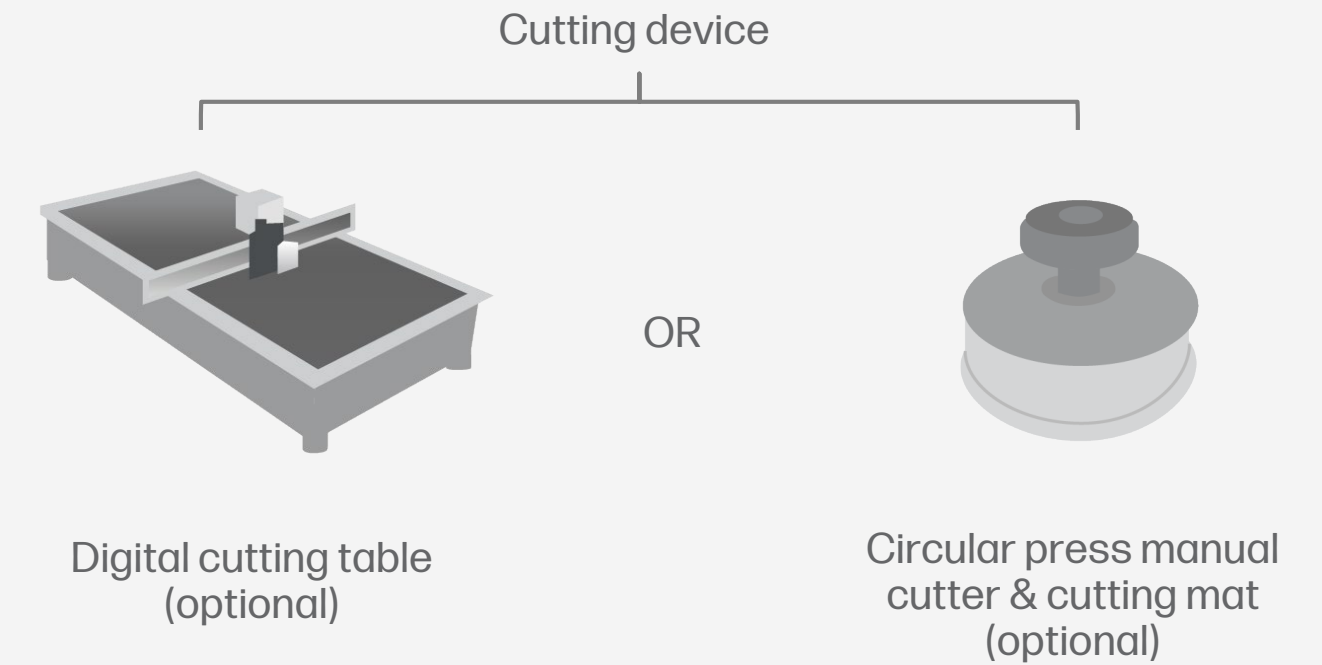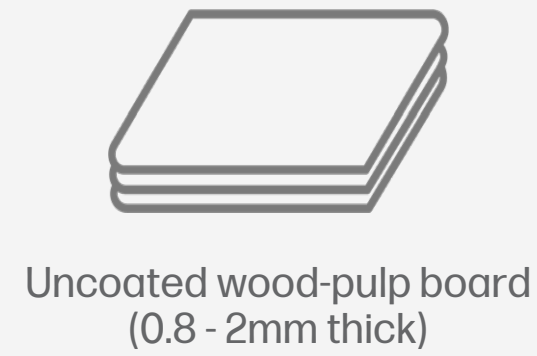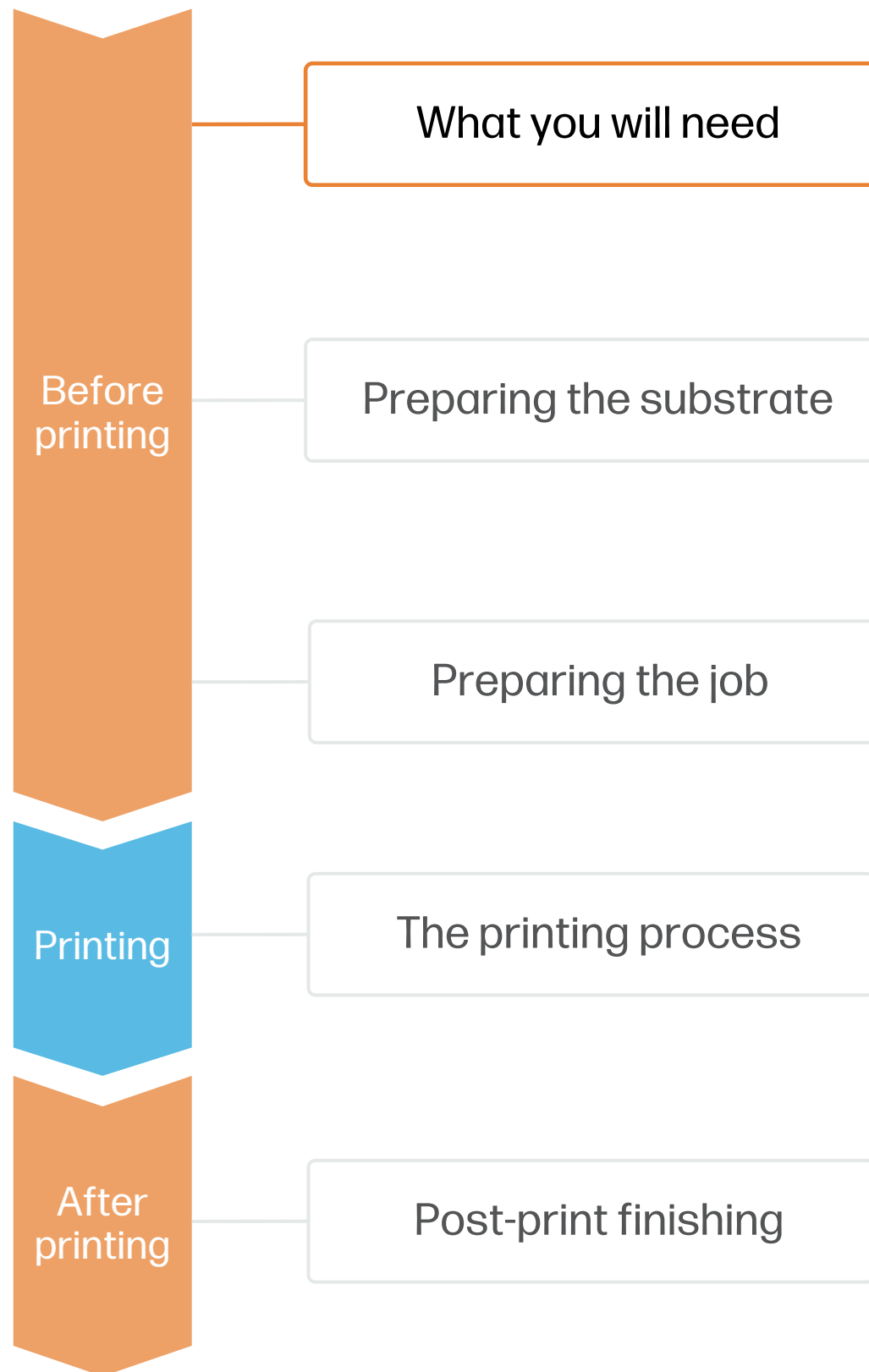# Beer mats with HP PageWideXL Pro

