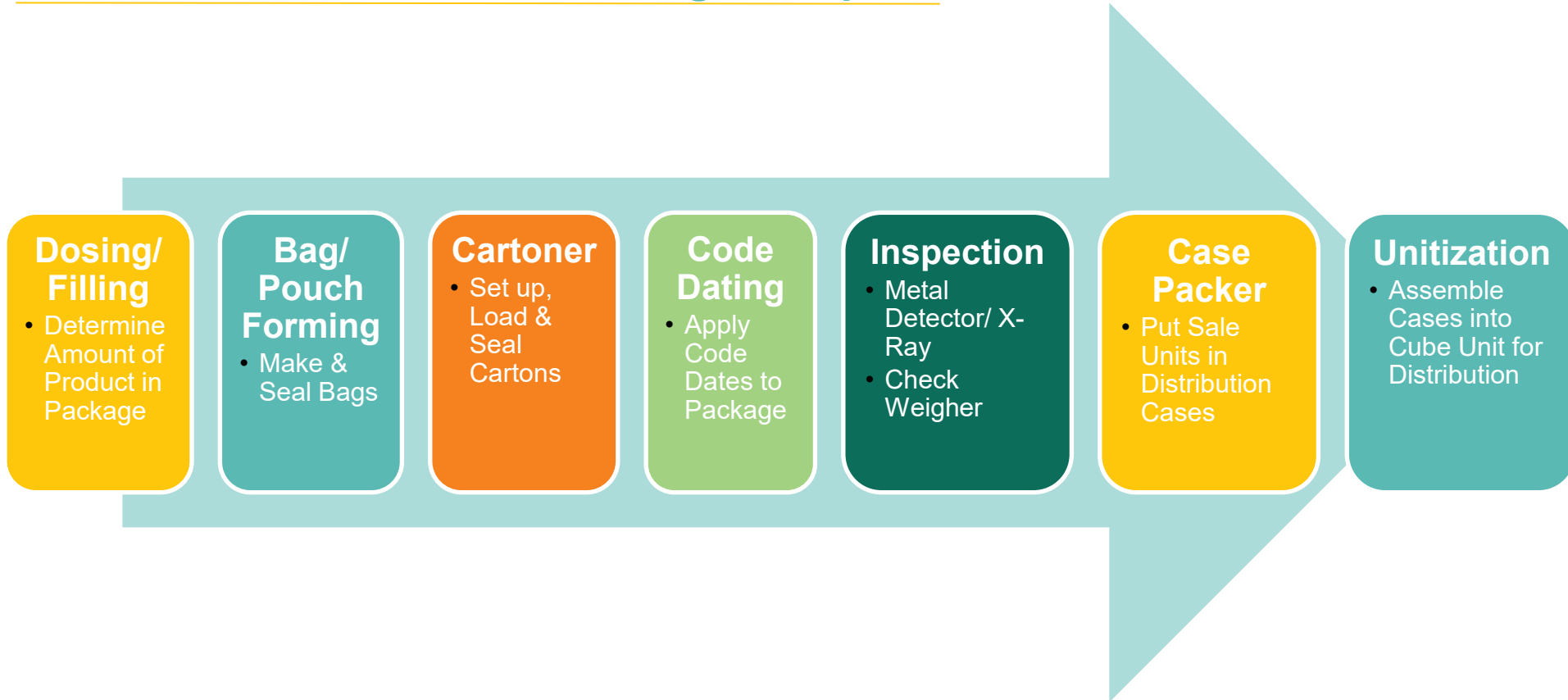
Communicate

BRONZE	SILVER	GOLD	PLATINUM
<p>Does your package communicate your brand and what is unique about your product?</p> <p>Are the instructions clear?</p> <p>Does it contain the necessary labeling requirements?</p>	<p>Does your packaging communicate product identification and brand messaging (ingredient cue, product and flavor identification, product benefit, etc)?</p> <p>Will your product enter interstate commerce? If so, does your packaging meet FDA labeling requirements (net weight, product claims, UPC codes, etc)</p>		<p>How can you <i>optimize</i> your brand or packaging communication?</p>



Food Manufacturing Equipment

Food Production / Manufacturing Example:





