

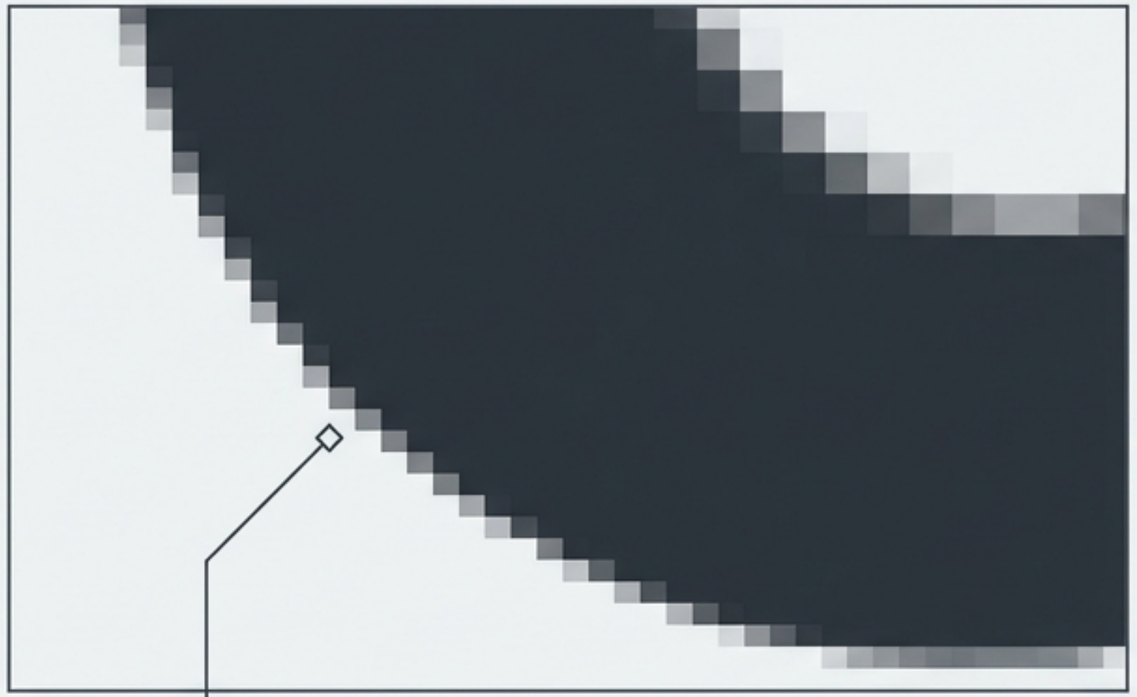
The Inkscape Blueprint

A Masterclass in Vector Design for KS4

NotebookLM

Building objects, not painting pixels.

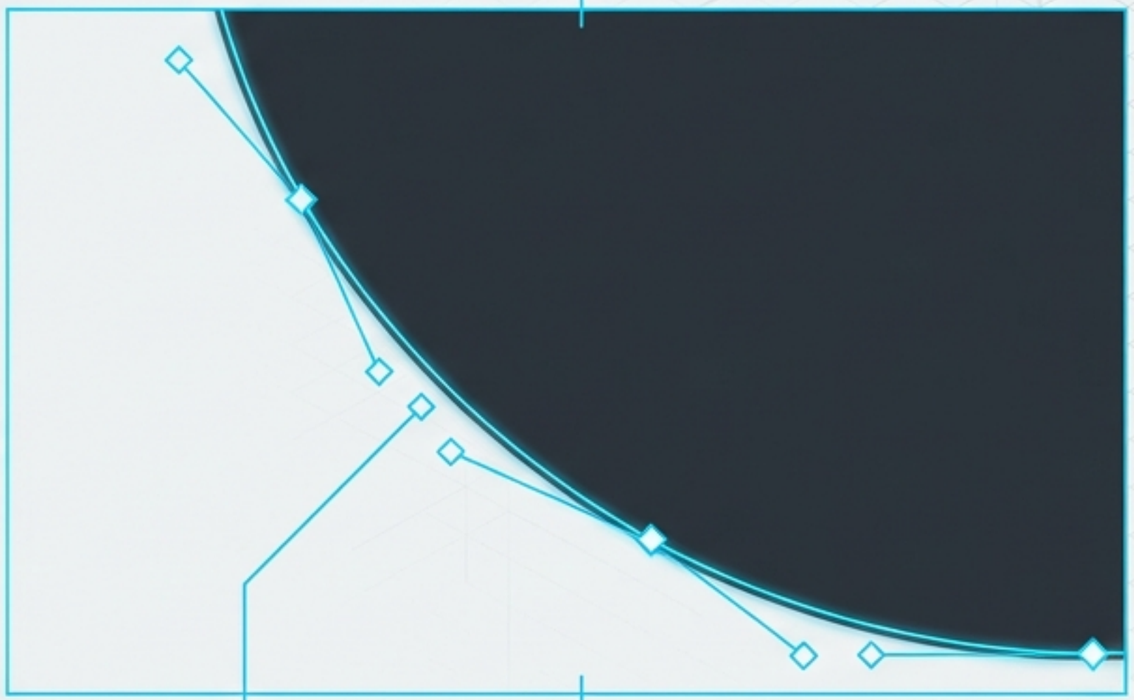
The Pixel World



Raster Graphics

Made of a grid of pixels. Loses quality and goes blurry when resized.

