Guide: Progressive Outline

1 Introduction

The `progressive-outline` function is a versatile component for building roadmaps, sidebars, and breadcrumbs. It displays a hierarchical view of the document structure that evolves as the reader progresses.

Previously, it required manual styling for every call. Now, it is designed to be **configured globally** via `navigator-config`, ensuring consistency across your document.

2 Global Configuration

You can define the default appearance and behavior of all outlines at the beginning of your document:

```
#import "@preview/navigator:0.2.0": navigator-config, progressive-outline

#navigator-config.update(c => {
  c.progressive-outline = (
    level-1-mode: "all",
    level-2-mode: "current-parent",
    text-styles: (
      level-1: (active: (weight: "bold", fill: navy)),
      level-2: (active: (weight: "regular", fill: gray))
    ),
    spacing: (indent-2: 2em)
  )
  c
})

// Use it with zero arguments to respect global config:
#progressive-outline()
```

3 Function documentation

This section details all the parameters available for the `progressive-outline` function. Most parameters default to `auto`, which means they will be resolved from the global `navigator-config` state.

Option	Type	Effect & Expected Values
`level-X-mode`	string | auto	Defines the visibility of level X (1, 2, or 3). Values: `"all"`, `"current"`, `"current-parent"`, `"none"`. Defaults to global config.
`layout`	string	Switch between `"vertical"` (default) and `"horizontal"` rendering.
`separator`	content | str	Separator displayed between items in horizontal layout. Ignored in vertical mode.
`text-styles`	dict | auto	Styles passed to `#text`. Merged with global config. You can use a float (e.g., `0.5`) as a shortcut for opacity inheritance.
`spacing`	dict | auto	Controls spacing (`v-between-X-Y`, `indent-X`, `h-spacing`). Merged with global config.
`show-numbering`	bool | auto	Whether to display heading numbering. Defaults to global config.
`numbering-format`	str | func | auto	Typst numbering format or custom function. If `auto`, resolved from global config or heading settings.

Option	Type	Effect & Expected Values
`match-page-only`	bool	If true, considers a heading active if it is on the same page (useful for sidebars). Default: `false`.
`filter`	func	A callback function `(heading) => bool` to programmatically include or exclude headings.
`marker`	content | dict | func	Content displayed before the item. Can be static, a dict by state, or a function `(state, level) => content`.
`clickable`	bool	Enables clickable links on headings. Default: `true`.
`max-length`	int | dict | auto	Maximum length of titles before truncation. Defaults to global config.
`use-short-title`	bool | dict | auto	Whether to use manual short titles. Defaults to global config.

4 Layout Modes

`progressive-outline` supports two main layout modes: `"vertical"` (the default, based on a grid) and `"horizontal"` (based on a stack).

4.1 Vertical Layout

This is the default mode, optimized for sidebars and roadmap slides. It supports complex indentation and vertical spacing between different levels.

4.2 Horizontal Layout

The horizontal mode is ideal for headers, footers, and breadcrumbs. Elements are placed side-by-side and can be separated by custom content.

```
progressive-outline(
  layout: 'horizontal',
  level-1-mode: 'current',
  level-2-mode: 'current',
  separator: ' > ',
  show-numbering: true
)
```

Horizontal Breadcrumb

4 Layout Modes > 4.2 Horizontal Layout

```
progressive-outline(
  layout: 'horizontal',
  level-1-mode: 'all',
  level-2-mode: 'none',
  separator: [ | ],
  spacing: (h-spacing: 1em)
)
```

Horizontal Navigation Bar

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5 Navigation & Interactivity

By default, the outline is interactive: clicking on a section title navigates directly to the corresponding slide in the PDF.

```
progressive-outline()
```

Non-clickable Outline

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In some print-focused or strict layout scenarios, you might want to disable this interactivity.

```
progressive-outline(
  clickable: false
)
```

Non-clickable Outline

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6 Visibility

This section covers the `level-X-mode` parameters.