This document will explain how to print and cut customized beverage mats of different shapes & sizes using HP PageWideXL Pro printers .
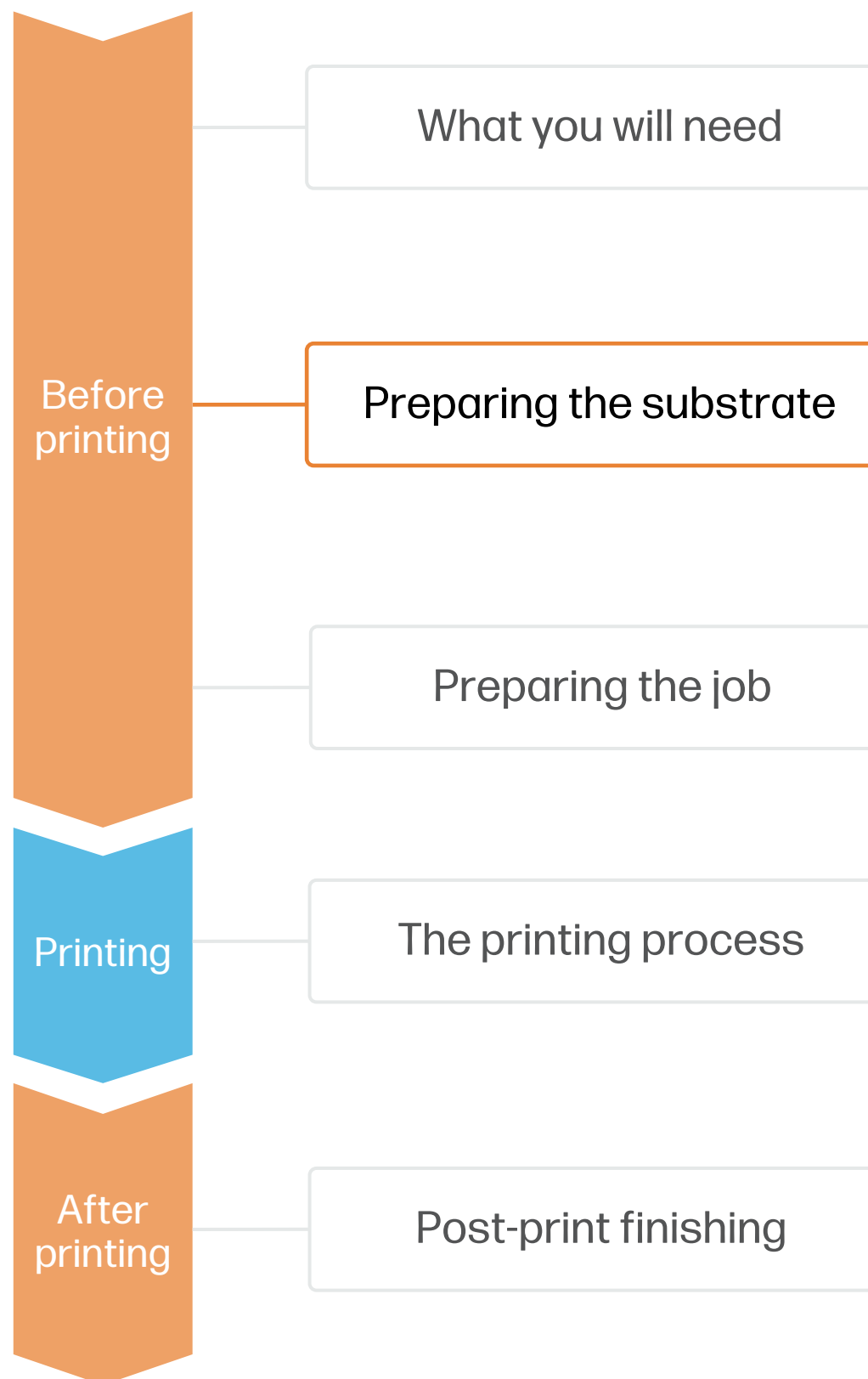
What you will need

Before printing
- What you will need
- Preparing the substrate
- Preparing the job

Printing
- The printing process

After printing
- Post-print finishing

Uncoated wood-pulp board (0.8 - 2mm thick)

SW tools (RIP, edition, etc.)

PageWide XL Pro printer

Cutting device

Sheet Feeder & Pro Stacker (optional)

Digital cutting table (optional)

OR

Circular press manual cutter & cutting mat (optional)

Lint-free cleaning cloth & sandpaper (optional)

Preparing the substrate

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1. Types of substrates for beer mats

- Beer mats (also known as coasters) are created using **uncoated wood-pulp boards.** These materials are **highly water absorbent**, and generally have good compatibility with HP PWXL inks.

- The thickness of the board will depend on the desired stiffness of the beer mats. Ranges usually go from **0.8 - 1.4mm thickness**, although it's possible to print up to 2mm boards.

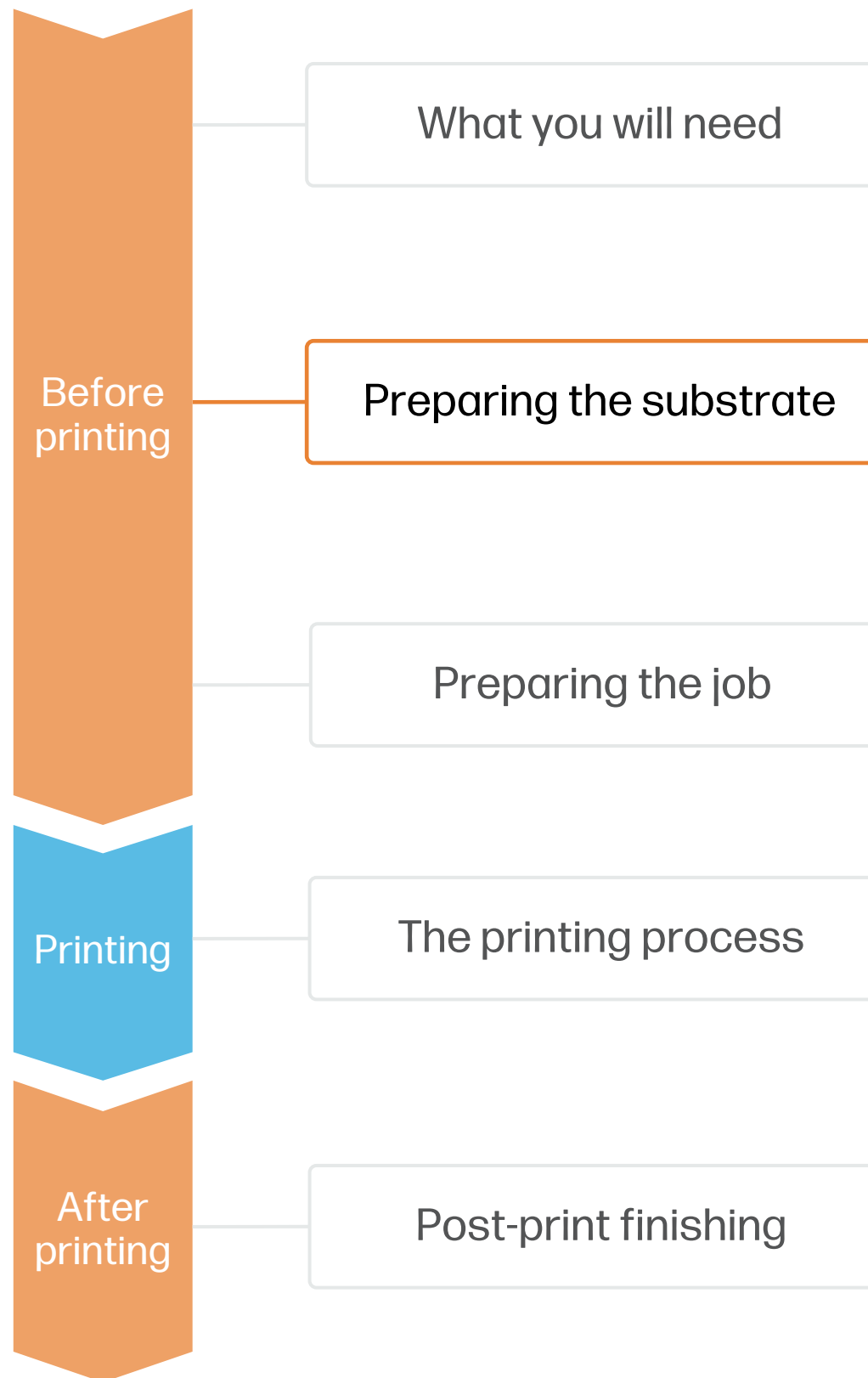- You can find a list of compatible boards that have been tested by HP in the HP Media Locator.