The Vector World

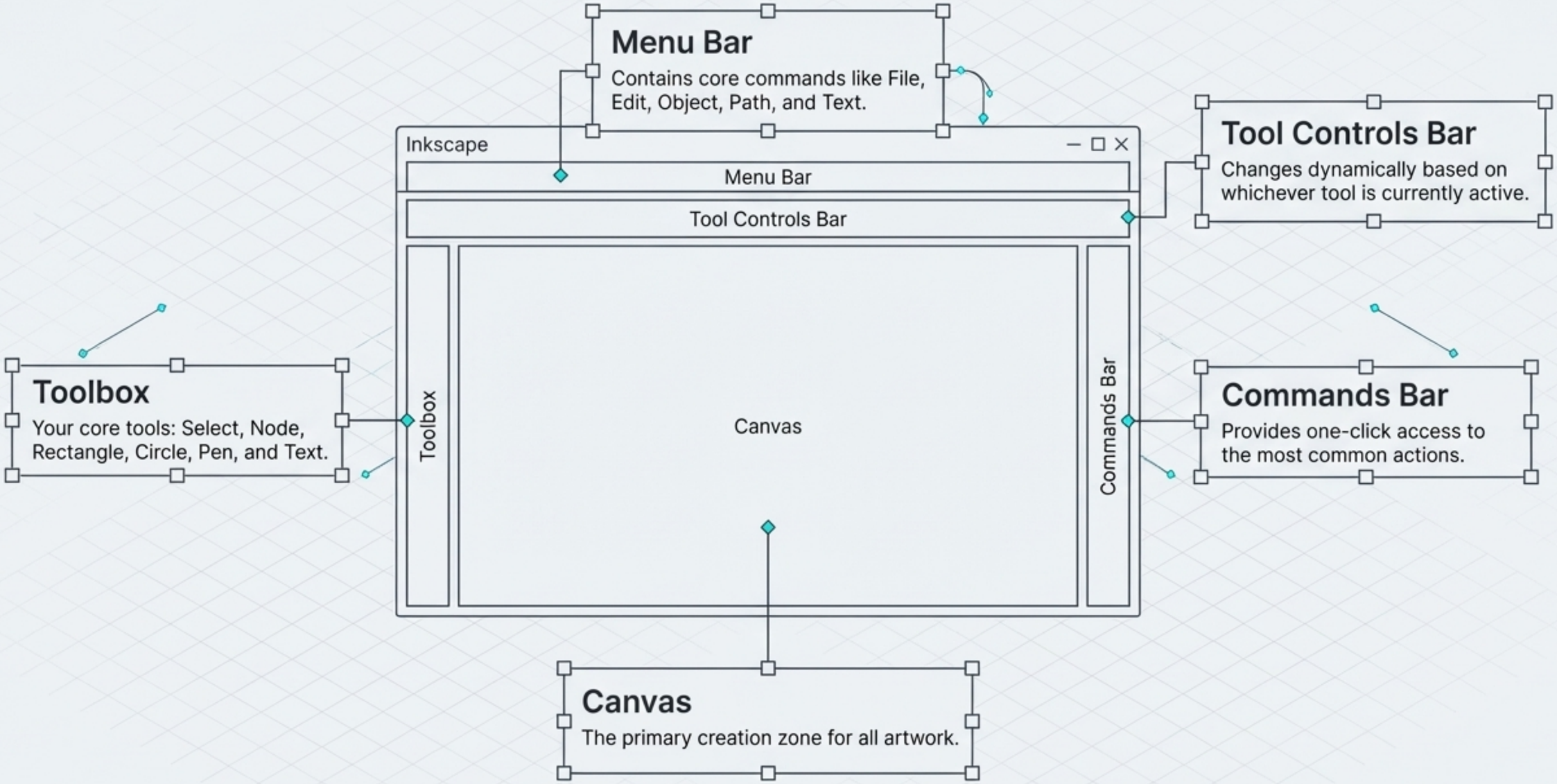


Vector Graphics

Made of lines, shapes, and paths. Infinitely scalable without losing quality. Essential for logos, icons, posters, packaging, and interface layouts.

