

STAMPING FOIL

PROTOTYPE

YOU ARE HERE ●

SECURITY SEAL

PKG

SUPPLY CHAIN

POINT OF PURCHASE

ENVIRONMENTAL IMPACT

CUSTOM INSERT

CONVENIENCE

TUCK TOP BOX

BASICS

Package design steps

Concept → Prototype → Dieline → Die Making → Bindery and finishing

Production

Package Design requires an understanding of marketing, client needs, industry trends, and a number of different production processes. Often the designer will work with a print house which subtracts to trade production houses to for die cutting, stamping, and other services.

In our presentation from Stephanie — who does production co-ordination at a Trade Finisher that specializes in packaging items — we learned about the process of **prototyping** and producing packaging items like boxes and inserts. Prototyping is done on a **plotter** and then a steel rule die is made for the final piece.

Trends

Like any industry, packaging has trends. For example, silver holographic foil is popular right now. Being on top of trends in your industry is important.

According to Hemlock Printers, other trends in 2021 included:

- Smaller runs
- Direct mail campaigns
- Real estate advertising and takeaways

This year several industry professional have visited our class and all have agreed that packaging and die work is a growing market for those of you interested in print design

Dies

Dies are used to cut and form paper.

Stamping dies are used to emboss or deboss paper, often using a **foil**. When there is not foil, the stamp creates a blind finish.

Dies are a fixed cost (so are plates for offset printing) while paper isn't, for example. Clients producing a large number of items will have different costing issues than clients doing a limited run. For example, a small run

might make use of handwork because it does not make sense to spend time setting it up for automation.

Creating a **custom die** costs more than a **standing die**, but it is a one-time cost. Clients can keep dies, but be aware of storage. Binderies throw out unclaimed dies after a couple of years.

Counters for stamping dies are an additional cost, but are recommended for a clean finish on emboss/deboss.

Steel rule dies are for cutting and creasing

Copper dies are for foiling and embossing.

Brass is good for **multi-level dies** while copper is good for single layer dies.

Costing for Packaging

Factors influencing the cost of producing a package include:

- Whether the box folds flat
- Type of glue used
- Number/complexity/custom requirements of dies
- Handwork versus Machine (automated) work required
- Printing costs like ink and stock

Some Types of Boxes

For costing, it's cheaper if boxes can **fold flat** for folding and shipping so folding cartons are good.

Box designs are not patented or copyrighted.

Alternatively a **rigid box** is popular and appealing (but more expensive). A rigid box is made with millboard covered in paper, does not collapse flat. These are not available locally. Boxes can be glued or glueless.

Tuck top boxes can have flaps on both top and bottom: simple and inexpensive.

Sleeves are another option. They can hold together a simple box like a **telescope box**.

Custom inserts can be added to accommodate a variety of sized contents within the same size of boxes. Inserts

don't need to have glue. Inserts protect items and can add to their presentation appeal, for example by tilting the angle of an item in a box.

Some boxes use **windows** to show the product inside.

Paper boxes without mixed materials are more environmentally friendly (easier to recycle).

Other considerations

Stock is important to choose early on so the box design has the right fit.

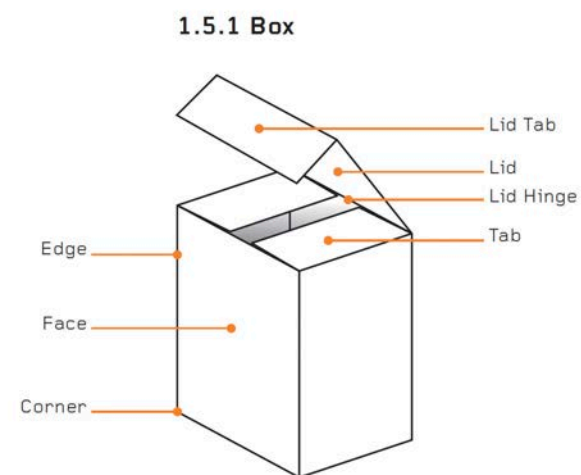
If there is a **window**, keep flaps short so they don't show in window. Longer flaps on the bottom (away from the window) will increase **package stability**.