6.1 The ‘current-parent’ mode

The `current-parent` mode is the most powerful: it only displays the “siblings” of the current element. This allows you to see the plan of the current section without being distracted by other chapters.

```
progressive-outline(
  level-1-mode: 'all',
  level-2-mode: 'current-parent'
)
```

Visibility Demonstration H2

6.2 Isolation via ‘current’ mode

If you want an ultra-minimalist rendering, the `current` mode hides everything except the exact entry where you are located.

```
progressive-outline(
  level-1-mode: 'current',
  level-2-mode: 'none'
)
```

Isolated Visibility Demonstration

6.3 Deep nesting (Level 3)

For complex structures, you can enable Level 3. Using `current-parent` will show siblings at the current depth.

6.3.1 Deep Component A

6.3.2 Deep navigation test

```
progressive-outline(
  level-2-mode: 'all',
  level-3-mode: 'current-parent'
)
```

Level 3 Siblings

7 Style Customization

The function allows you to modify the appearance of headings based on their state (**completed**, **active**, or **inactive**).

7.1 The 3-state system

By default, headings can be in one of three states:

- **completed**: The heading has already been passed.
- **active**: This is the current heading.
- **inactive**: The heading is yet to come.

```
text-styles: (
  level-1: (
    active: (fill: eastern, weight:
'bold'),
    completed: (fill: gray.lighten(50%)),
    inactive: (fill: black)
  )
)
```

Past, Present, Future

7.2 Advanced Opacity & Inheritance

Instead of redefining the full style for `inactive` or `completed` states, you can use smart inheritance to adapt the `active` style.

7.2.1 The Float Shortcut (Clone & Fade)

Pass a number (0.0 to 1.0) to automatically clone the active style and apply transparency. `0.2` means 20% opacity (very faint), `1.0` means fully opaque.

```
text-styles: (
  level-1: (
    active: (fill: red, weight: 'black'),
    inactive: 0.2,   // Future: very faint
(20%)
    completed: 0.5   // Past: semi-
transparent (50%)
  )
)
```

Auto-Fade Shortcut

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7.2.2 Partial Inheritance (Mix & Match)

You can also use a dictionary with an `opacity` key. This allows you to inherit the active color (faded) while overriding other properties (like weight).

```
text-styles: (
  level-1: (
    active: (fill: blue, weight: 'black'),
    inactive: (
      opacity: 0.5,      // 50% of active
color
      weight: 'regular'  // But force
regular weight
    )
  )
)
```

Fade + Weight Change

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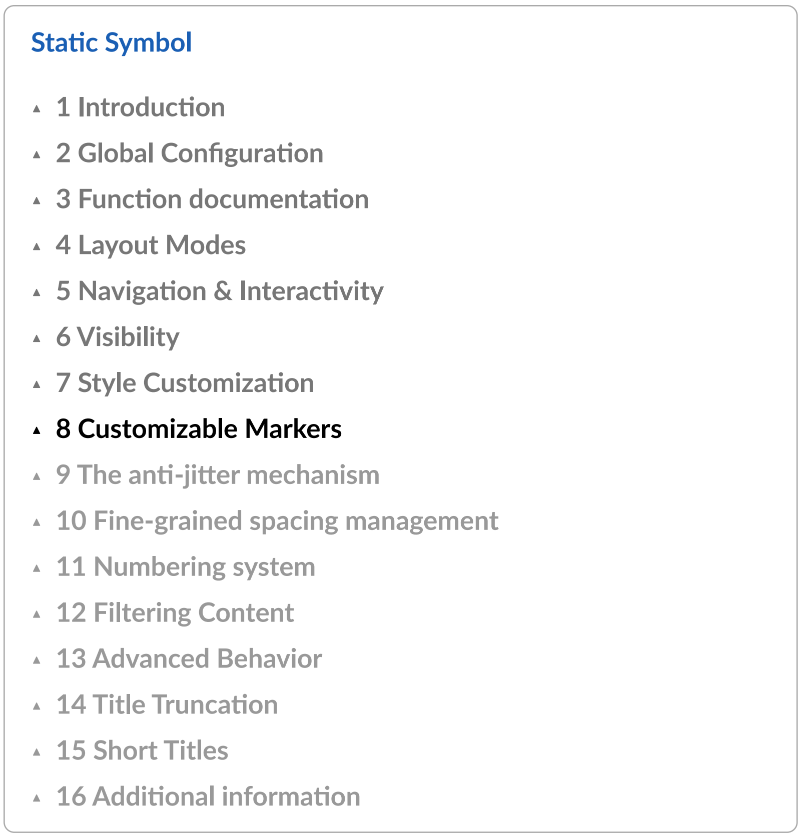
8 Customizable Markers

You can add visual indicators (icons, arrows, etc.) before each item using the `marker` parameter.