Food Packaging Equipment

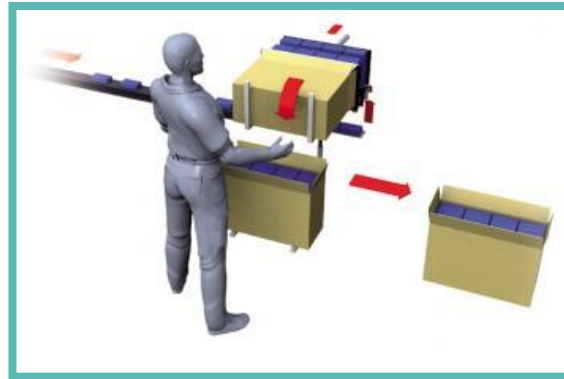
Variations in Automation:

Automatic



- Minimal Human Interaction
- Typically Faster Speeds / Higher Volumes

Semi-Automatic



- Hybrid Human / Equipment Interaction
- Medium Speed / Volume

Hand Packing



- Human Interaction for forming & filling packaging
- Lower speed / Volume



Categorization

Company Attributes	Bronze	Silver	Gold	Platinum
Time in Business	Pre-revenue	< 1 year	1 - 3 years	3+ years
Commitment	Hobby	Lifestyle Business	Actively Growing	All in/Exit
Sales	\$0 - \$50k	\$50k - \$250k	\$250k - \$500k	\$500k - \$1M
Product/Package	Prototype +	Working Standard	Gold Standard	Gold Standard +
Manufacturing	Cottage Food License @ home/Shared Kitchen	Commercial Kitchen	Commerical kitchens or small/mid stage facility	Co-manufacture or Self Manufacture
Staffing	Solo	Part Time Employees	1 - 3 Additional Staff	Team
Funding	Self Funded	\$50k	\$50k - \$250k	\$250k+
Channel/ Distribution	Farmer's Market/Pre-Retail(N/A)	Retail/ Local Distributor(s)	Multiple Stores/ Local and Regional Distributors	Multiple Channels/ Local, Regional and National Distributors
Scale	Local (<20 stores)	Local -> Regional (20-100 stores)	Regional -> National (100-500+ stores)	National -> International (1000+ stores)
Units	5 units per store per week 100 units per week total Turns target: upper 1/3 of category	5 Units per store per week 500 units per week total Turns target: upper 1/3 of category	5 units per store per week 2500 units per week total Turns target: upper 1/3 of category	5 units per store per week 5000 units per week total Turns target: upper 1/3 of category

Entrepreneur options – Reliable Providers - Packaging



	Bronze	Silver	Gold	Platinum
Pack Method	<ul style="list-style-type: none"><input type="checkbox"/> Hand Pack<input type="checkbox"/> Table Top	<ul style="list-style-type: none"><input type="checkbox"/> Hand Pack<input type="checkbox"/> Multi Station	<ul style="list-style-type: none"><input type="checkbox"/> Semi Automatic Form/Fill Seal	<ul style="list-style-type: none"><input type="checkbox"/> Semi Automatic Form/Fill Seal<input type="checkbox"/> Contract Packaging Facility
Materials	<ul style="list-style-type: none"><input type="checkbox"/> Vendor Standard Materials & Designs<input type="checkbox"/> Preformed Unprinted Poly Bags,<input type="checkbox"/> Pre-glued Paperboard Cartons, plastic tubs, plastic and glass jars<input type="checkbox"/> Unprinted crack and peel labels<input type="checkbox"/> Standard Regular Slotted corrugated case<input type="checkbox"/> Sealing Tape	<ul style="list-style-type: none"><input type="checkbox"/> Vendor Standard Materials & Designs<input type="checkbox"/> Preformed Unprinted Poly Bags,<input type="checkbox"/> Pre-glued Paperboard Cartons, plastic tubs, plastic and glass jars<input type="checkbox"/> Pre-printed crack and peel labels<input type="checkbox"/> Standard Regular Slotted corrugated case<input type="checkbox"/> Sealing Tape	<ul style="list-style-type: none"><input type="checkbox"/> Vendor stock sizes, designs & grades<input type="checkbox"/> Preformed Printed Pouches,<input type="checkbox"/> Pre-glued Paperboard Cartons, plastic tubs, plastic and glass jars<input type="checkbox"/> Standard Regular Slotted corrugated case<input type="checkbox"/> Hot Melt Adhesives	<ul style="list-style-type: none"><input type="checkbox"/> Fully Optimized design designs, customized dimensions and material grades<input type="checkbox"/> Preformed Printed Pouches or Printed roll stock<input type="checkbox"/> Pre-glued Paperboard Cartons, plastic tubs, plastic and glass jars<input type="checkbox"/> Standard Regular Slotted corrugated case<input type="checkbox"/> Pallet & Stretch Wrap