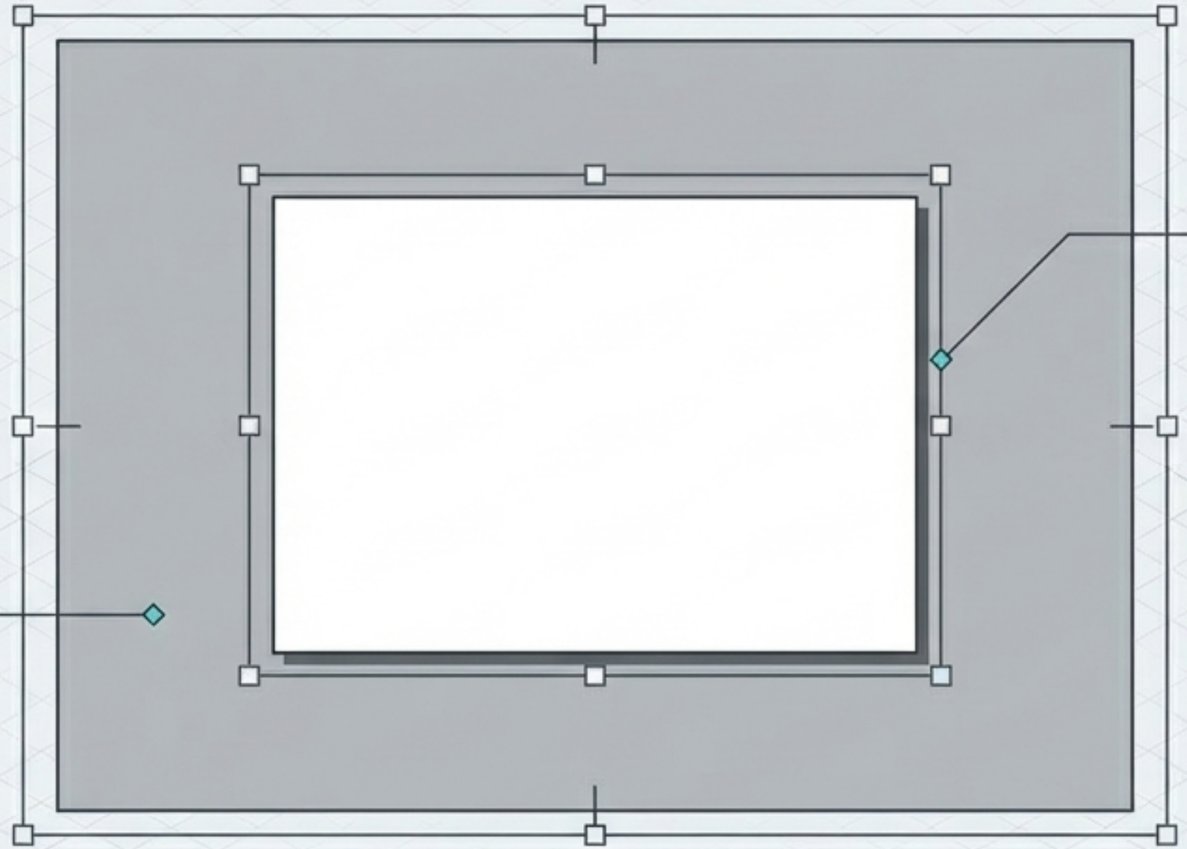
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Anatomy of the Workspace



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The Finished Area vs. The Working Area



The Page

This is the finished area. Items placed inside these borders are exported or printed.

The Canvas

The wider workspace. Use this infinite area for spare objects, testing variations, and experiments before moving them to the page.

Configure the exact page dimensions at any time using JetBrains Mono Shift + Ctrl + D JetBrains Mono (Document Properties).

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The Basic Building Blocks

1. Create



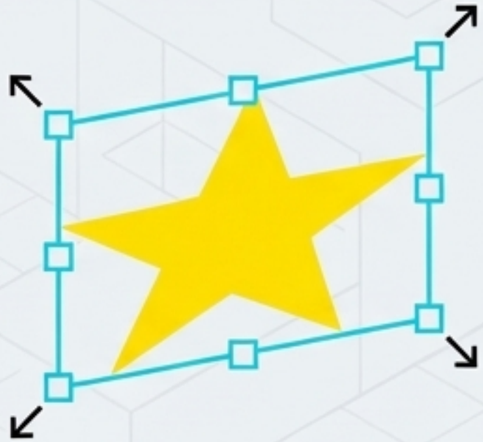
Start with basic shape tools. Building with rigid rectangles, circles, and stars is cleaner and easier than drawing freehand.

2. Select



The Select tool is the basis of everything. Click an object to select it, then click and drag to move it anywhere.

3. Transform



Use the corner handles on the selection box to precisely resize and rotate your objects into the perfect position.

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Styling the Objects: Fill vs. Stroke



Fill

The solid inside colour of an object.