8.1 Static Marker

The simplest usage is to pass a single content element (like a symbol) that will be used for all items.

```
progressive-outline(
  marker: sym.triangle.filled.small
)
```



Static Symbol

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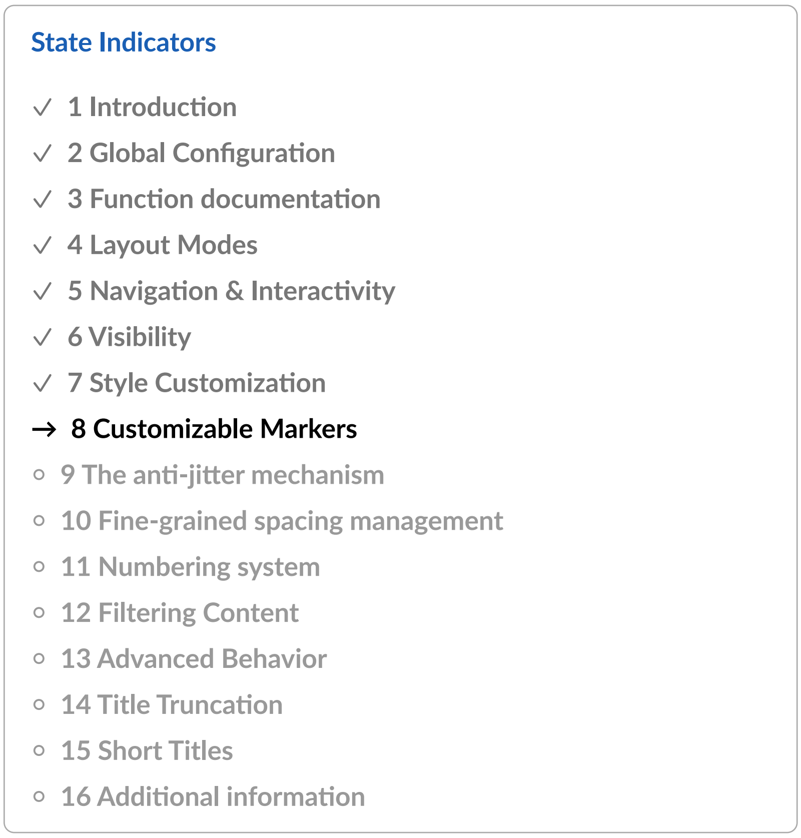
8.2 State-based Markers (Dictionary)

You can define different markers for `active`, `inactive`, and `completed` states using a dictionary.

```
progressive-outline(
  marker: (
    active: sym.arrow.r,
    completed: sym.checkmark,
    inactive: sym.circle.small
  )
)
```



State Indicators

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8.3 Dynamic Markers (Function)

For total control, pass a function `(state, level) => content`. This allows you to vary markers based on depth level and status.

```
progressive-outline(
  marker: (state, level) => {
    if level == 1 { sym.star.filled }
    else if state ==
'active' { sym.arrow.r }
    else { sym.circle.filled.tiny }
  }
)
```

Advanced Logic

8.4 Marker Alignment

Use the `spacing` parameter to fine-tune layout:

- `marker-gap`: Space between marker and text (default `0.5em`).
- `marker-width`: Fixed width for the marker container (useful for alignment).

```
progressive-outline(
  marker: (active: sym.arrow.r),
  spacing: (
    marker-gap: 1em,
    marker-width: 1.5em
  )
)
```

Aligned Markers

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9 The anti-jitter mechanism

Anti-jitter ensures that switching from a thin font to a bold one doesn't move the text. We use a ghost box to reserve the maximum space required.

```
text-styles: (
  level-1: (
    active: (weight: 'black', fill:
eastern, size: 1.2em),
    inactive: (weight: 'light', fill:
gray, size: 1.2em)
  )
)
```

Stability Test H1

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9.1 Colors and decorations

Each level can have its own rules for colors, italics, or bold.

```
text-styles: (
  level-2: (
    active: (style: 'italic', fill: blue,
weight: 'bold'),
    inactive: (fill: luma(200))
  )
)
```

Creative Style H2

10 Fine-grained spacing management

The `spacing` dictionary sculpts the rhythm.