ⓘ IMPORTANT: Some wood-pulp boards can have loose fibers on their surface or edges, which can clog the printer's nozzles. Choose boards with no visible loose fibers or clean them before printing.

2. Usage

- Customized beer mats are widely used in breweries, distilleries, vineyards, coffee shops, bars and restaurants. They are also gaining popularity in events like weddings, festivals, or business gatherings.

- Beer mats are usually **short-term** applications, since they are normally replaced after a few uses.

- For **long-term** use cases, you may protect the printed mats using **film lamination** on both sides, although the mats will lose their water-absorbent properties.

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3. Storage

Store the boards horizontally in a flat surface and in their original packaging. Keep them in a clean, dust-free environment, within the temperature and humidity range specified on their label. If the label gives no specification, try to store the boards at 20°C and a relative humidity of 40–60%.

Allow boards to adapt to room conditions, out of the packaging, for 24 hours before printing.
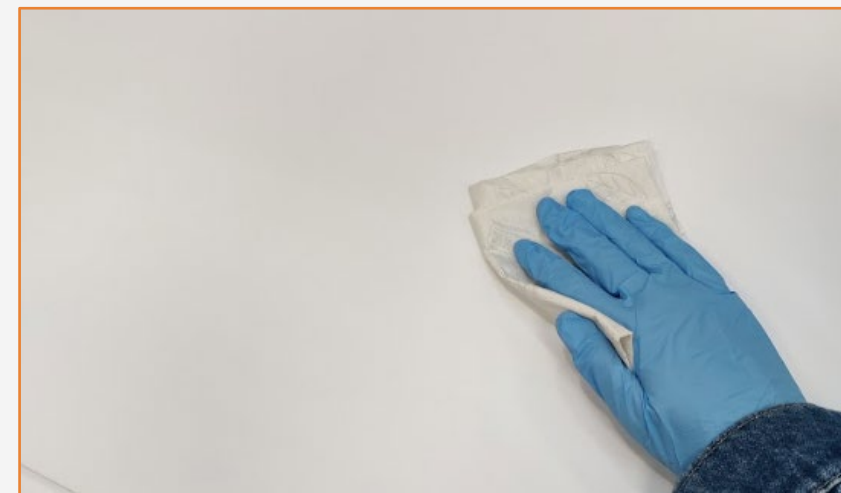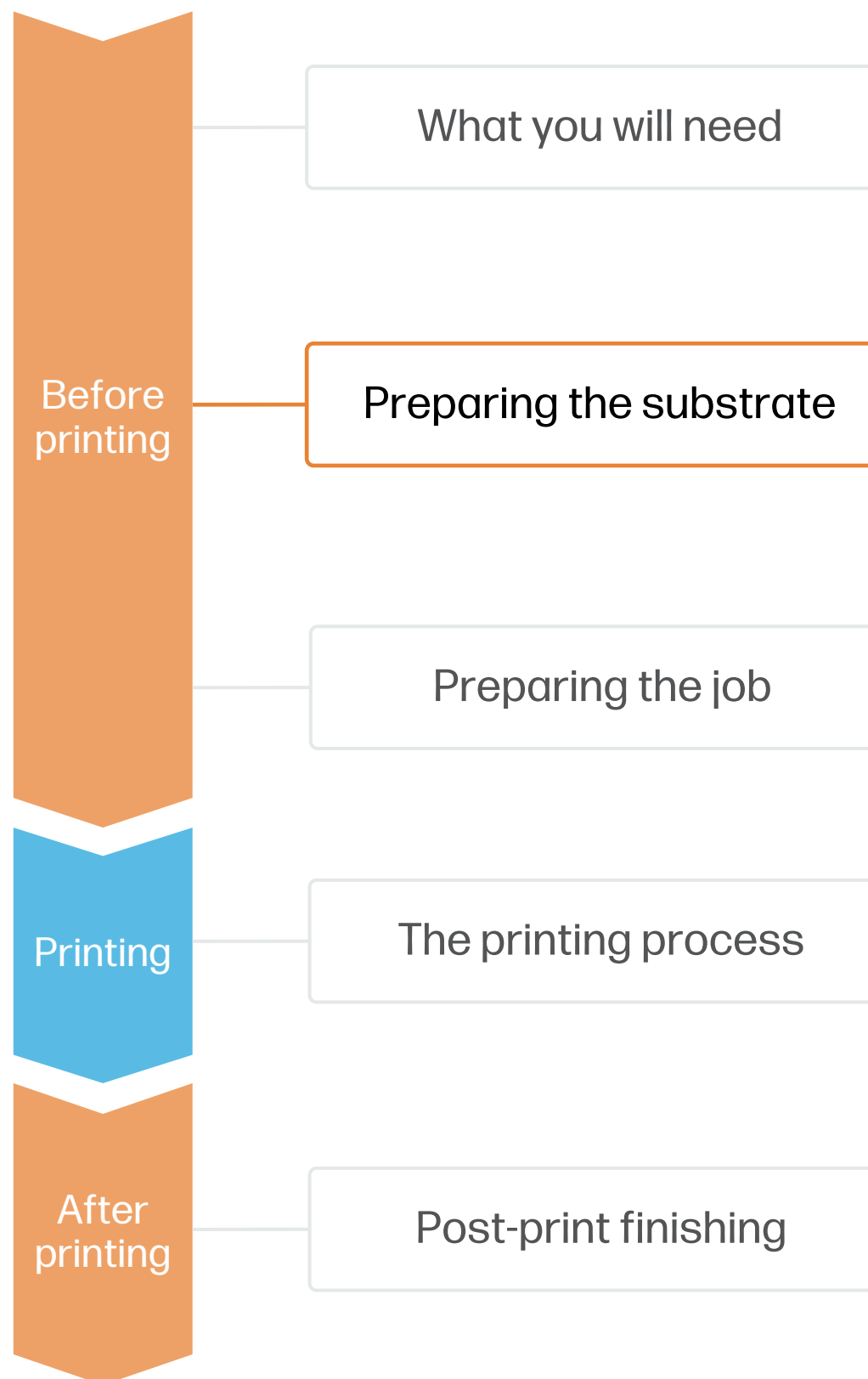

4. Cleaning

If you notice loose wood fibers on the surface or edges of your boards, try to:

• Remove large particles using a lint-free cloth or clean the edges of the stack with a vacuum cleaner or compressed air.

• Use sandpaper to smooth and remove loose fibers from the edges of the stack.