Stroke

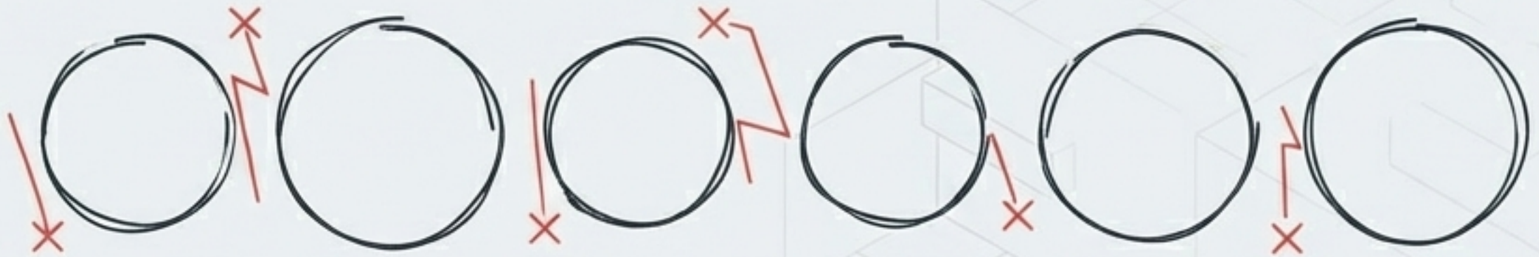
The outline colour and thickness applied to the edge.

Controlling both fill and stroke independently is essential for poster design, logos, and infographics. Quickly copy styles from one object to another using `JetBrains Mono Shift + Ctrl + V JetBrains Mono` (Paste style only).

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The Rule of Duplication and Alignment

The Amateur Way



Redraw from scratch → Drag items by eye → Result: Inconsistent, messy, and slow.