10.1 Inter-level spacing

You can define the exact space between an H1 heading and an H2 heading, or between two headings of the same level.

```
spacing: (
  v-between-1-1: 2em,
  v-between-1-2: 1.2em,
  v-between-2-2: 0.8em,
  v-between-2-1: 1.5em
)
```

Airy Vertical Rhythm

10.2 Horizontal indentation

Indentation defines the offset to the right for each depth level.

```
spacing: (
  indent-2: 3em,
  indent-3: 6em
)
```

Marked Indentation

11 Numbering system

The function relies on Typst’s native engine.

11.1 Complex hierarchical formats

The `numbering-format` parameter accepts all standard Typst models (1, a, i, I, A).

```
show-numbering: true,
numbering-format: 'I.a.1. '
```

Legal Format

11.2 Advanced textual prefixes

To use long words like “Chapter” without errors, pass a function. This prevents Typst from interpreting letters like ‘a’ or ‘i’ as numbering models.

```
show-numbering: true,
numbering-format: (..n) => 'Chapter ' +
numbering('1', ..n) + ' : '
```

Secure 'Chapter' Prefix

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12 Filtering Content

The `filter` parameter allows you to programmatically include or exclude headings from the outline. It expects a callback function `(heading) => boolean`.

The `heading` object passed to the filter contains standard properties (`level`, `body`, `label`, `counter`) as well as context properties: `parent-h1` and `parent-h2`.

12.1 Label-based filtering

In this document, the current section “Filtering Content” has been tagged with the label `<hidden>`.

```
progressive-outline(level-2-mode: 'none')
```

Standard Outline (No Filter)

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```
progressive-outline(
  level-2-mode: 'none',
  filter: h => h.label != <hidden>
)
```

Filtered Outline (Label)

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12.2 Logic-based filtering

You can also filter based on any heading property. Here, we filter the list to **keep only** the section named “Visibility”.

```
progressive-outline(
  level-2-mode: 'none',
  // Keep only the heading named
'Visibility'
  filter: h => h.body == [Visibility]
)
```

Filtered Outline (Content)

6 Visibility

Here, we create a custom rule: show all Level 1 headings, but show Level 2 headings **only** if they belong to the “Visibility” section.

```
progressive-outline(
  level-2-mode: 'all',
  filter: h => h.level == 1 or
    (h.level == 2 and h.parent-h1.body ==
[Visibility])
)
```

Conditional Depth

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12.3 Recursive filtering

The filtering logic is recursive: if a parent heading (e.g., a Section) is excluded by the filter, all its children (Subsections and Sub-subsections) are automatically hidden as well, even if they would have passed the filter individually.

```
// Hiding a parent automatically hides its
children
progressive-outline(
  level-2-mode: 'all',
  filter: h => h.label != <hidden>
)
```

Recursive Hiding

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16 Additional information

13 Advanced Behavior

13.1 Page-based matching

In contexts like sidebars, the outline is rendered in the page margin or background before the slide content. This can cause the active heading detection to fail because the content is technically "after" the sidebar in the document flow.

Setting `match-page-only: true` solves this by considering any heading on the current page as "active", ignoring precise vertical positioning.