Entrepreneur options – Reliable Providers - Packaging



	Bronze	Silver	Gold	Platinum
Graphic Design	<input type="checkbox"/> Self design	<input type="checkbox"/> <i>Professional Service</i>	<input type="checkbox"/> Professional	<input type="checkbox"/> Professional
Equipment	<input type="checkbox"/> Weigh Scale <input type="checkbox"/> Impulse Bag <input type="checkbox"/> Sealer/Vacuum Sealer <input type="checkbox"/> Tape Dispenser <input type="checkbox"/> Hot Melt Glue Gun <input type="checkbox"/> Ink Jet Printer	<input type="checkbox"/> Weigh Scale <input type="checkbox"/> Impulse Bag <input type="checkbox"/> Sealer/Vacuum Sealer <input type="checkbox"/> Tape Dispenser <input type="checkbox"/> Hot Melt Glue Gun <input type="checkbox"/> Ink Jet Printer	<input type="checkbox"/> Weigh Scale <input type="checkbox"/> Semi Automatic <input type="checkbox"/> Form/Fill and Seal <input type="checkbox"/> Equipment <input type="checkbox"/> Semi Automatic Case <input type="checkbox"/> Packer <input type="checkbox"/> Hot Melt Glue System	<input type="checkbox"/> Weigh Scale <input type="checkbox"/> Semi Automatic <input type="checkbox"/> Form/Fill and Seal <input type="checkbox"/> Equipment <input type="checkbox"/> Semi Automatic Case <input type="checkbox"/> Packer <input type="checkbox"/> Hot Melt Glue system <input type="checkbox"/> Automatic Case Code <input type="checkbox"/> Date
Sources	<input type="checkbox"/> U-Line <input type="checkbox"/> Amazon <input type="checkbox"/> Office Depot	<input type="checkbox"/> <i>Local Small Printer</i> <input type="checkbox"/> U-Line <input type="checkbox"/> Amazon <input type="checkbox"/> Office Depot	<input type="checkbox"/> Local Small Printer <input type="checkbox"/> U-Line <input type="checkbox"/> Amazon <input type="checkbox"/> Office Depot <input type="checkbox"/> <i>Used equipment brokers</i>	<input type="checkbox"/> <i>Local Medium Scale Printer</i> <input type="checkbox"/> <i>Local Contract Packaging Company</i> <input type="checkbox"/> U-Line <input type="checkbox"/> Amazon <input type="checkbox"/> Office Depot



Glossary

- ❑ **Sales Unit-** the individual package sold in retail locations, can be different depending on channel needs (traditional grocery, convenience, club, or food service)
- ❑ **Case-** Corrugated box intended to contain multiple individual sales unit packages- Often case count will be dictated by stores and dependent upon expected units sold per week. Large case counts for fast-selling items and smaller for slower-turning items
- ❑ **Primary-** The part of the package that is in direct contact with the product
- ❑ **Secondary-** Provides protection when needed for the primary package- Cereal carton surrounds the cereal bag protecting the product
- ❑ **Tertiary-** Provides unitization to the individual primary and secondary packaging for protection through the distribution channels
- ❑ **Crack and Peel-** Pressure-sensitive labels with easy to peel die cut corners
- ❑ **FMOT-** First Moment of Truth- Ability of package to break through shelf clutter and be recognized by the consumer- Typically less than 3-5 seconds of scan time by prospective buyers
- ❑ **Form/Fill Equipment-** Mechanical devices used to form, fill, and seal the package Can vary in complexity, speed, and cost depending on package style and product. Essential as sales volumes increase



