



margo deck

Purpose

`deck` renders one Markdown source through Margo's versioned Marpit-compatible deck profile. Slides can be separated by top-level thematic breaks or supported heading-divider pagination.

Input and output

Input is a path or `-` for stdin. The default format is HTML and the default output is stdout. `--format pdf` requires an explicit `--output PATH` or `--output -`. HTML or PDF bytes go to the selected output; failures go to stderr.

PDF decks reuse the PDF engine, page, image-overflow, and atomic output contracts. Their page margins default to zero, and relative PDF links use `strip`. Page metadata in the document still applies unless an explicit page or slide-geometry flag overrides it.

Examples

Create and render a two-slide example:

```
cat > slides.md <<'MARKDOWN'  
---  
title: Release review  
language: en  
---  
  
<!-- paginate: true -->  
  
# Release review  
  
One source, two projections.
```

Next step

Verify the artifact before publication.

MARKDOWN

```
margo check slides.md --target deck
margo deck slides.md --output build/slides.html
margo deck slides.md \
  --format pdf \
  --output build/slides.pdf \
  --slide-size 16:9 \
  --engine auto
```

Preset geometry selects a logical canvas: **16:9** is 1280×720 and **4:3** is 960×720.

Custom geometry requires all four declarations:

```
margo deck slides.md \
  --slide-size custom \
  --slide-width 1920 \
  --slide-height 1080 \
  --slide-unit px \
  --output build/slides-wide.html
```

Host-owned chrome can add a bounded confidentiality label and an icon from the Goshtoso catalog beside enabled page ordinals:

```
margo deck slides.md \
  --confidentiality-badge "Internal" \
  --pagination-icon hi-16-solid-clock \
  --pagination-icon-placement before \
  --pagination-icon-decorative \
  --output build/slides-internal.html
```

For an informative icon, omit **--pagination-icon-decorative** and provide **--pagination-icon-label**. **--print-chart-data** includes accessible exact-data tables after supported charts.

Charts in decks

Deck HTML and PDF are static slide projections. Use the default renderer or write `renderer: static`; `renderer: interactive` is intentionally rejected for the `deck` target because browser chart controls are not part of the deck artifact contract. Run the target check first to get the same actionable diagnostic that rendering would produce:

```
cat > slides.md <<'MARKDOWN'
# Revenue review

```goshtosochart
schemaVersion: 1
type: line
renderer: static
title: Weekly revenue
categories: [Mon, Tue, Wed]
series:
 - name: Revenue
 values: [12, 18, 21]
```

MARKDOWN

margo check slides.md --target deck
margo deck slides.md --format html --output build/slides.html
margo deck slides.md --format pdf --output build/slides.pdf --slide-size
16:9
```

The interactive renderer remains available for standalone HTML, sites, and `margo pdf`; PDF rasterizes the interactive chart for print. For a deck, keep the exact-data table with `-print-chart-data` when the printed artifact needs the tabular fallback. PDF decks apply compact print styling and let the table reflow to its natural height, keeping all declared rows visible in the fixed slide canvas. If a larger table still cannot fit, Margo reports the affected slide and suggests reducing the chart data or choosing a larger slide size.

Structural layouts

Structural layouts are a closed Markdown contract. A slide uses a class marker, the matching `layout` marker, source-ordered `slot` markers, and a closing `/layout` marker. Use the `_class` spelling when the class should apply only to the current slide; an unprefixed `class` directive is inherited by following slides until it changes. There must be no unmarked body text inside a structural layout, and every slot must contain non-empty Markdown.

| Layout ↕ | Slot names, in source order ↕ | Cardinality ↕ |
|----------|-------------------------------|---------------|
| columns | left, right | exactly 2 |
| sidebar | main, rail | exactly 2 |
| compare | left, right | exactly 2 |
| metrics | metric-1 through metric-4 | 3 to 4 |
| timeline | step-1 through step-6 | 3 to 6 |
| demo | code, result | exactly 2 |