How to create beer mats

Preparing the substrate

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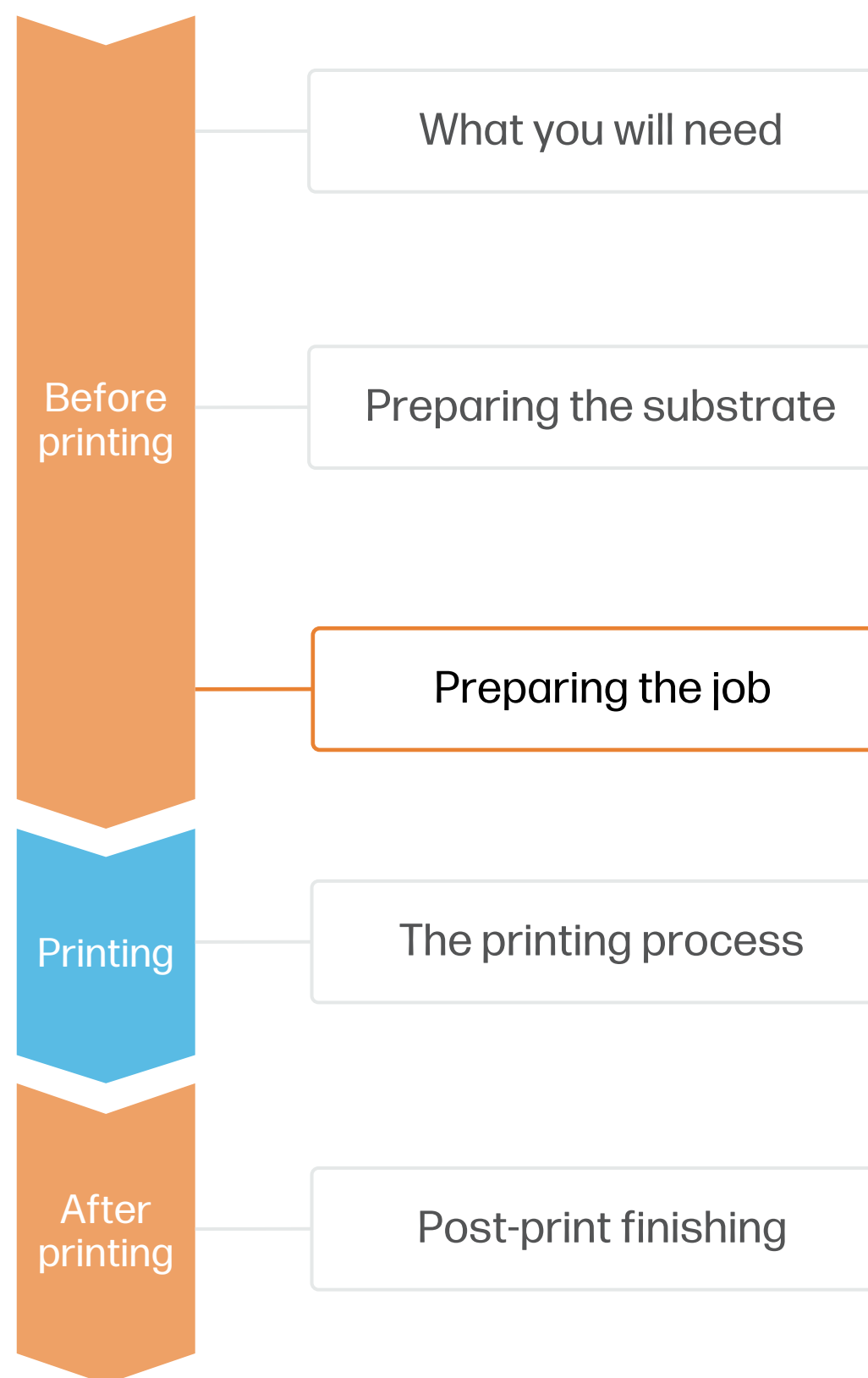
5. Substrate presets

- Check if the material you are going to use has its own custom optimized substrate preset:

  a) On the printer's **front panel** online Paper Library search (tutorial)

  b) On the **web**, in the HP PrintOS Media Locator:
     On the Filter tab, select your Printer Model, then select "**Application: Beer mats**".

  c) On the **web**, from the substrate vendor's or RIP vendor's websites

- Download and install.

📝 NOTE: If you cannot find custom substrate presets for your material of choice, you can always use the **generic presets** already installed in your printer. Try using the **Plain Uncoated Cardstock >400gsm** generic preset.

Preparing the job

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6. Create the file

Design the contents and shape of the mats using tools such as Adobe Illustrator, Photoshop, or any other program that will allow for export to a vector format.

Keep in mind the mat size preferences of each region, the most common being Ø94mm, Ø100mm, or Ø104mm.

7. Job edition | Digital cutting table

One of the most common editing attributes when using a digital cutting table is the **cutting path definition.**

1. **Draw the cutting path:** follow the beer mats silhouette interior, leaving 3mm bleed margin with the outer edge. If your design has text or logos, leave 3-4mm between the text and the cutting path.
2. **Create a new color swatch** and assign it to the cutting path, saving it to its own unique layer.
3. **Add registration marks** for your digital cutting table and save them to all layers.

🗒 NOTE: A 720x1020mm wood-pulp board can fit up to 48 Ø11.4mm or 70 Ø 9.4mm beer mats packed in a square pattern.
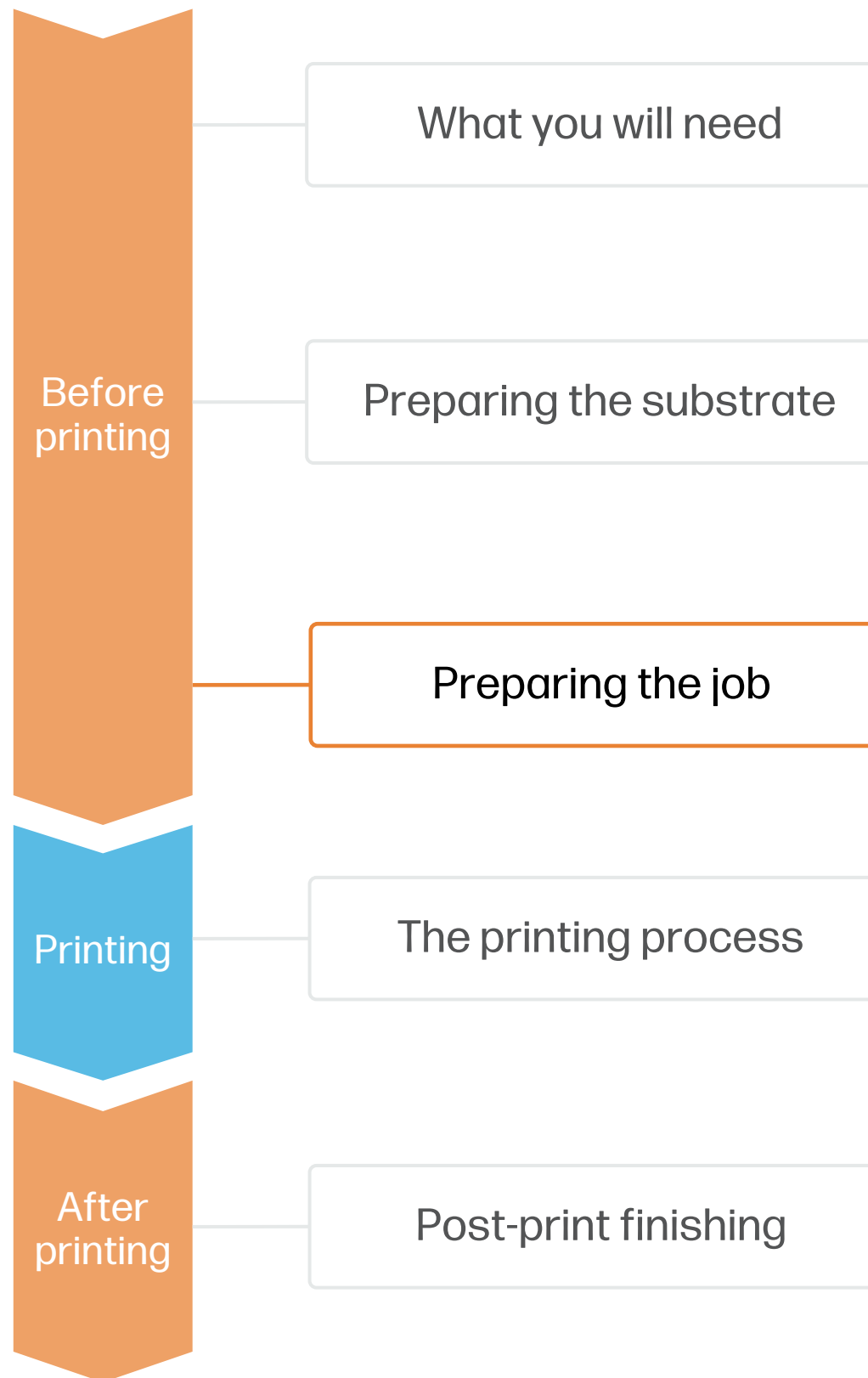
💡 TIP: Leave **3mm bleed margin** between the edge of the design and the cutting path to ensure there will not be any unprinted areas in the final product.