Shelf display is an important consideration; think about the end user.

Vector is important for making dielines, they use CimEx in house. Illustrator is a good option for protoypers.

A natural **glue** — animal or plant — will break down naturally as opposed to plastic. Plastic glue is stronger and lasts longer. As Irina pointed out: think about the big picture to reduce waste.

Handwork is used for short runs because set up time on machine is expensive. On larger runs it's worth the cost of setting up the machine to replace handwork.



BEFORE YOU PRINT: THE CHECKLIST

InDesign or Illustrator Document

- ☞ All bleeds are set
- ☞ All images are cropped correctly
- ☞ Nothing important (text or image) is sitting on, or right next to, gutter or trim line
- ☞ None of the linked images are stretched to over 100% of their size
- ☞ No text or images are stretched
- ☞ Page numbers are correct

Attachments

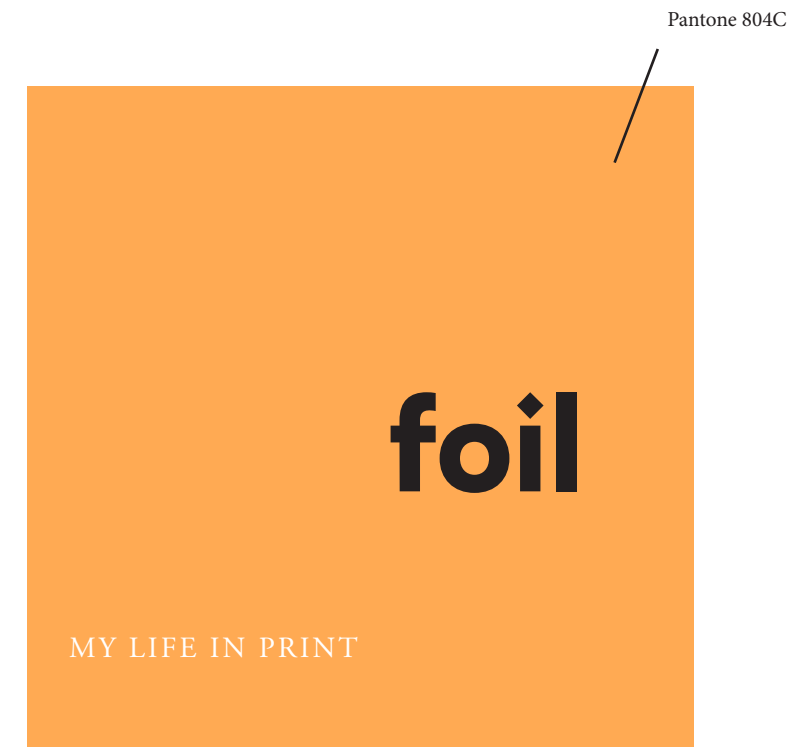
- ✦ All attached images are in tif or eps file formats
- ✦ Inks are set to CMYK, Greyscale OR Spot colours (PMS, TOYO)
- ✦ Resolution of all digital/digitized images is set to a minimum of 300 dpi
- ✦ Images are the correct resolution

Packaging InDesign file for press

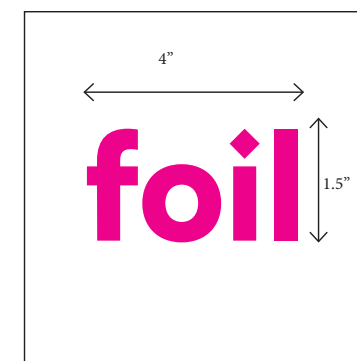
- ☞ All linked images are included
- ☞ All fonts used are included

< From "STRUCTURAL PACKAGING DESIGN YOUR OWN BOXES AND 3-D FORMS" by Paul Jackson

Sample quote request



^ proposed design



Other Factors

A quote request like this would also include labels, type of vinyl, and inner sleeve. This is a simplified quote requests just looking at the jacket/sleeve of an LP.

Hi John

I am looking for a quote request for an LP sleeve

Project name: "My Life in Print"

Dieline: 11183

We will need a custom die for some foiled text, measurements are included. We're looking for a gloss black foil.