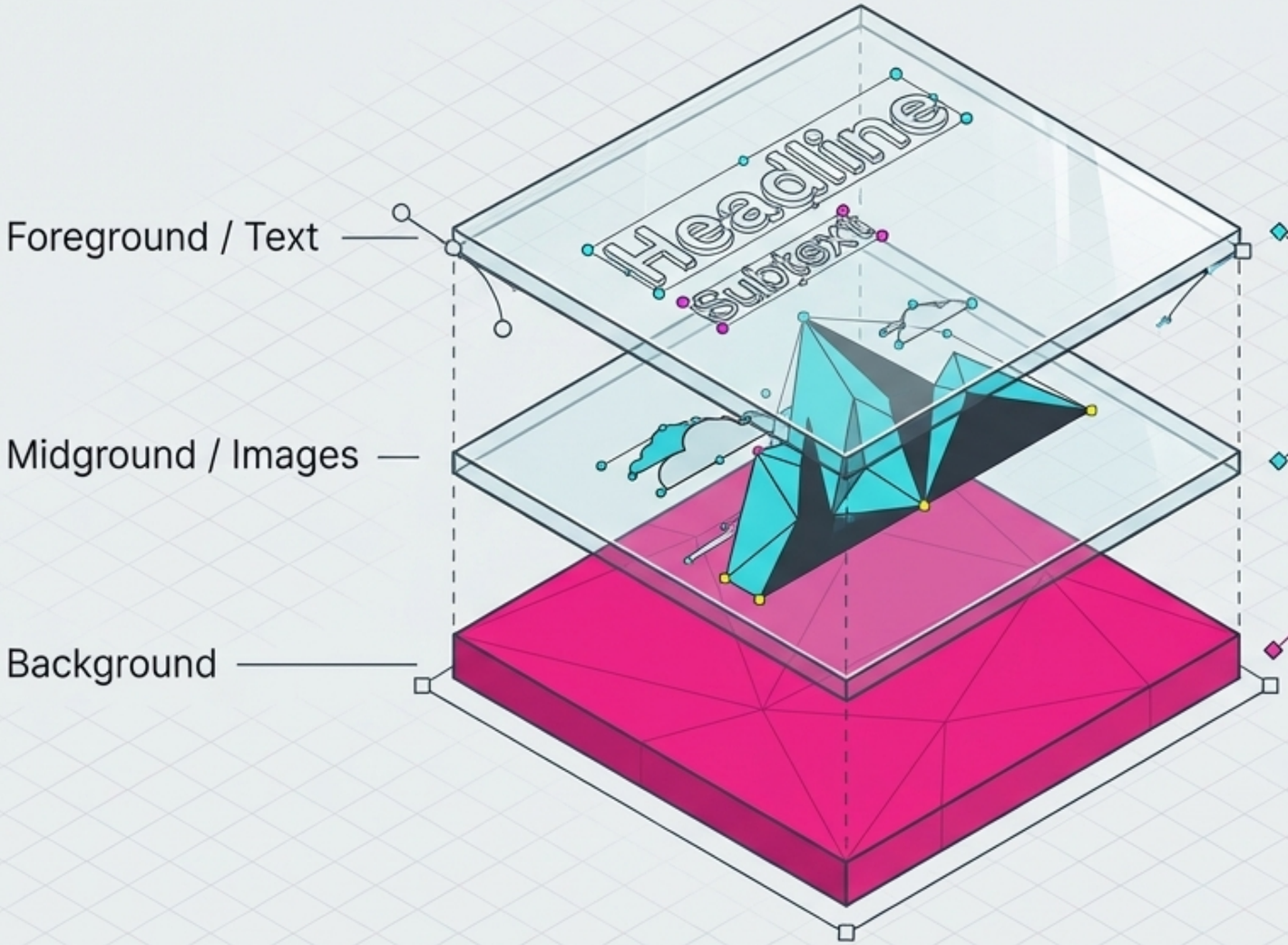
The Pro Way



Select object → Press `Ctrl + D` (Duplicate in place) → Press `Shift + Ctrl + A` (Align and Distribute) → Result: Neat, perfectly spaced, professional layouts instantly.

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Stacking Order: Working with Layers



Layers keep artwork mathematically organised.

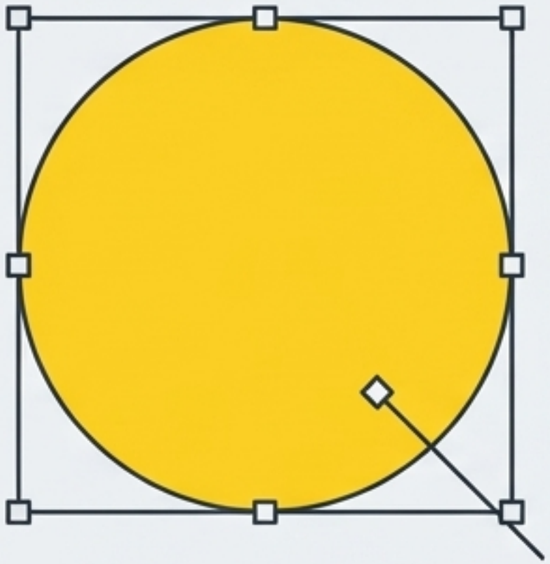
By separating your background, images, and text onto distinct levels, you completely avoid moving or editing the wrong part of a complex design by mistake.

Essential for all major projects.

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The Conceptual Shift: Object to Path

The Object

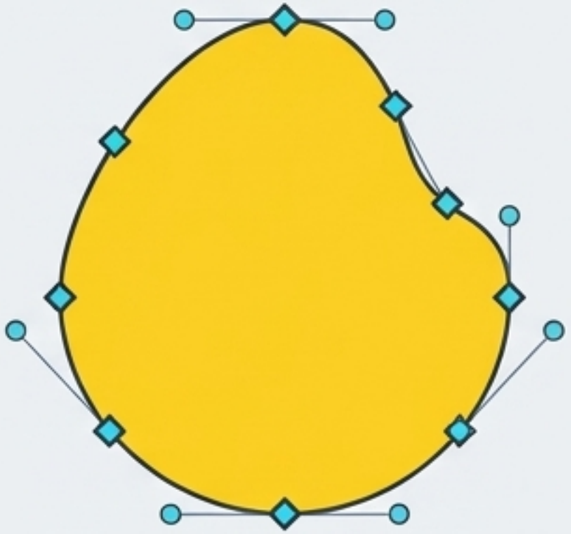


Rigid shape or typed text. Maintains its original editable behaviour (e.g., you can still type new letters or keep the circle mathematically perfect).