Text margin
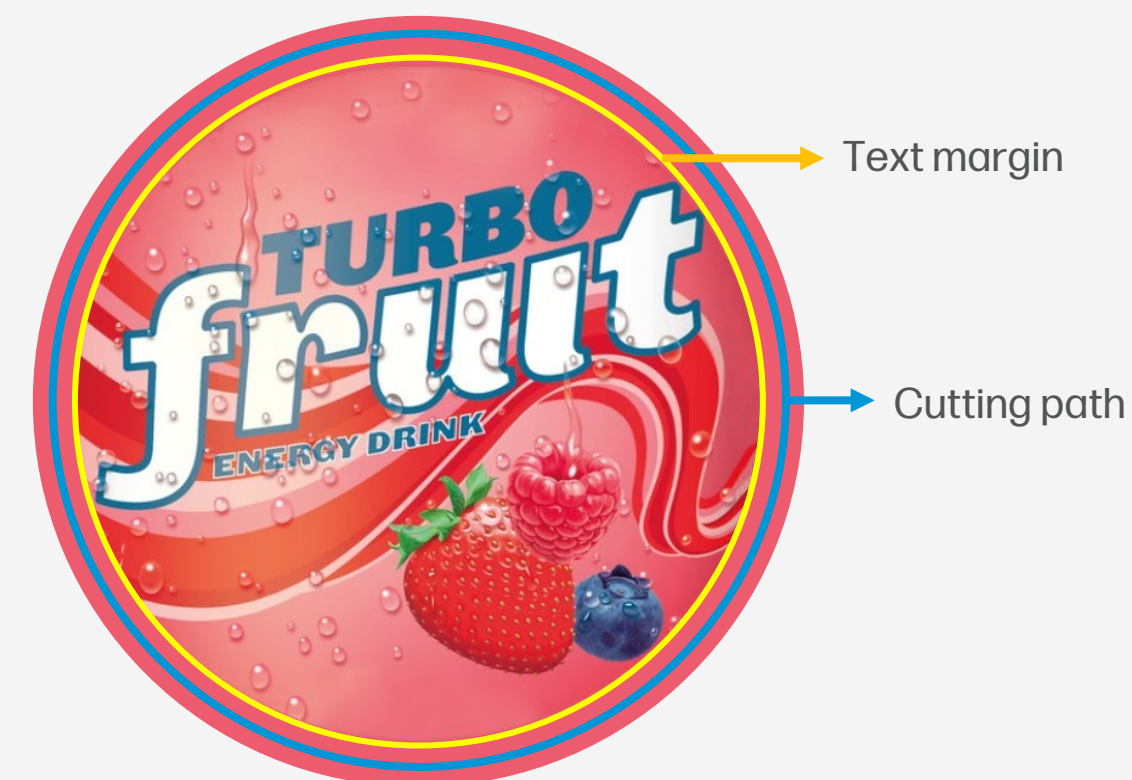
Cutting path

💡 TIP: Leave **3-4mm margin** between important design elements (such as text or logos) and the cutting path.

How to create beer mats

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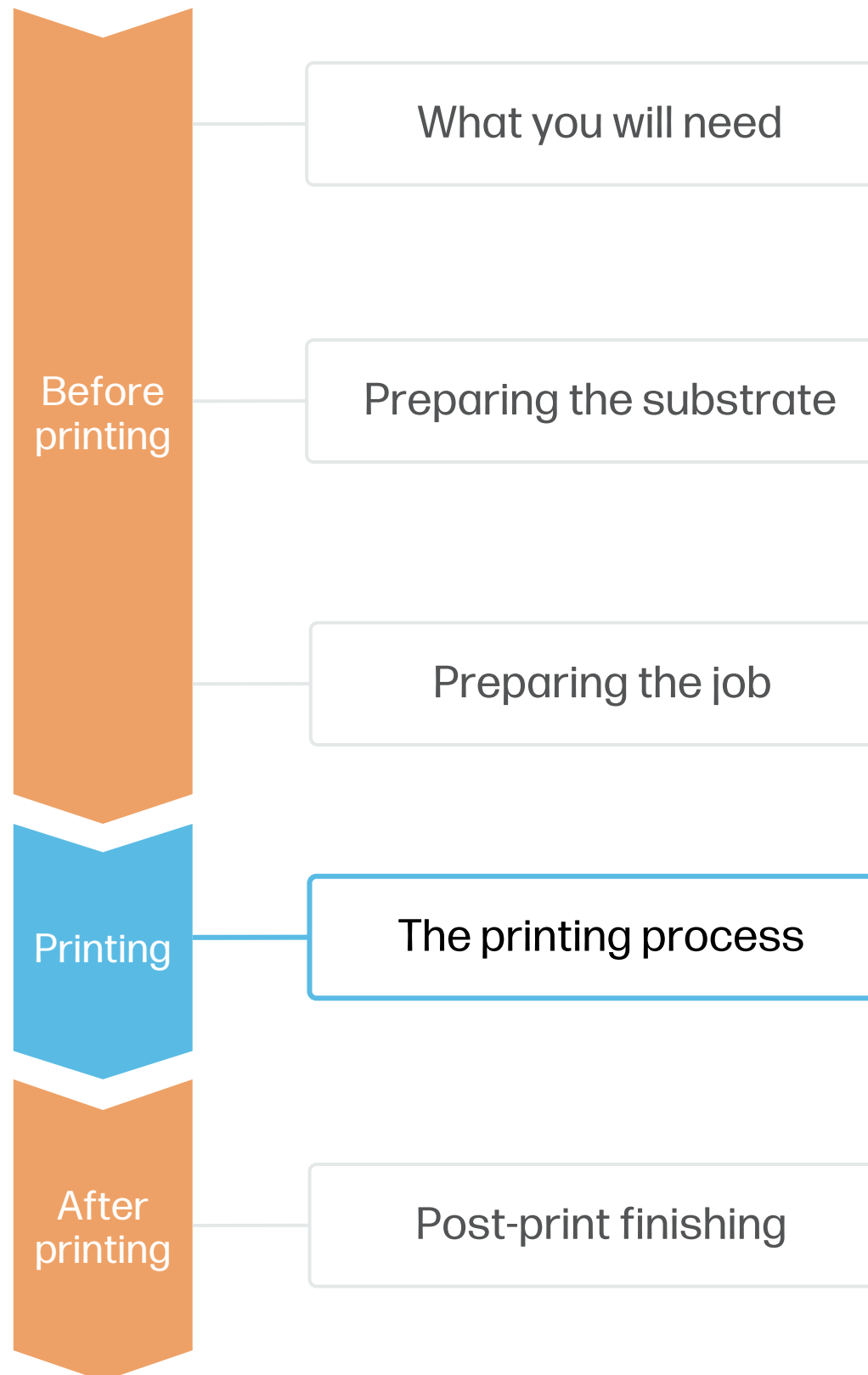
7. Job edition | Manual cutting

If using a circular manual cutter, it's important to add **reference marks** to your plots to help you center the tool during the cutting process.

1. **Measure the outer diameter** of the circular cutter tool.
2. **Create a reference circle** of the same diameter you measured and center it on top of one of the mats.
3. **Delete the unnecessary sections of the circle,** those that are close to the adjacent beer mats, leaving only 4 circle arcs on the blank spaces of the plot.
4. **Center a copy of the reference marks** on top of every beer mat.
5. **Save and export** the reference marks together with your printing file.