Quantity: 500

Ink: 2/O (1 PMS + matte varnish)

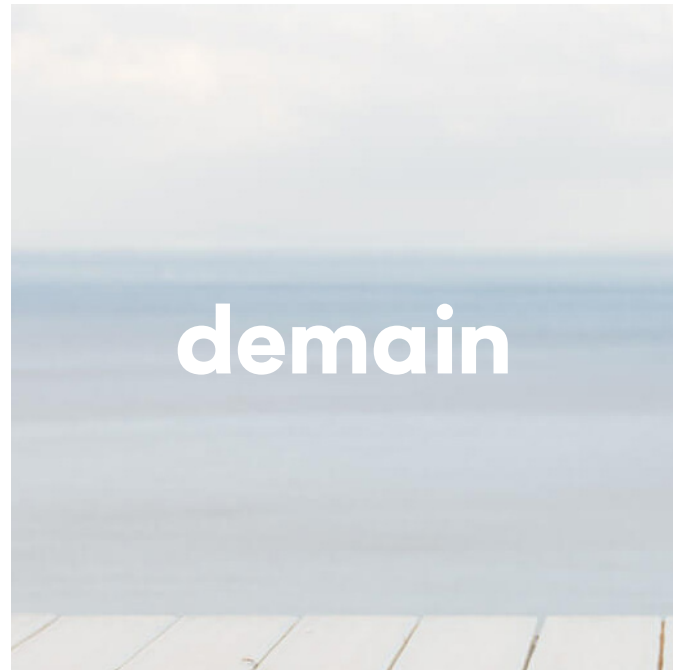
Paper stock: 300gsm (16pt.) White/White Carton

Shipping address: 113 Design Street, Vancouver, Canada

Date when items must be delivered by: September 3, 2021

Files supplied: PDFs

Sample quote request



^ proposed design

Hi Iris

I am looking for a quote request for a 12-inch vinyl record

Project name: "demain"

Dieline: I'm looking for a die for a 12-inch LP

Quantity: 1,000

Ink: 6/O (CMYK + matte varnish + spot gloss varnish)

Finishing: Shrink-wrapping

Paper stock: 350gsm (18-20pt.) White/White Carton

Shipping address: 226 Bindery Street, Vancouver, Canada

Date when items must be delivered by: September 3, 2021

Files supplied: InDesign files

Planning

Janet, a print rep from Hemlock printers spoke to our class this year. A print rep helps manages projects from printing to bindery, sometimes subcontracting other vendors. She acts as the point of contact between the designer and the printer and provides estimates as well.

Her key point:

“Creating a package takes time so when project planning, make sure you have planned with enough time.”

Quote requests go to people like Janet. They will often clarify confusing requests or make suggestions which might improve the quality of a project or lower its cost.

Quote requests

Quote requests are used to find out how much a project will cost. Budgeting quote requests are sometimes sent out early, often to feel out who will be a good printer to work with.

Be judicious when sending out requests. It takes time to produce them.

Print reps like simple language when working with new designers. Using professional terms can be confusing if they are used incorrectly. Don't feel bad about using plain language, it is much more professional to be clear than anything else.

Quote requests generally contain the following information:

- Project name
- A brief description of the project (e.g. a cookbook, a blister package)
- A dieline number or description. If you are writing to a plant which uses standing dies, use their number. If you don't know it, simply describe the item, e.g. a 12-inch LP jacket.

- Description of any custom dies required. Provide dimensions, since dies are costed according to size.
- Quantity to be produced
- Paper stock
- Ink to be used
- Finishing, such as laminates
- Shipping address
- Date when files will be delivered and when the final items must be delivered (make sure shipping is included in the estimate)
- Files supplied (InDesign, PDFs etc.) I recommend that new designers avoid submitting PDFs. This costs more, but the designer often has less responsibility for pre-production.

Marketing

Irina Kem is Director of Marketing at PackPro. She talked about the purpose of packaging and the process and life cycle of packaging.