```
match-page-only: true
```

Sidebar Logic

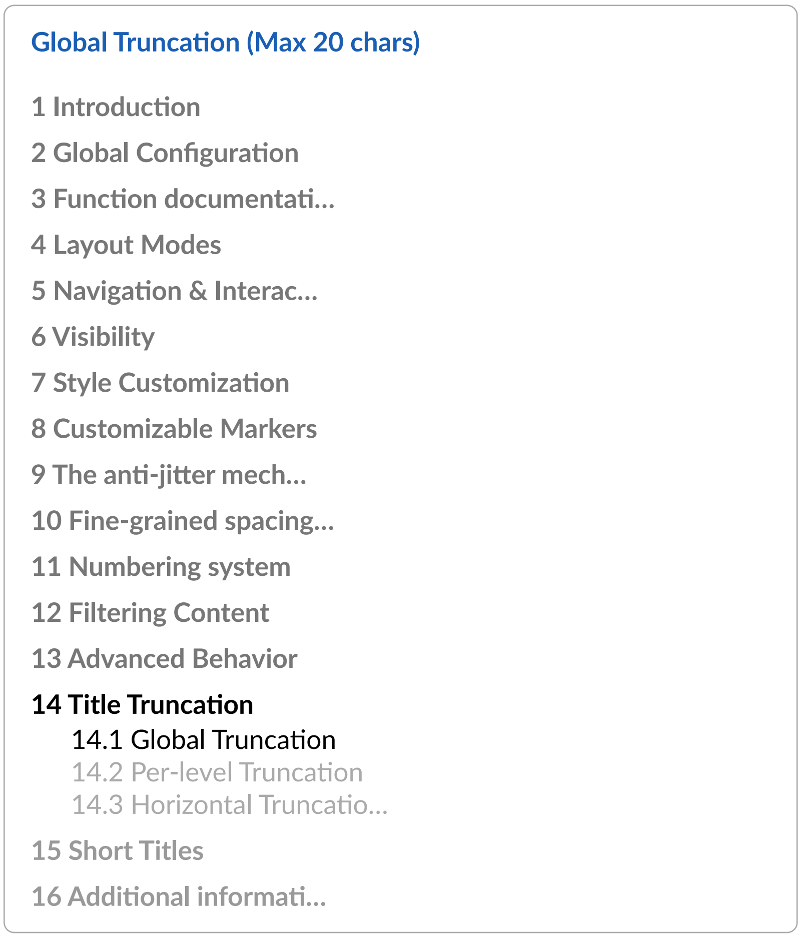
14 Title Truncation

For very long titles that might break the layout (especially in sidebars or breadcrumbs), you can use the `max-length` parameter to automatically truncate the text.

14.1 Global Truncation

Setting `max-length` to an integer applies the limit to all heading levels.

```
progressive-outline(
  max-length: 20
)
```


Global Truncation (Max 20 chars)

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14.2 Per-level Truncation

You can also pass a dictionary to define different limits for each level.

```
progressive-outline(
  max-length: (level-1: 10, level-2: 30)
)
```

Granular Truncation

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14.3 Horizontal Truncation

This is particularly useful for horizontal breadcrumbs to ensure they don't overflow the page width.

```
progressive-outline(
  layout: 'horizontal',
  max-length: 15,
  separator: ' > '
)
```

Truncated Breadcrumb

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15 Short Titles

Sometimes automatic truncation is not enough, and you want to display a completely different (shorter) text in the outline while keeping the full descriptive title in the content.

You can define a short title by placing a `#metadata("...") <short>` element immediately after the heading.

15.1 Basic Usage

By default, `use-short-title` is `false`. To use your manual short titles, you must set it to `true`.

```
progressive-outline(
  use-short-title: true,
  level-1-mode: 'current',
  level-2-mode: 'current-parent',
  level-3-mode: 'current-parent'
)
```

Using Manual Short Titles

15 Short
    15.1 Example
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15.2 Disabling Short Titles

If you want to ignore the metadata and force the original titles, keep `use-short-title: false` (the default).

```
progressive-outline(
  level-1-mode: 'current',
  level-2-mode: 'current-parent',
  level-3-mode: 'current-parent'
)
```

Original Titles (Default)

15 Short Titles

15.1 Basic Usage

15.2 Disabling Short Titles

You can also control this per-level: `use-short-title: (level-1: true, level-2: false)`

16 Additional information

It is optimized to work within presentation themes (like `progressive-outline`), but can be used in any standard Typst document.