Outer Diameter

Tool outer diameter Reference marks

Reference marks for all 4 adjacent mats
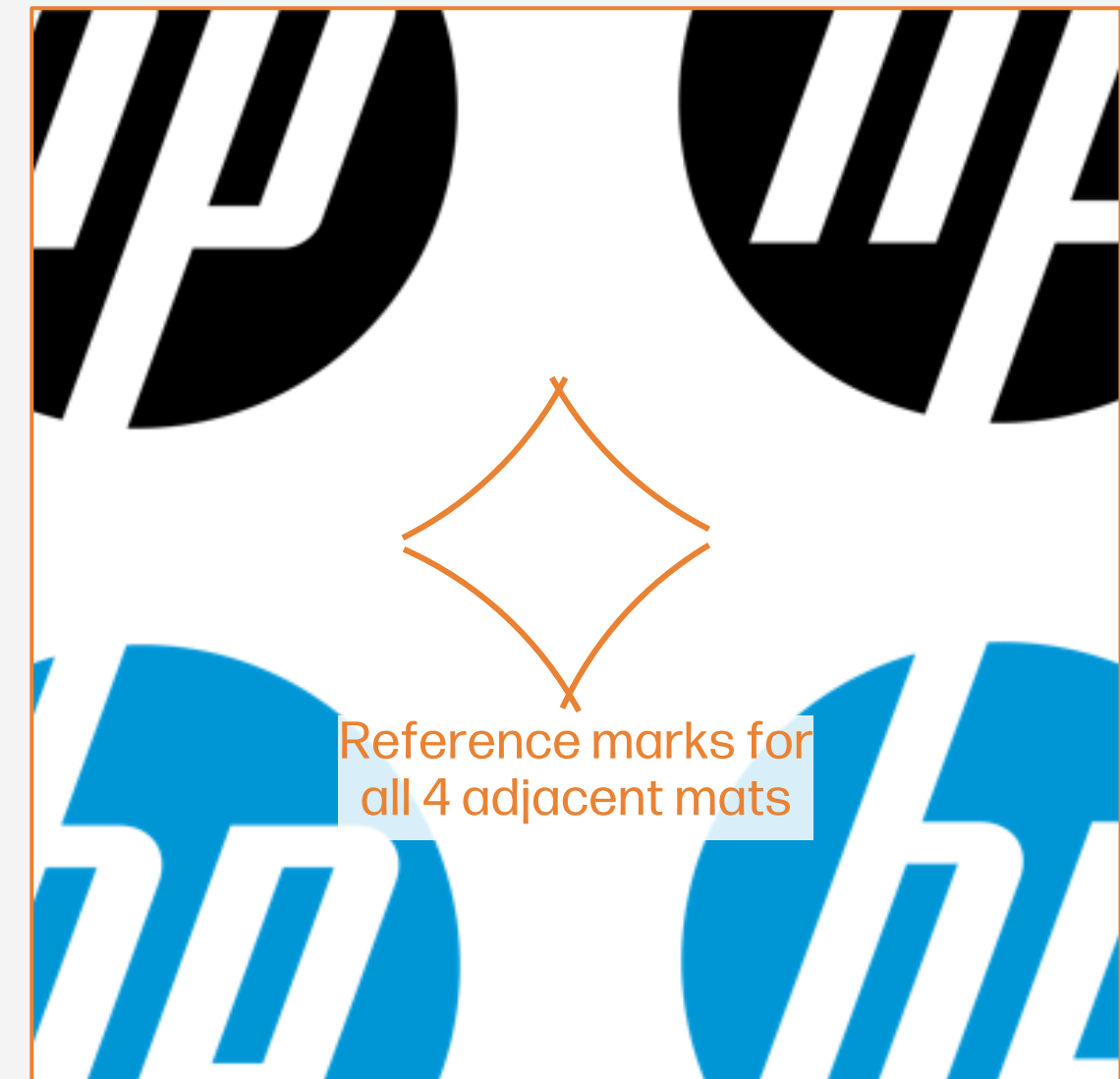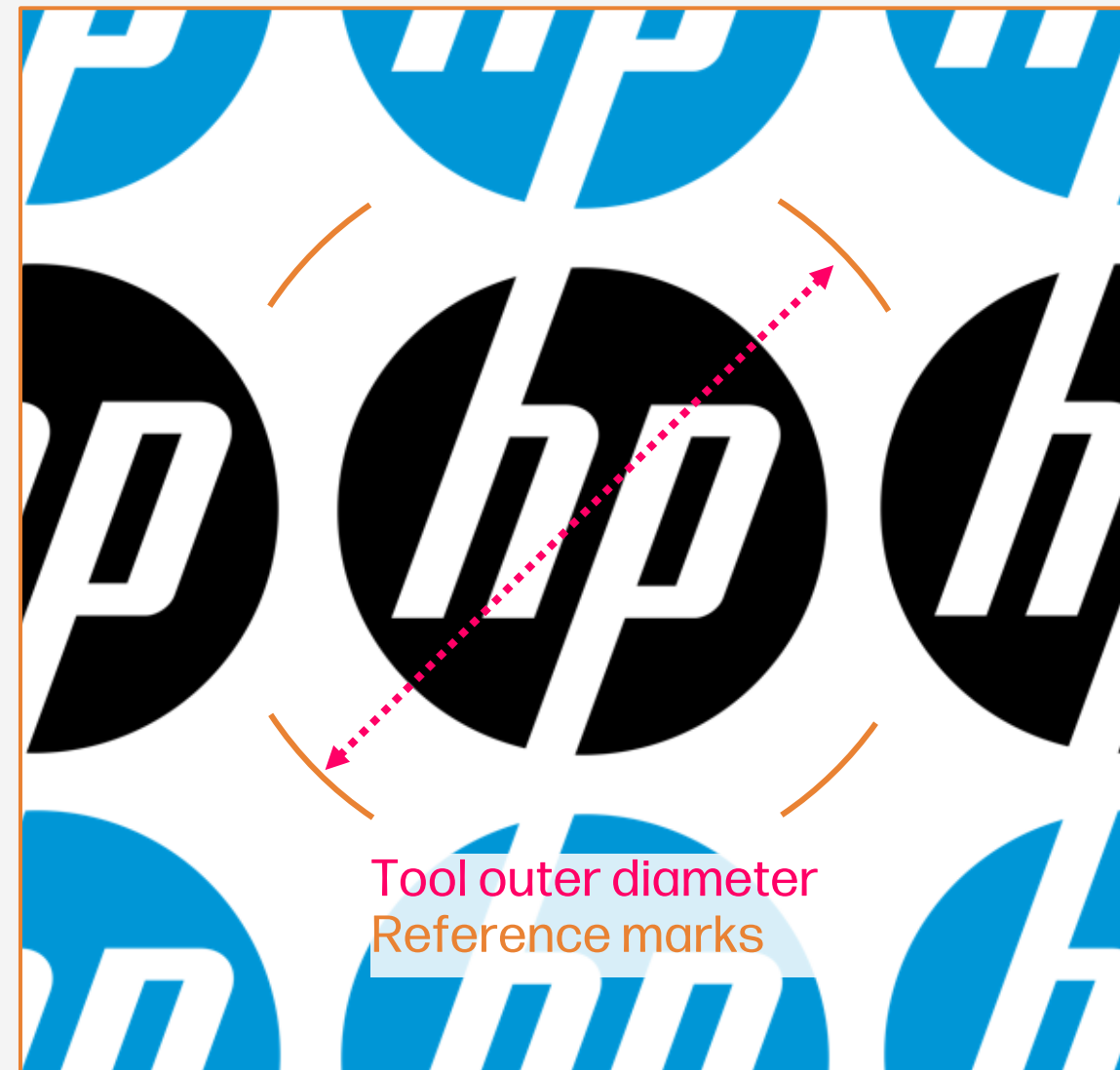
How to create beer mats

The printing process

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                    ┌─────────────────────────────┐
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                    └─────────────────────────────┘
  Before
  printing          ┌─────────────────────────────┐
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  Printing          ┌─────────────────────────────┐
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                    └─────────────────────────────┘

  After             ┌─────────────────────────────┐
  printing          │     Post-print finishing     │
                    └─────────────────────────────┘
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Loading a sheet | Manual Load

1. Load your printing file into **HP SmartStream** or other third-party compatible RIPs, like Onyx or Caldera.

2. On HP SmartStream, select the **Sheet view** icon on the toolbar, then choose the parameters such as paper type, thickness, size, print quality, or double-side settings.

3. If it's your first time using this substrate, perform a basic **Color Uniformity Calibration** and **Automatic Printhead Alignment** before printing. You can follow this Calibration guide.

4. Click **Print** and follow the instructions of the Front Panel. First open the input tray, then load the sheets **aligning its edge with the right side of the printer**.