She says: People are very aware of **Packaging Waste** now. Part of package design is helping clients make better choices for the environment with the goal of **reducing waste**.

The **big picture** is important. For example, packaging which protects food as it moves along the supply chain can prevent food waste.

One of her key points:

“A good food package designer understands food production, print production, marketing, and supply chain.”

The Packaging Process

Packaging must function or it fails.

Food packaging items run from **front-of-the-line to the end-of-the line**. Box vs bag is a question that involves things like weight and size for transportation (e.g. corrugated boxes, food trays, film — these involve many other companies). These choices affect cost and environmental impact.

Knowledge and a **creativity** are both required.

Bagging technology allows for **automation**. As companies get bigger, automation becomes more necessary to keep packaging affordable and time-efficiently. Irina's example was a company using hand-sealed Ziploc baggies for healthy school snacks as inefficient.

Combined materials: this can contaminate the recycling process. Consumers need prompts to know how to handle this at their end.

Innovation: always keep an eye on new, better options that fix current issues.

Professionalism tip: always look outside your industry to find out what other industries are working on.

Process Tips

- Start with product and purpose
- Keep your packaging life cycle in mind
- Securely protect your product
- Deliver productivity and performance
- Optimize your packaging (restart your process)



Food Packaging's Main Jobs

- **Protection** (eg tamper seals)
- **Brand awareness** (marketing tool)
- Capturing consumers' **attention** (marketing tool)
- **Information** like best before date, nutritional info, etc.

Environmental Considerations

- Be aware of the big picture: reducing overall waste
- **Food preservation** (supply chain > fridge) reduces waste
- Bags without boxes can reduce waste
- **Mixed material** packaging is harder to recycle
- Some items can't be recycled, like wax paper

20% to 40% of food produced is wasted and uneaten.

There are many factors causing this, but packaging can solve some of those items. **Consumer education** is key! Foods without packaging are thrown out uneaten more often than foods protected by packaging.

Irina suggests that we can use a variety of technologies to help educate consumers about reducing waste. E.g. augmented reality code or enriched info about product and packaging.

Packaging help reduce food waste:

- **Physical protection** to prevent damage
- **Barrier Protection** to delay spoilage
- **Security Features** to prevent tampering
- Properties to promote **shelf stability**
- More efficient **portion control**
- Packaging that communicates brand message, educates, and engages

< From "PACKAGING ESSENTIALS: 100 DESIGN PRINCIPLES FOR CREATING PACKAGES" by Candace Ellicott, Sarah Roncarelli

4 Key Packaging Points of Exchange

- E-commerce
- Materials, sourcing, and sustainability
- Automation
- Retail-ready (this includes larger containers which are easy for store to open and shelve)

5 Packaging Pointers

- Product and Purpose
- Packaging life cycle
- Product protection
- Productivity and performance
- Optimization of packaging

Food Packaging Trends

Driving Food Industry Growth

- Single serve
- Ready to eat
- Enhanced convenience
- Expanding consumer purchasing power
- Growing supply chain
- Demand for delivery services

Market constraints

- Volatile prices of raw material
- Uncertainty in global trade policies
- Government regulations
- High profile contamination recalls
- Consumer-driven environmental concerns

Irina's suggested resources:

Best Practices

www.packproinc.com/learn-packaging-best-practices/

Food Labelling

"I'd recommend starting with the Health Canada site and then possibly finding an expert in that area to consult with."

food-guide.canada.ca/en/healthy-eating-recommendations/using-food-labels/

www.canada.ca/en/services/health/food-labels.html

ic.gc.ca/eic/site/oca-bc.nsf/eng/ca03052.html

Reducing Waste

Whitepaper on Food Waste and Ways Packaging Can Reduce it: www.sonoco.com/sites/default/files/SON_Food-Waste-Whitepaper.pdf

NFS has a lot of resources on Food Safety: www.nsflearn.com/ca

Example of reducing waste in produce with packaging:

www.packagingdigest.com/food-packaging/peppers-protective-packaging-doesnt-deserve-packagingfail



^ From BEST PRACTICES FOR GRAPHIC DESIGNERS, Rockport Press

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