The following is one complete deck containing every structural layout. The comments are part of the deck source; keep each marker on its own line and do not change its name. The `_class` markers make each slide independent when this file is copied into another deck.

```
mkdir -p build
cat > build/structural-layouts.md <<'MARKDOWN'
---
title: Structural layouts
description: The six closed structural layouts in the Margo deck profile.
language: en
lang: en
theme: modern
colorMode: light
```

```

size: 16:9
---

<!-- _class: columns -->
<!-- layout: columns -->
<!-- slot: left -->
# Context

The left column carries the premise or primary evidence.
<!-- slot: right -->
# Decision

The right column carries the consequence or supporting action.
<!-- /layout -->
<!-- speaker note: compare the two columns in source order. -->

---

<!-- _class: sidebar -->
<!-- layout: sidebar -->
<!-- slot: main -->
## Main

Use the main slot for the thesis, evidence, and reading flow.
<!-- slot: rail -->
### Rail

Use the rail for definitions, context, or a short callout.
<!-- /layout -->
<!-- speaker note: keep the rail short enough to remain subordinate. -->

---

<!-- _class: compare -->
<!-- layout: compare -->
<!-- slot: left -->
## Option A

- controlled authoring
- deterministic output
<!-- slot: right -->
## Option B

- familiar Markdown input
- bounded visual vocabulary
<!-- /layout -->
<!-- speaker note: state the decision criteria before comparing options. -->

```

```
---

<!-- _class: metrics -->
<!-- layout: metrics -->
<!-- slot: metric-1 -->
### 6

structural layouts
<!-- slot: metric-2 -->
### 2

two-column variants
<!-- slot: metric-3 -->
### 3-6

timeline slots
<!-- slot: metric-4 -->
### 0

arbitrary CSS rules
<!-- /layout -->
<!-- speaker note: read the metrics left to right. -->

---

<!-- _class: timeline -->
<!-- layout: timeline -->
<!-- slot: step-1 -->
### Input

Write Markdown and closed directives.
<!-- slot: step-2 -->
### Normalize

Resolve the class, slots, and source order.
<!-- slot: step-3 -->
### Publish

Render HTML or validate a PDF projection.
<!-- /layout -->
<!-- speaker note: pause after each step before advancing. -->

---

<!-- _class: demo -->
<!-- layout: demo -->
```

```

<!-- slot: code -->
### Source

```markdown
<!-- composition: media-split -->
<!-- slot: media -->
![[Evidence]](assets/evidence.svg)
<!-- slot: content -->
Decision
Keep source order explicit.
```

<!-- slot: result -->
### Result

The same source can produce a navigable HTML deck and a validated PDF.
<!-- /layout -->
<!-- speaker note: presenter notes are retained by the Go parser, not
painted on the slide. -->
MARKDOWN

margo check build/structural-layouts.md --target deck --diagnostics json
margo deck build/structural-layouts.md --output build/structural-
layouts.html

```

The sample carries both `language` and the deck directive `lang`: the generic Margo check uses `language`, while deck labels and localized chrome use `lang`. For a deck that is rendered only through the Go API, `lang` is the deck-local language control.

The `layout` and `/layout` markers are structural markers, not free-form CSS. `columns` and `compare` intentionally share the `left` / `right` slot contract, while `sidebar`, `metrics`, `timeline`, and `demo` use the names in the table. Slot order is preserved in the normalized model, HTML reading order, keyboard order, and PDF projection; CSS never reorders slots.

Composition presets are separate

The optional `composition` directive selects the versioned R1 catalog and has different slot contracts. For example, `media-split` uses `media` and `content`, `compare-grid` uses `item-1` through `item-4`, and `steps` uses `step-1` through `step-6`.

Do not substitute those names into an uncomposed `columns`, `compare`, or `timeline` layout. See the [composition reference](#) for the complete preset catalog and its cardinalities.

Themes, directives, and presenter notes

Deck themes are closed: `modern`, `goshtoso`, and `minimal`. `colorMode` is `light` or `dark`, and `lang` is a BCP 47-style language tag. Global directives can be placed in frontmatter or in an unprefixd HTML comment outside a fenced code block:

```
---
title: Themed deck
lang: pt-BR
theme: goshtoso
colorMode: dark
headingDivider: 2
size: 4:3
---
```

Local directives are `paginate`, `header`, `footer`, `class`, `color`, `backgroundColor`, `backgroundImage`, `backgroundPosition`, `backgroundRepeat`, `backgroundSize`, `backgroundDecorative`, `backgroundAlt`, and `composition`. An unprefixd local directive is inherited by subsequent slides; prefix it with `_` for the current slide only, for example `<!-- _class: invert -->` or `<!-- _composition: none -->`. Colors use finite theme tokens, and backgrounds use a local asset or an approved gradient token. Remote URLs, arbitrary CSS, `style`, custom Marpit themes, and unknown extension allocators are rejected.