5. Load the next sheets one by one when the Front Panel prompts you to do so.

6. If printing a **double-side job**, wait for the Front Panel prompt to flip the printed sheet(s) vertically, align them to the right, and load them to print side B.
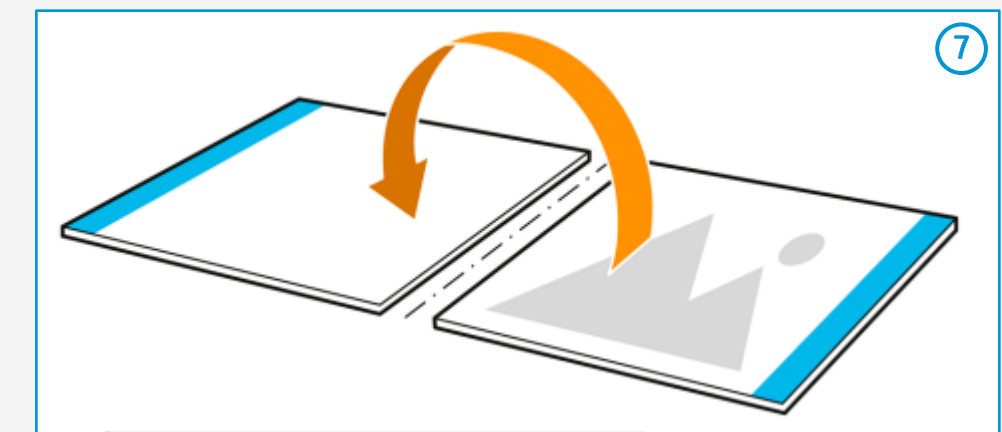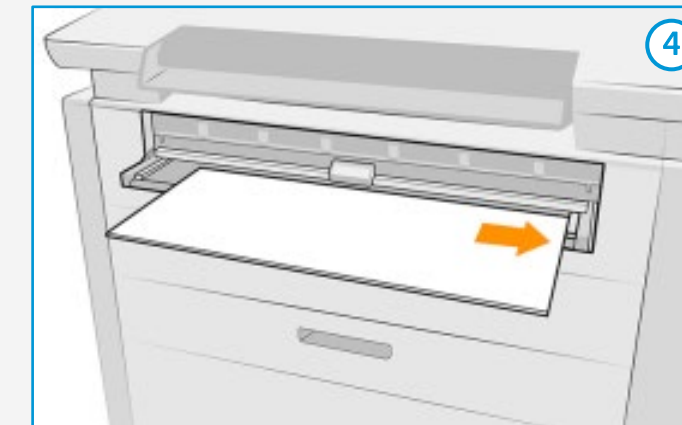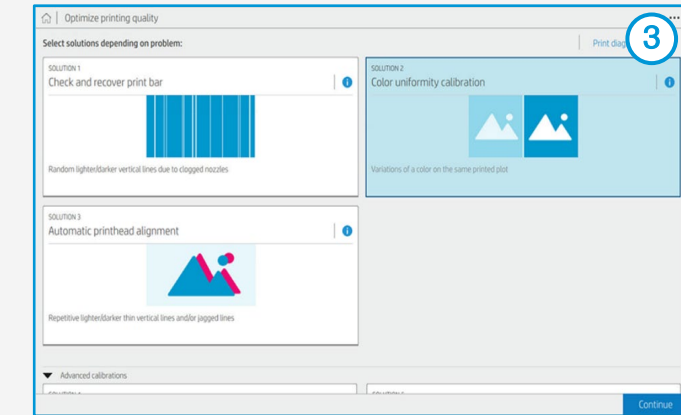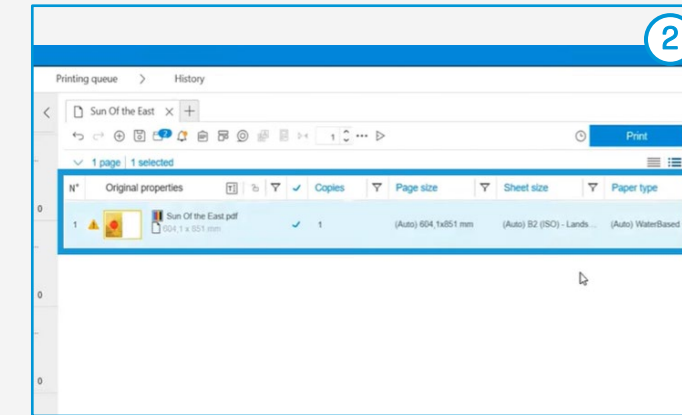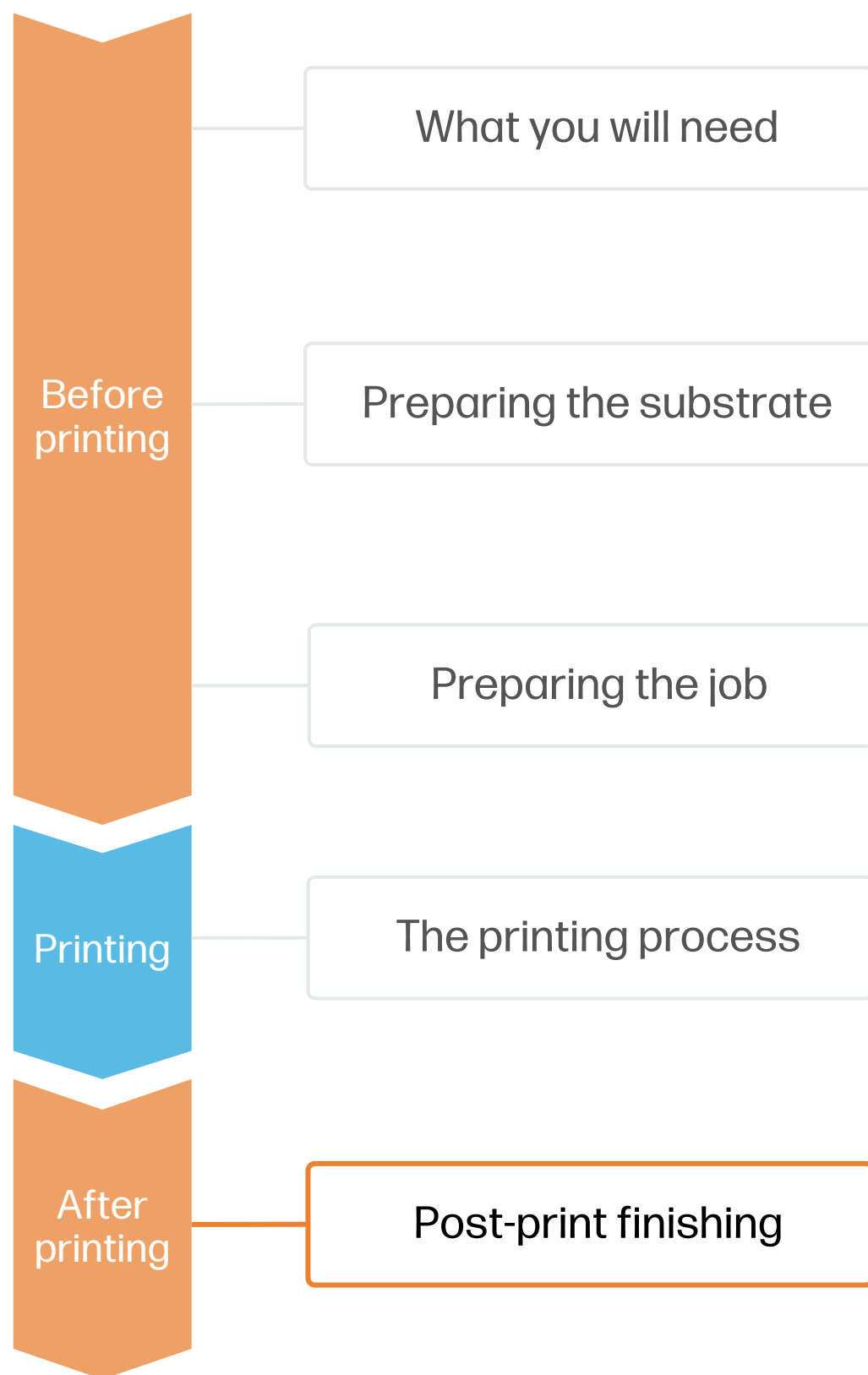
💡TIP: Check this short video guide if you have any doubts about the manual loading process. If using an **HP Sheet Feeder** accessory, check this video guide on how to automatically load stacks of sheets.