Ctrl + Shift + C

Convert Object to Path

The Path



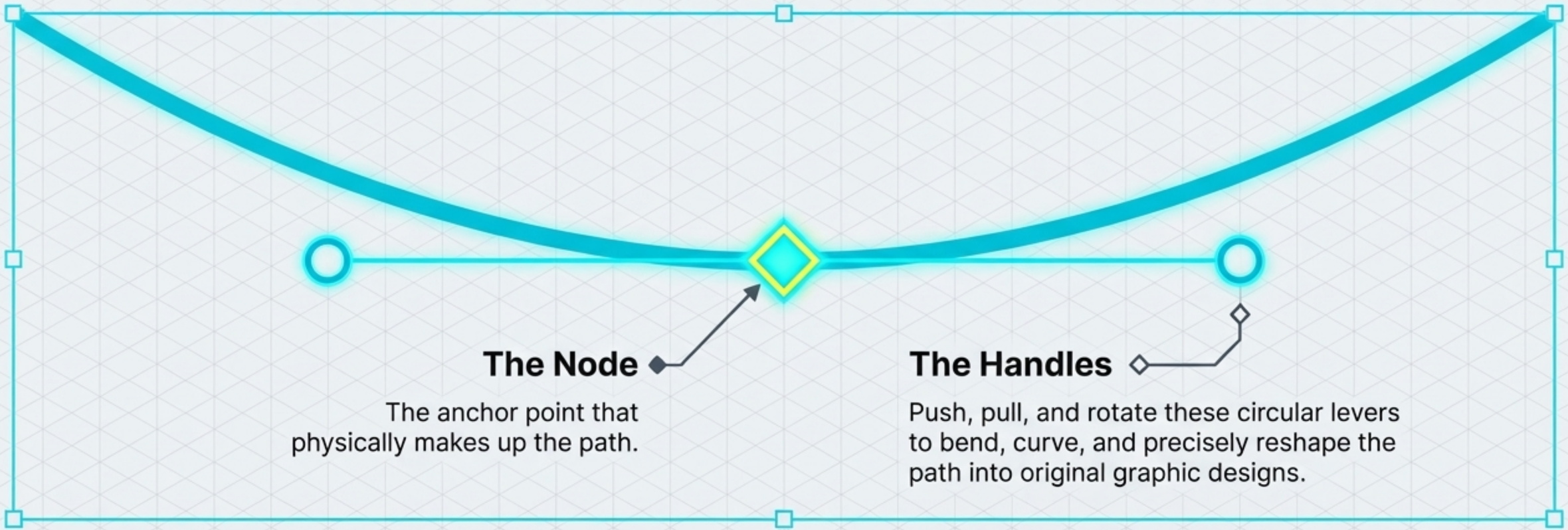
Malleable, custom shape. Freely editable point-by-point to create totally unique logos, but forever loses its original object behaviour.

⚠ **Warning:** Don't convert text to paths too early! Save versions carefully.

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Precision Control: Editing Nodes

Activate the Node tool to access these hidden points.



The Node

The anchor point that physically makes up the path.

The Handles

Push, pull, and rotate these circular levers to bend, curve, and precisely reshape the path into original graphic designs.

Pro Tip

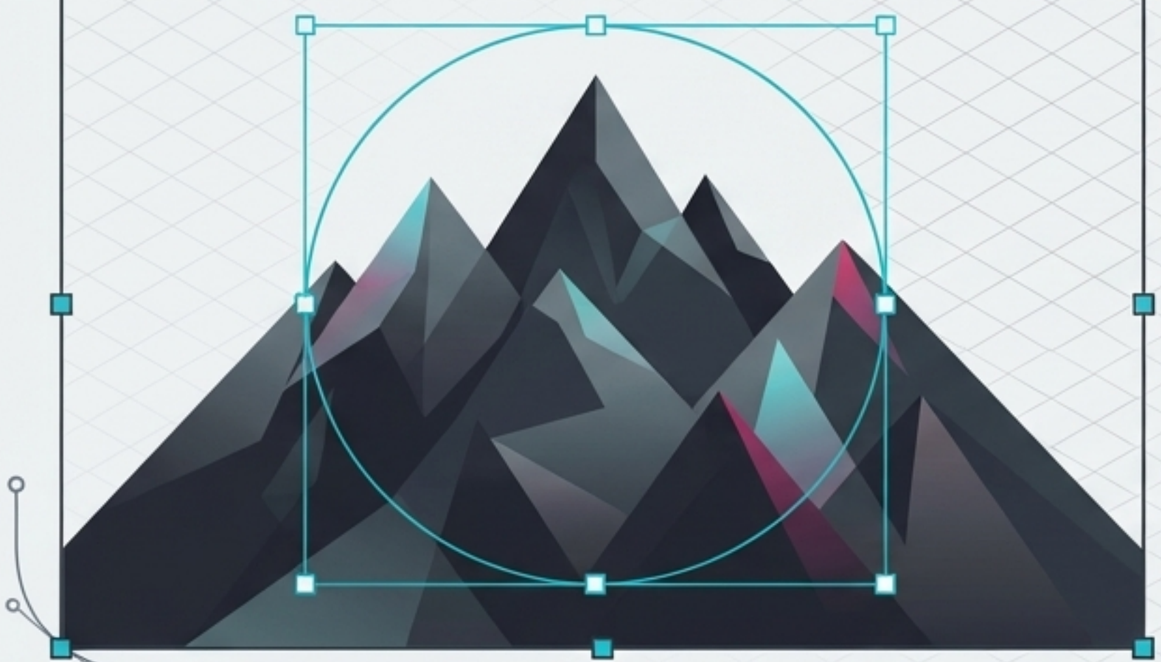
Press `Shift + A` to convert selected nodes to auto nodes (smooth, perfect curves).

Press `Ctrl + K` to combine multiple selected paths into one complex master path.