An HTML comment that is not a recognized directive is a presenter note:

```
<!-- speaker note: explain why the right column follows the left. -->
```

Notes stay in source order and are available through `deck.Slide.Notes()` in the Go API. The CLI deck projection does not render a presenter pane or expose notes as visible slide content; keep the comments in the source when a host application needs to

read them.

Failures and diagnostics

Run the check before rendering to get source locations and recovery hints:

```
margo check build/structural-layouts.md --target deck --diagnostics json
```

| Code ↕ | Meaning ↕ | Recovery ↕ |
|--------------------------------|--|--|
| deck.layout_invalid | Unknown, mismatched, nested, or unclosed structural markers. | Use one matching layout/_class pair and close it with <!-- /layout -->. |
| deck.layout_slots_required | A structural layout has too few or too many slots. | Use the exact slot names and cardinality in the table above. |
| deck.slot_invalid | A slot is duplicated, unknown, or out of order. | Keep each slot once and preserve the required sequence. |
| deck.class_unsupported | The class is outside the closed layout/style vocabulary. | Choose a documented class such as columns, sidebar, compare, metrics, timeline, or demo. |
| deck.class_combination_invalid | Multiple structural/style classes were combined. | Select one structural class, with only the supported invert modifier when needed. |
| deck.directive_invalid | A directive value or type is outside its contract. | Use the accepted theme, color, geometry, pagination, and background values. |
| | | |

| Code ↕ | Meaning ↕ | Recovery ↕ |
|--|---|--|
| deck.directive_unsupported | An author-authored style or other unsupported directive was used. | Remove it; arbitrary CSS and custom Marpit themes are not part of the profile. |
| deck.background_invalid | A background is remote, malformed, or uses an unsupported value. | Use a local asset or one of the approved gradient tokens. |
| deck.fence_unclosed | A Markdown fence was not closed. | Close the fence before the next slot or slide separator. |
| deck.composition_invalid | A composition name or value is outside the R1 catalog. | Use a documented lowercase composition name or none. |
| deck.composition_conflict /
deck.composition_slot_invalid | A composition disagrees with its class or slot contract. | Use the composition's own family and ordered slot names. |
| cli.format_invalid | A format other than html or pdf was selected. | Pass --format html or --format pdf. |
| cli.output_required | PDF output has no explicit destination. | Pass --format pdf --output PATH or --output -. |
| cli.deck_geometry_invalid | Slide size or custom geometry is incomplete or unsupported. | Use 16:9, 4:3, or positive custom width, height, and unit values. |
| cli.deck_geometry_conflict | Slide geometry conflicts with legacy page flags. | Use slide geometry or page geometry, not both. |
| cli.deck_validator_unavailable | PDF validation has no supported Chromium-compatible validator. | Install/select a supported local Chromium and retry, or render HTML. |
| | | |

| Code ↕ | Meaning ↕ | Recovery ↕ |
|--|----------------------------------|---|
| deck.confidentiality_badge_invalid /
deck.pagination_icon_invalid | Host chrome options are invalid. | Use bounded badge text or a catalog icon; informative icons need a label. |

Existing output files are protected; add `--force` only when replacement is intentional. Engine failures otherwise use the same `pdf.*` diagnostics as `margo pdf`.

Limitations and care

Deck projection does not expose the standalone `--title`, `--lang`, `--base-url`, or `--relative-links` flags. Preset slide geometry cannot be combined with custom width, height, or unit flags; custom geometry requires a positive width and height plus an explicit unit. Legacy `--page-size` and `--orientation` must match the selected slide canvas.

Arbitrary HTML and CSS, remote backgrounds, custom Marpit themes, and unknown extension allocators remain rejected. PDF decks validate page count and page edges against the logical canvas before publishing the destination.