📝 NOTE: Learn how to boost your workflow efficiency using HP SmartStream by enrolling on the available training: "Advanced certification - PWXLPRO5200and8200" on HP Learn.

Post-print finishing

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1. Cutting

A. Digital cutting table:

1. Import the cutting path created in previous steps into the digital cutter.
2. Assign the material, settings, and tools to the operation. Use a sharp light duty **EOT Electric Oscillating Tool** (or similar) that matches the characteristics of your material.
3. Place the printed board on the flatbed. Turn on the vacuum and give a small push to the board to test if it's firmly set.
4. Use the registration marks on your printed design to align the machine.
5. Run the cutting operation, preferably on best quality mode.

♡ **TIP:** Calibrate the right cutting depth parameter for your flatbed cutter
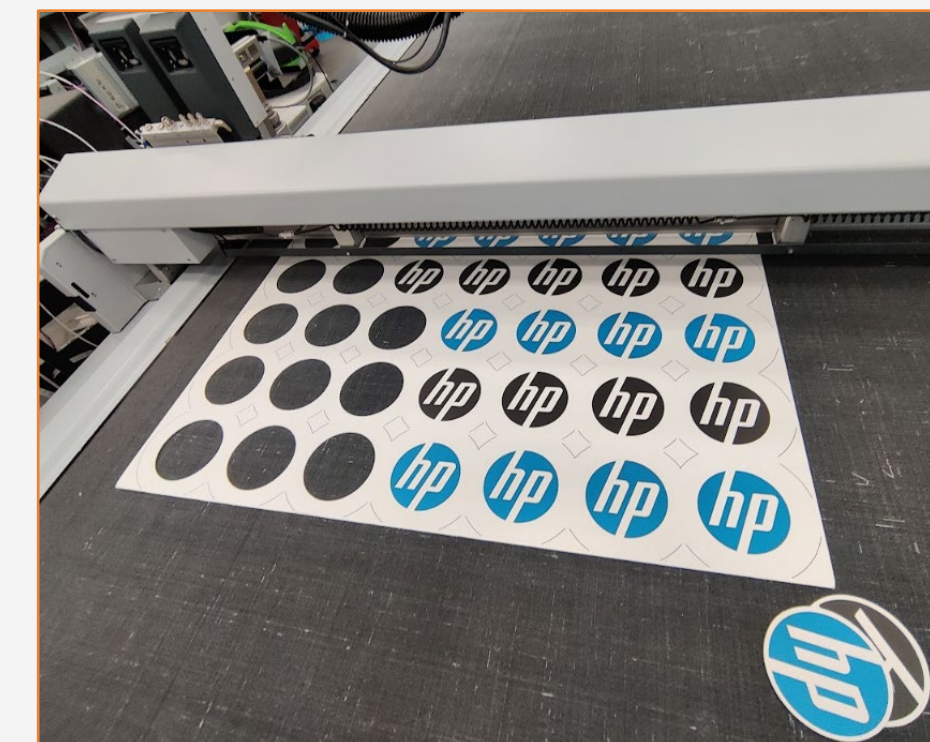

Example of proper cutting depth

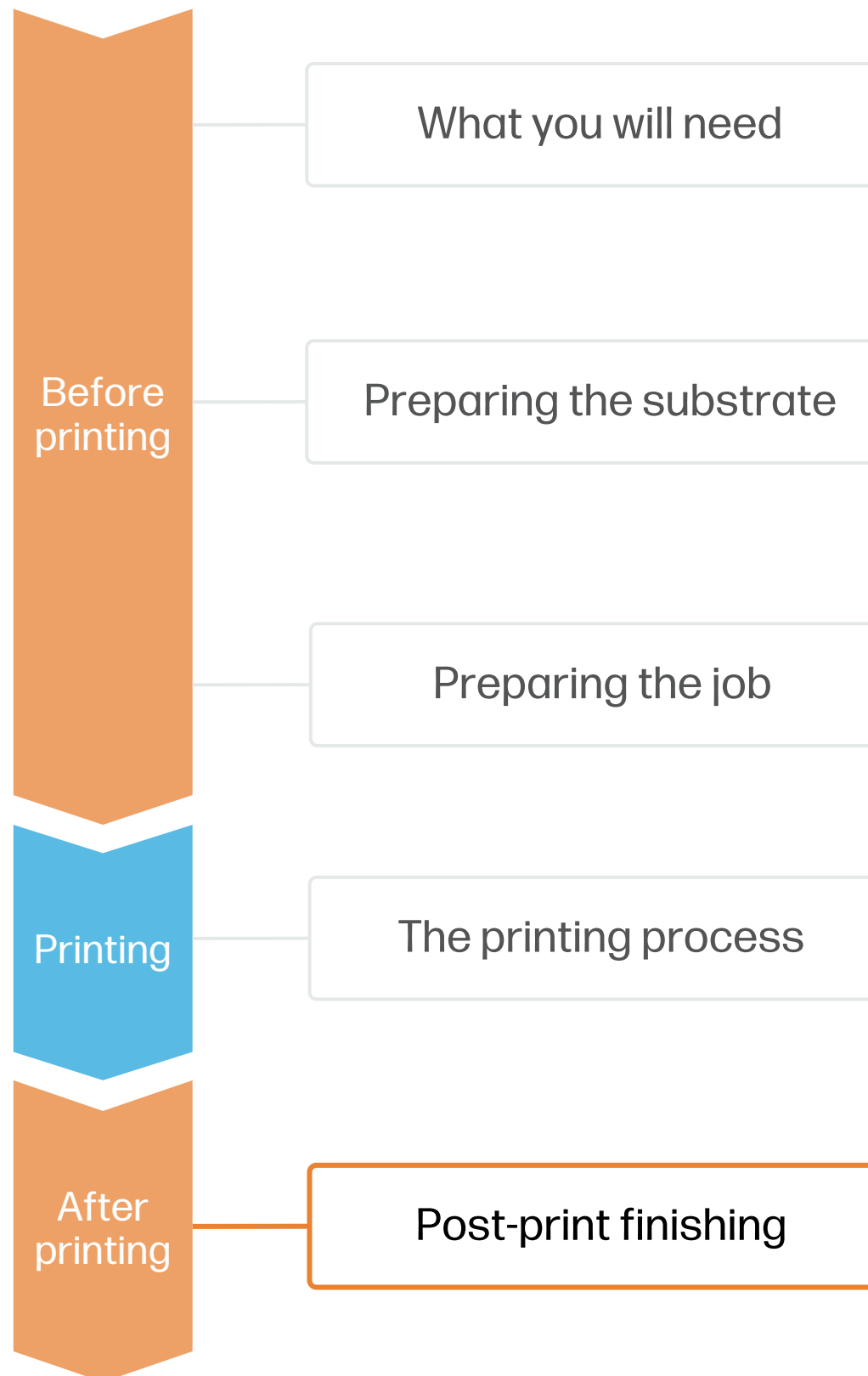Example of too deep cutting depth

EOT tool

♡ **TIP:** If printing a double-sided design, run the cutting operation on side B. This will give a cleaner finish to the front-facing face.

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Post-print finishing

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1. Cutting

B. Manual circular cutter:

Get a manual circular cutter that matches the desired beer mat diameter. Tools designed for compressed paperboards work best, but other circular cutters such as fabric samplers can also do the job.

1. Place the printed board on top of a cutting mat.
2. Align the manual circular cutter using the registration marks added in previous steps.
3. Cut each beer mat using a circular motion while applying pressure to the cutter.

Use the printed reference marks to center the cutter

💡 **TIP:** Make sure the blades of your tool are always sharp to avoid jagged edges. Make multiple shallow passes for each cut if you feel too much resistance.