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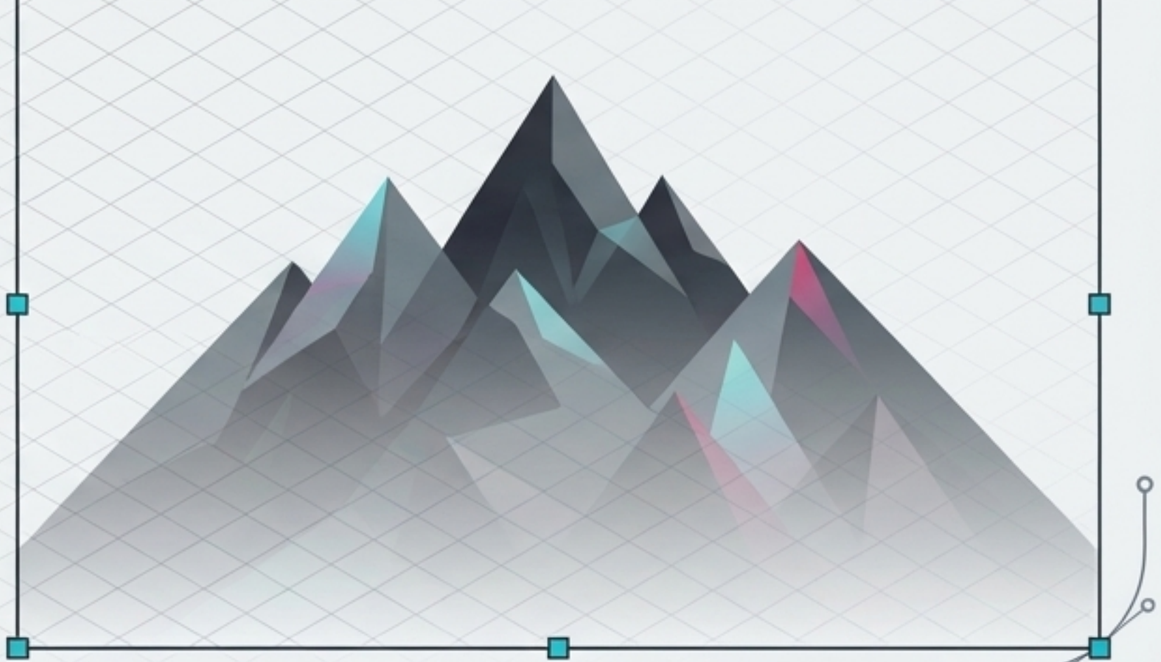
Visual Effects: Clipping vs. Masking

Clipping



Hides everything outside the top shape using a hard edge. Perfect for strictly fitting photographs or textures into specific shapes like circles or letters.

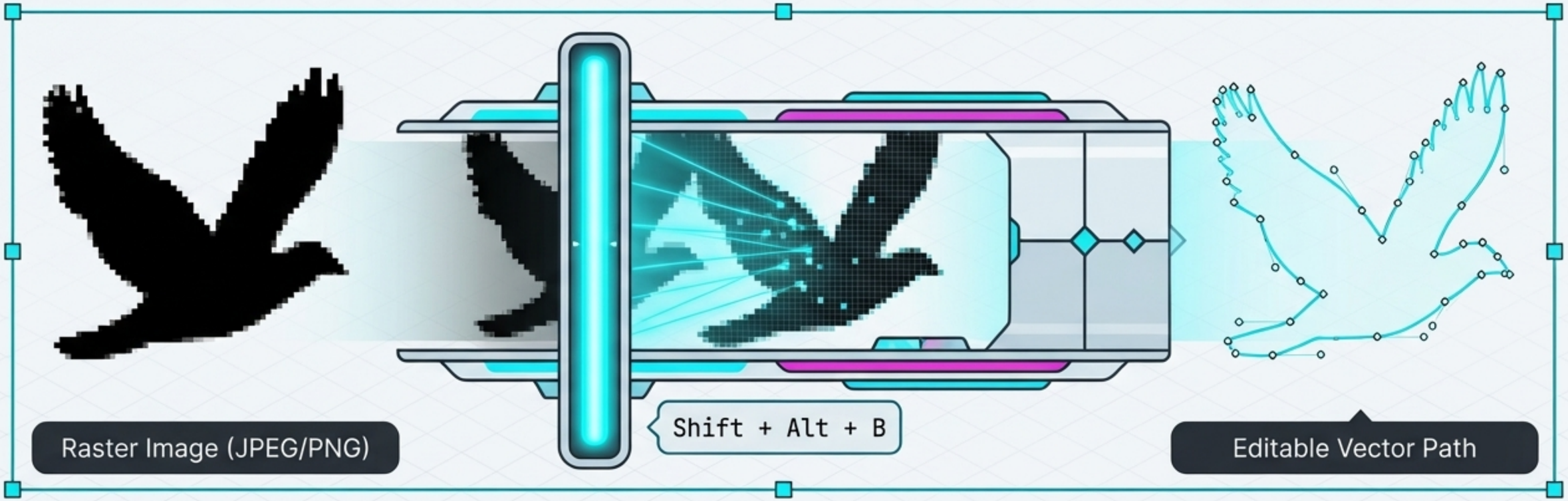
Masking



Changes visibility dynamically using tone and transparency. Perfect for soft blends, fading images out, and creating cleaner, high-end editorial layouts.

