Guide: Miniframes Navigation

1 Introduction

The `render-miniframes` function generates a navigation bar showing the progress through sections and subsections using “miniframes” (dots or squares).

Previously, it required manual structure extraction. Now, it is designed to be **configured globally** via `navigator-config`, allowing a clean one-line integration in your document.

2 Global Configuration

Instead of passing parameters to every `render-miniframes` call, you can set them once at the beginning of your document:

```
#import "@preview/navigator:0.2.0": navigator-config, render-miniframes

#navigator-config.update(c => {
  c.slide-selector = metadata.where(value: (t: "ContentSlide"))
  c.miniframes = (
    fill: navy,
    active-color: white,
    inactive-color: gray,
    style: "compact"
  )
  c
})

// Now you can use a simple one-liner in your header/footer:
#set page(header: context render-miniframes())
```

3 Function documentation

`render-miniframes(structure, current-slide-num, ...)`

3.1 Parameters Reference

Most parameters default to `auto`, which means they will be resolved from the global `navigator-config` state.

Option	Type	Effect & Expected Values
`structure`	array | auto	The presentation structure. If `auto`, resolved automatically from global `slide-selector`.
`current-slide-num`	int | auto	The index of the active slide. If `auto`, resolved automatically.
`style`	string | auto	Layout mode: `"compact"` or `"grid"`. Defaults to global config.
`marker-shape`	string	`"circle"` (default) or `"square"`.
`marker-size`	length	Diameter/width of the markers. Default: `4pt`.
`active-color`	color | auto	Color of the current slide’s marker. Defaults to global config.
`inactive-color`	color | auto	Color of future slides’ markers. Defaults to global config.
`fill`	color | auto	Background color of the bar block. Defaults to global config.
`text-color`	color | auto	Color of titles. Defaults to contrast with `fill`.
`text-size`	length	Size of the titles. Default: `10pt`.

Option	Type	Effect & Expected Values
`font`	string | none	Font family for titles. Uses document default if `none`.
`align-mode`	string	Global horizontal alignment of the block: `"left"`, `"center"`, `"right"`.
`dots-align`	string	Alignment of the dots **within** their section column: `"left"`, `"center"`, `"right"`.
`navigation-pos`	string	Vertical position of dots relative to titles: `"top"` or `"bottom"`. Default: `"bottom"`.
`show-level1-titles`	bool	Whether to display the names of sections.
`show-level2-titles`	bool	In grid mode, whether to display subsection names.
`show-numbering`	bool	Whether to display heading numbers. Default: `false`.
`numbering-format`	string	Typst numbering format string (e.g., `"1.1"`). Default: `"1.1"`.
`gap`	length	Horizontal space between sections. Default: `1.5em`.
`line-spacing`	length	Vertical space between titles and dots. Default: `4pt`.
`inset`	dict | length	Internal padding of the bar block. Default: `(x: 1em, y: 0.5em)`.
`radius`	length | dict	Corner rounding of the background block. Default: `0pt`.
`width`	length	Total width of the block. Default: `100%`.
`outset-x`	length	Horizontal bleed. Useful to make the bar touch page edges.
`max-length`	int | dict | auto	Maximum length before truncation. Defaults to global config.
`use-short-title`	bool | dict | auto	Whether to use short titles. Defaults to global config.

4 Structure Extraction

To work, the navigation bar needs to know the presentation structure. Two functions are provided to extract this data from metadata markers. These are called automatically by `render-miniframes()` if arguments are set to `auto`.

4.1 `get-structure`

`get-structure(slide-selector: auto, filter-selector: none)`

Scans the document for headings and slide markers. Returns a structure dictionary.

4.2 `get-current-logical-slide-number`

`get-current-logical-slide-number(slide-selector: auto, filter-selector: none)`

Determines the index of the current slide relative to the extracted structure.

4.3 Selection Parameters

Option	Type	Description
`slide-selector`	selector | auto	The metadata type used to identify slides. Default is `(t: "LogicalSlide")`. Useful for custom engines (e.g., Polylux).

Option	Type	Description
`filter-selector`	selector | none	If provided, only pages containing this selector will be counted. Useful to exclude transition slides that might share the same slide metadata.

5 Function Signature

`render-miniframes(structure, current-slide-num, ...)`

5.1 The `structure` object

The `structure` argument is an array of section dictionaries. Each section has the following schema:

- **Section**: `(title: content, loc: location, subsections: array)`
- **Subsection**: `(title: content, loc: location, slides: array)` OR `(title: content, loc: location, subsections: array)` (if 3 levels are used).
- **Slide**: `(number: integer, loc: location)`

5.1.1 What is `loc`?

The `loc` field expects a Typst **location** object.

- **Purpose**: It defines the destination for navigation links. If a valid location is provided, clicking on the section title or the dot will take the user to that specific position in the PDF.
- **Disabling links**: If set to `none`, the element will be displayed normally but will not be clickable. This is used in the mock data of this guide.

