

# Guide: Progressive Outline

## 1 Function documentation

This section details all the parameters available for the `progressive-outline` function.

Option	Type	Effect & Expected Values
<code>level-X-mode</code>	string	Defines the visibility of level X (1, 2, or 3). Values: "all", "current", "current-parent", "none".
<code>text-styles</code>	dict	Styles passed to <code>#text</code> (fill, weight, etc.). You can also use a float (e.g., 0.5) as a shortcut to inherit the active style with that opacity.
<code>spacing</code>	dict	Controls vertical space ( <code>v-between-X-Y</code> ) and horizontal indentation ( <code>indent-X</code> ) between elements.
<code>show-numbering</code>	bool	Enables or disables the display of heading numbering.
<code>numbering-format</code>	str   func	Typst numbering format (e.g., "1.1") or custom function ( <code>..n</code> ) => ....
<code>match-page-only</code>	bool	If true, considers a heading active if it is on the same page, regardless of its Y position. Useful for sidebars.
<code>filter</code>	func	A callback function ( <code>heading</code> ) => bool to programmatically include or exclude headings.
<code>marker</code>	content   dict   func	Content displayed before the item. Can be static, a dict by state, or a function ( <code>state, level</code> ) => content.
<code>clickable</code>	bool	Enables clickable links on headings. Defaults to true.

## 2 Navigation & Interactivity

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

```
progressive-outline()
```

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

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

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## 3 Visibility

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

### 3.1 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'  
)
```

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## 3.2 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

### Visibility

## 3.3 Deep nesting (Level 3)

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

### 3.3.1 Deep Component A

### 3.3.2 Deep navigation test

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

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## 4 Style Customization

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

### 4.1 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

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## 4.2 Advanced Opacity & Inheritance

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

### 4.2.1 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%)
  )
)

```

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### 4.2.2 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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## 5 Customizable Markers

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

### 5.1 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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### 5.2 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  
  )  
)
```

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## 5.3 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 }
  }
)

```

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## 5.4 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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## 6 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)  
  )  
)
```

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### 6.1 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))  
  )  
)
```

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## 7 Fine-grained spacing management

The spacing dictionary sculpts the rhythm.

### 7.1 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  
)
```

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## 7.2 Horizontal indentation

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

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

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## 8 Numbering system

The function relies on Typst's native engine.

### 8.1 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. '
```

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## 8.2 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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## 9 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`.

### 9.1 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>
)
```

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## 9.2 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)

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])
)
```

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## 9.3 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>
)
```

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## 10 Advanced Behavior

### 10.1 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

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## 11 Additional information

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