Glossary

- ❑ **Retail Ready Packaging-** Case/Tray designed to be opened and placed directly on the shelf- often requested by retailers to reduce in-store labor
- ❑ **Display cases-** Promotional cases that are used by retailers to feature products, typically at end of shelves. Allows products to be placed in complementary aisles or categories
- ❑ **Minimum quantity production runs-** Sometimes required by packaging material vendors- increases total spend for materials and risks of excessive inventories
- ❑ **Shelf Life-** length of time that product quality remains acceptable
- ❑ **BIUB-** Best if used by date- frequently used to inform consumers of ultimate product quality. Also used by retailers to manage shelf stock
- ❑ **Corrugated-** Fiber structure consisting of an outer and inner liner and a middle fluted structure to provide strength- most often used for shipping cases
- ❑ **Hot Melt-** Adhesive used for sealing fiber packaging, usually dispensed with a hand-held glue gun
- ❑ **Rigid Packaging-** Cartons, cases, jars, tubs, and clamshell cartons, can be fiber-based, poly structures, metal or glass
- ❑ **Flexible Packaging-** Generally plastic or paper bags or pouches

Glossary



- ❑ **SUP-** Stand Up Pouches-Flexible pouches that have a gusseted bottom enabling the pouch to stand up on shelves
- ❑ **Zipper Closure-** Reclose feature that enables the pouch to be opened and closed repeatedly-Can add significant costs to the package but is often considered a must for consumers
- ❑ **Universal Design-** Package designs intended to be easy to use by individuals of all abilities. Easy-to-open and dispense designs or easy-to-follow preparation instructions can often result in repeat purchases
- ❑ **The Packaging Lab-** Full service flexible pouch printer focused on small production runs with quick turnaround times. A good option for prototype pouch samples <https://www.thepkglab.com/>
- ❑ **Institute of Packaging Professionals (IoPP)** Industry experts with a vast packaging knowledge base. Source of the definitive resource of packaging textbook [Fundamentals of Packaging Technology](#)

Words of Wisdom Packaging



FOUNDER ADVICE

- ☐ At Farmer's Market you can get away with less sophisticated packaging, but once you hit retail the packaged product needs to stand on its own.
- ☐ Packaging is the first moment of truth. If consumers can not find it on the shelf it doesn't matter what it tasted like.
- ☐ Think of consumer purchasing behavior as a "drive by" experience. Purchasing decisions are made quickly in retail outlets. You get 5 seconds from 5 feet to tell your story.
- ☐ Consumers look at packaging in this order.
 - Color
 - Shape
 - Numbers
 - Words
- ☐ Packaging performs many functions.....



Decision Considerations Packaging

- ❑ Packaging has three primary functions:
 - Containment
 - Protection
 - Communication
- ❑ Know your product shelf life and what drives quality loss
- ❑ Distribution and handling practices will vary by channel (retail, club store, convenience, refrigerated, shelf stable, etc.) and will change as sales quantities increase.
- ❑ Package Graphic Design drives sales. Make sure your package design stands out on the shelf.
- ❑ Smart package designs utilize the least amount of packaging materials needed to provide enough protection throughout the distribution and use cycle.
- ❑ Package material can be equal to or exceed ingredients costs.



Decision Considerations Packaging

- ❑ Use standard sizes, shapes, and materials, when possible, to reduce cost and lead times
- ❑ Seek materials that are recyclable or have recycled content in their makeup
- ❑ Seek material vendors that specialize in small order quantities and offer design services and technical support
- ❑ Package Graphic Design drives sales. Make sure your package designs stand out on the shelf. Utilize Graphic Designers early in the process
- ❑ The Graphic Design process can be long and may require multiple revisions- these changes can take weeks to finalize.

Homework



1. Sign up for Office Hours for Thursday 1:00 – 4:00 p.m., Friday 9:00 – 12:00 p.m.
2. If your product can work in a pouch or stand-up pouch, go to www.thepkglab.com and order a free sample pack

See you later this week at Office Hours!