5.2 The `current-slide-num` argument

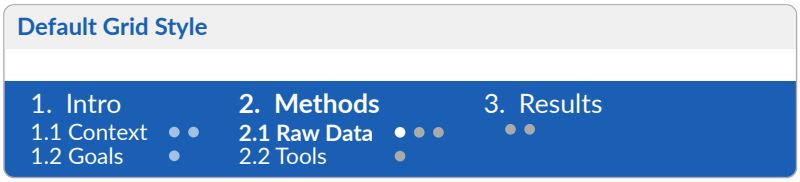
An integer representing the current slide number. The function compares this value with the `number` field of each slide in the structure to determine its state:

- **Active**: `slide.number == current-slide-num`
- **Completed**: `slide.number < current-slide-num`
- **Future**: `slide.number > current-slide-num`

6 Basic usage

By default, the navigation bar uses the `"grid"` style and shows section titles.

```
render-miniframes(structure, 4, use-short-
title: true)
```



7 Short Titles & Truncation

Like `progressive-outline`, Miniframes supports short titles and truncation. This is crucial for navigation bars which have limited horizontal space.

7.1 Collecting Short Titles

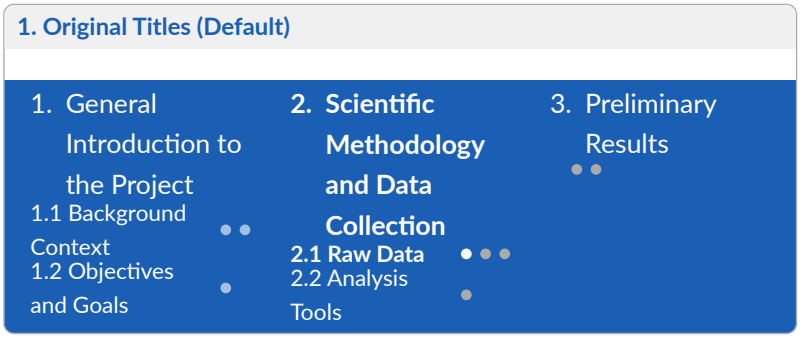
You must pass the short titles to the structure extractor.

```
#let struct = get-structure(
  all-shorts: query(<short>)
)
```

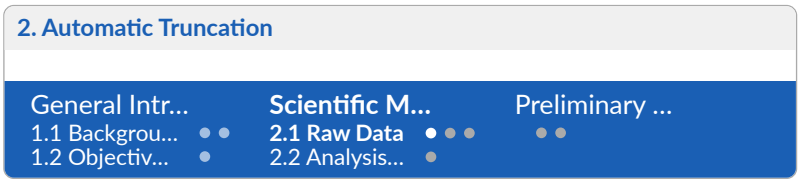
7.2 Truncation & Short Titles

Then, configure the rendering. By default, `use-short-title` is `false`.

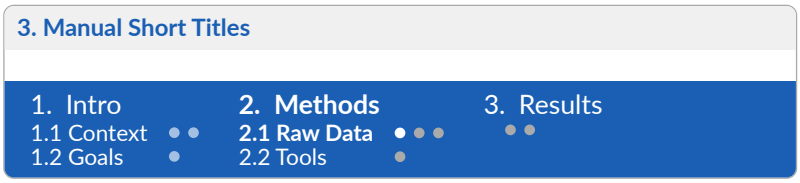
```
render-miniframes(structure, 4)
```



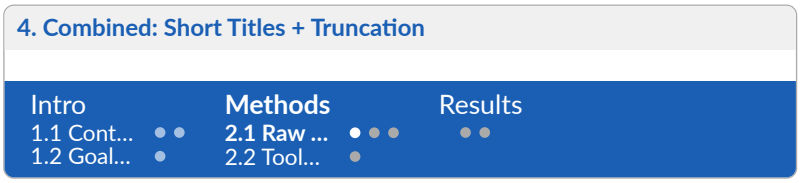

```
render-miniframes(
  structure, 4,
  max-length: 12
)
```




```
render-miniframes(
  structure, 4,
  use-short-title: true
)
```




```
render-miniframes(
  structure, 4,
  use-short-title: true,
  max-length: 8
)
```

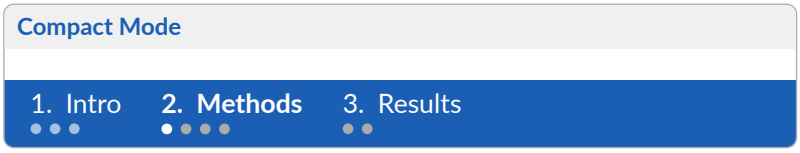


8 Layout Styles

8.1 Compact Mode

In `"compact"` mode, all slide markers of a section are grouped on a single line, regardless of subsections. This is useful for saving space in the header or footer.

