

# Guide: Miniframes Navigation

## 1 Function documentation

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

### 1.1 Parameters Reference

Option	Type	Effect & Expected Values
structure	array	<b>Mandatory.</b> The presentation structure typically obtained via <code>get-structure()</code> .
current-slide-num	int	<b>Mandatory.</b> The index of the active slide typically obtained via <code>get-current-logical-slide-number()</code> .
style	string	Layout mode: "compact" (all dots on one line) or "grid" (one line per subsection/subsubsection). Default: "grid".
marker-shape	string	"circle" (default) or "square".
marker-size	length	Diameter/width of the markers. Default: 4pt.
active-color	color	Color of the current slide's marker. Default: white.
inactive-color	color	Color of future slides' markers. Default: gray.
fill	color	Background color of the navigation bar block. Default: black.
text-color	color	Color of the section/subsection titles. Default: white.
text-size	length	Size of the titles. Default: 10pt.
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 <b>within</b> their section column: "left", "center", "right".
navigation-pos	string	Vertical position of dots relative to titles: "top" (dots above) or "bottom" (dots below). 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).

Option	Type	Effect & Expected Values
radius	length   dict	Corner rounding of the background block. Can be a single length for all corners, or a dictionary (e.g., (top: 5pt)) for specific corners. 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	Maximum length of titles before truncation. Ex: 10 or (level-1: 8, level-2: 15). Defaults to none.
use-short-title	bool   dict	If true, uses short titles defined via #metadata("...") <short> (must be collected via get-structure(all-shorts: ...)). Default: false.

## 1.2 Structure Extraction

To work, the navigation bar needs to know the presentation structure. Two functions are provided to extract this data from metadata markers.

### 1.2.1 get-structure

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

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

### 1.2.2 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.

### 1.2.3 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).
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.

## 2 Short Titles & Truncation

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

### 2.1 Collecting Short Titles

You must pass the short titles to the structure extractor.

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

### 2.2 Truncation & Short Titles

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

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

### 1. Original Titles (Default)

1. General	2. Scientific	3. Preliminary
Introduction to the Project	Methodology and Data	Results
1.1 Background Context	• •	• •
1.2 Objectives and Goals	•	Tools
	2.1 Raw Data 2.2 Analysis	• • •

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

### 2. Automatic Truncation

General Intr...	Scientific M...	Preliminary ...
1.1 Backgrou...	• •	2.1 Raw Data
1.2 Objectiv...	•	2.2 Analysis...

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

### 3. Manual Short Titles

1. Intro	2. Methods	3. Results
1.1 Context	• •	2.1 Raw Data
1.2 Goals	•	2.2 Tools

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

### 4. Combined: Short Titles + Truncation

Intro	Methods	Results
1.1 Cont...	• •	2.1 Raw ...
1.2 Goal...	•	2.2 Tool...

## 2.3 Function Signature

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

### 2.3.1 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)

#### 2.3.1.1 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.

#### 2.3.2 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

## 3 Basic usage

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

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

### Default Grid Style

- |  |   |                                  |
|--|---|----------------------------------|
| 1. General<br>Introduction to<br>the Project<br>1.1 Background<br>Context<br>1.2 Objectives<br>and Goals | 2. Scientific<br>Methodology<br>and Data<br>Collection<br>2.1 Raw Data<br>2.2 Analysis<br>Tools | 3. Preliminary<br>Results<br>• • |
|--|---|----------------------------------|

## 4 Layout Styles

### 4.1 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'  
)
```

### Compact Mode

- |   |   |                                  |
|---|---|----------------------------------|
| 1. General<br>Introduction to<br>the Project<br>• • • | 2. Scientific<br>Methodology<br>and Data<br>Collection<br>• • • | 3. Preliminary<br>Results<br>• • |
|---|---|----------------------------------|

### 4.2 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  
)
```

### Grid Mode with Titles

- |  |   |                                  |
|--|---|----------------------------------|
| 1. General<br>Introduction to<br>the Project<br>1.1 Background<br>Context<br>1.2 Objectives<br>and Goals | 2. Scientific<br>Methodology<br>and Data<br>Collection<br>2.1 Raw Data<br>2.2 Analysis<br>Tools | 3. Preliminary<br>Results<br>• • |
|--|---|----------------------------------|

### 4.3 Hiding Titles

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

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

### Hiding Subsection Titles (Grid)

- |   |   |                                  |
|---|---|----------------------------------|
| 1. General<br>Introduction to<br>the Project<br>• • | 2. Scientific<br>Methodology<br>and Data<br>Collection<br>• • • | 3. Preliminary<br>Results<br>• • |
|---|---|----------------------------------|

```
render-miniframes(
  structure, 4,
  show-level-titles: false
)
```

## Hiding Section Titles (Dots Only)

1.1 Background Context	• •	2.1 Raw Data	• • •	• •
1.2 Objectives and Goals	•	2.2 Analysis Tools	•	

## 5 Customization

### 5.1 Markers

Change the shape and size of the progress indicators.

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

## Square Markers

1. General Introduction to the Project	2. Scientific Methodology and Data Collection	3. Preliminary Results
1.1 Background Context	■ ■	■ ■
1.2 Objectives and Goals	■	■ ■
	2.1 Raw Data 2.2 Analysis Tools	

### 5.2 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')
)
```

## Colors & Fonts

1. General Introduction to the Project	2. Scientific Methodology and Data Collection	3. Preliminary Results
1.1 Background Context	● ●	● ●
1.2 Objectives and Goals	●	● ● ●
	2.1 Raw Data 2.2 Analysis Tools	

### 5.3 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
)
```

## Centered & Airy

1. General Introduction to the Project	2. Scientific Methodology and Data Collection	3. Preliminary Results
1.1 Background Context	● ●	● ● ●
1.2 Objectives and Goals	●	●
	2.1 Raw Data 2.2 Analysis Tools	

### 5.4 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  
)
```

### Compact Centered Bar



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

### Rounded Corners