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The Extraction Machine: Trace Bitmap

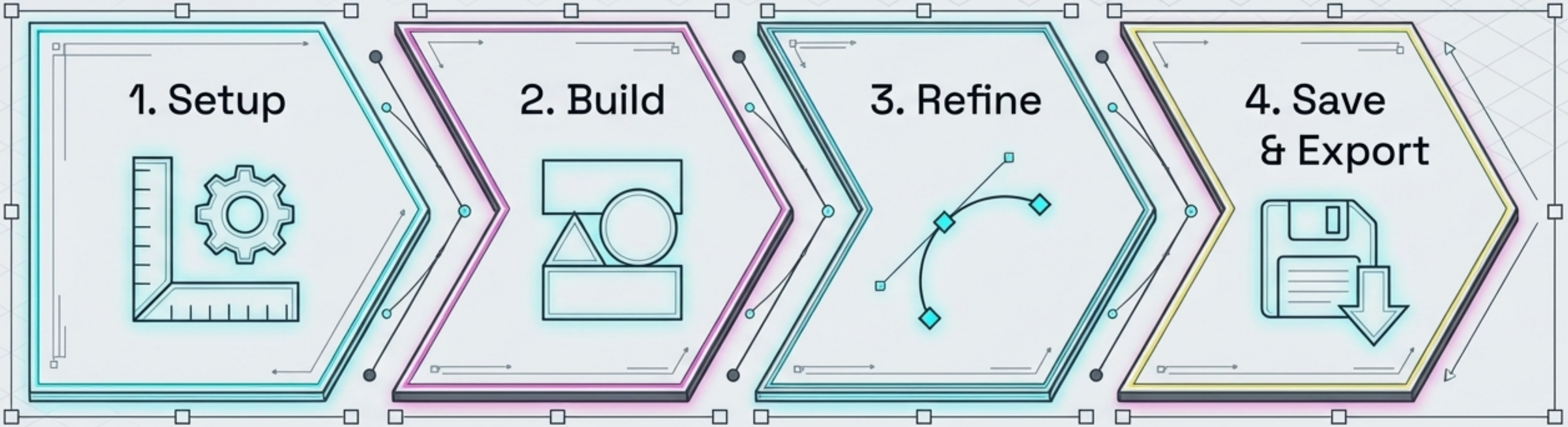


Inkscape can automatically trace a pixelated raster image and extract a clean, mathematical vector outline. Highly useful for digitising hand-drawn silhouettes or simple logos.

Warning: The extraction machine is not magic. The result is rarely perfect on complex photos and will require manual tidying using the Node tool.

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The Designer’s Workflow Lifecycle



Press **JetBrains Mono: Shift+Ctrl+D**. Set the exact page dimensions before you start drawing.

Use rigid Shapes, apply Fill/Stroke, and organise Layers. Rely on alignment tools and duplicate objects to keep the layout flawless.

Convert strictly necessary elements to Paths (**JetBrains Mono: Ctrl+Shift+C**). Edit nodes to construct unique, custom logo details.

Always save the master file as an SVG. Use “Save a Copy” to export a flat PDF for handing in to your teacher.

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The KS4 Blueprint Checklist

- [x] Create a page of the correct size
- [x] Draw and colour basic shapes
- [x] Add and format text
- [x] Duplicate objects (instead of redrawing)
- [x] Align objects neatly
- [x] Change fill and stroke independently
- [x] Convert a shape or text to a path
- [x] Edit nodes to customise a design
- [x] Trace a simple bitmap image
- [x] Export finished work while keeping the SVG safe

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Keyboard Command Centre

Zone 1: File & Edit Basics

- Ctrl + C / Ctrl + V : Copy / Paste
- Ctrl + D : Duplicate in place
- Shift + Ctrl + V : Paste style only



Zone 2: Layout & Organisation

- Shift + Ctrl + A : Align and Distribute
- Shift + Ctrl + D : Document Properties

Zone 3: Path & Shape Editing

- Ctrl + Shift + C : Object to Path
- Ctrl + K : Combine selected paths
- Shift + A : Convert to Auto Nodes

Zone 4: Tracing & Drawing Tools

- Shift + Alt + B : Trace Bitmap
- C or Ctrl + F6 : Calligraphy Tool
- X or Shift + F4 : 3D Box Tool

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