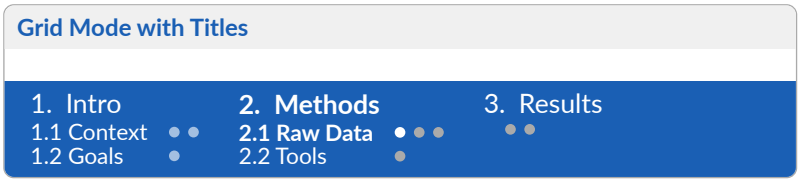
```
render-miniframes(
  structure, 4,
  style: 'compact',
  use-short-title: true
)
```



8.2 Grid Mode

The `"grid"` style is ideal for presentations with many subsections, as it aligns them vertically.

```
render-miniframes(
  structure, 4,
  style: 'grid',
  show-level2-titles: true,
  use-short-title: true
)
```

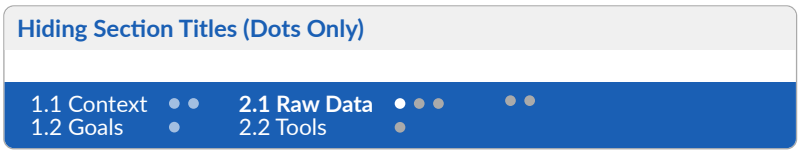


8.3 Hiding Titles

You can hide titles at different levels to obtain a minimalist bar.

```
render-miniframes(
  structure, 4,
  style: 'grid',
  show-level2-titles: false,
  use-short-title: true
)
```


```
render-miniframes(
  structure, 4,
  show-level1-titles: false,
  use-short-title: true
)
```

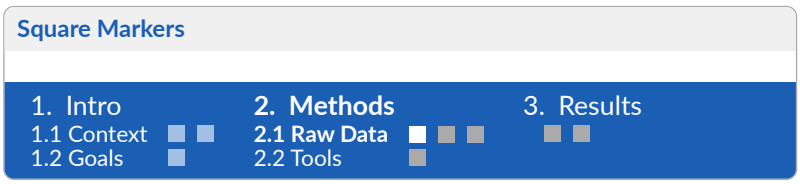


9 Customization

9.1 Markers

Change the shape and size of the progress indicators.

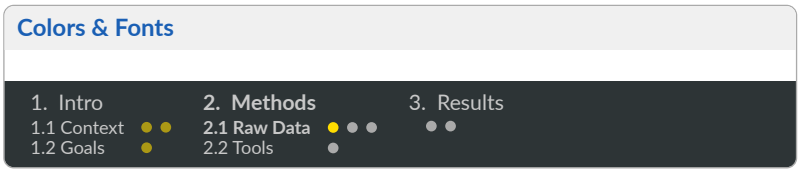
```
render-miniframes(
  structure, 4,
  marker-shape: 'square',
  marker-size: 6pt,
  use-short-title: true
)
```



9.2 Colors & Typography

Fine-tune the appearance of markers and labels.

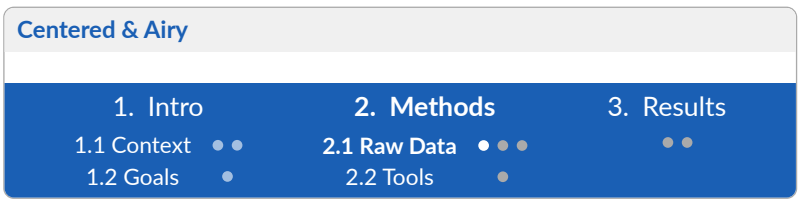
```
render-miniframes(
  structure, 4,
  active-color: yellow,
  inactive-color: gray,
  text-color: luma(200),
  text-size: 8pt,
  fill: rgb('#2d3436'),
  use-short-title: true
)
```



9.3 Alignment & Spacing

Control the rhythm and positioning of the navigation elements.

```
render-miniframes(
  structure, 4,
  align-mode: 'center',
  dots-align: 'center',
  gap: 3em,
  line-spacing: 8pt,
  use-short-title: true
)
```

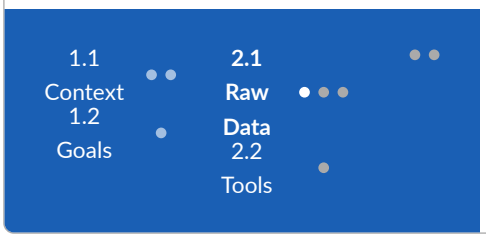


9.4 Advanced Layout

Use `inset` and `width` to integrate the bar into specific layout zones.

```
render-miniframes(
  structure, 4,
  width: 60%,
  align-mode: 'center',
  inset: 15pt,
  show-level1-titles: false,
  use-short-title: true
)
```

Compact Centered Bar




```
render-miniframes(
  structure, 4,
  radius: 10pt,
  fill: rgb('#34495e'),
  inset: (x: 2em, y: 1em),
  use-short-title: true
)
```

Rounded Corners