

Marius Wilms & Christoph Labacher

Discovering Principles for Design System Tools

code.talks Hamburg — 24.10.2019

Atelier Disko

We are ...

Marius Wilms

Technical Director at Atelier Disko

Christoph Labacher

Interaction Designer at Atelier Disko

- What are Design Systems?
- What is DSK?
- Lessons Learned: Principles

What are Design Systems?

Design Systems are
repositories of **organizational
knowledge on design.**

What are Design Systems?

Styleguide

What are Design Systems?

Styleguide

Component
Library

What are Design Systems?

Documentation
of Principles

Culture

~~Styleguide~~
Tokens

Component
Library

Case Studies

What is DSK?

DSK is a workbook for
collaboratively **creating and**
documenting Design Systems.

What is DSK?

Live Demo of DSK

Lessons Learned: Principles

Principle I

Designed for **Process**

Many tools help you with
the [outcome](#), and little
with the [process](#).

Outcome

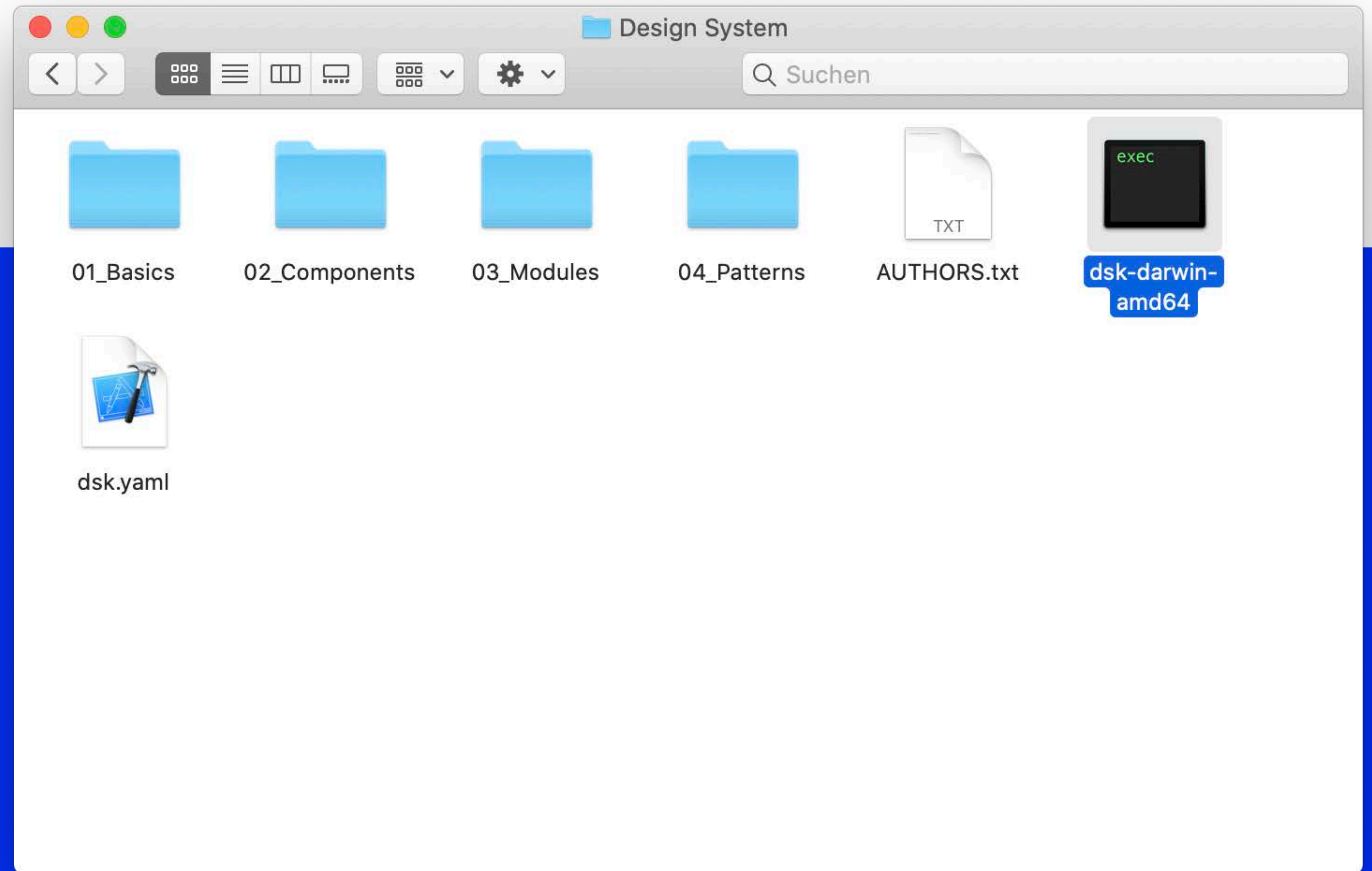
»We want a documentation
website for our Design
System.«

Process

» We need to build a design system, and we're creating it from scratch! «

Many tools help you with
the [outcome](#), and little
with the [process](#).

Process in DSK

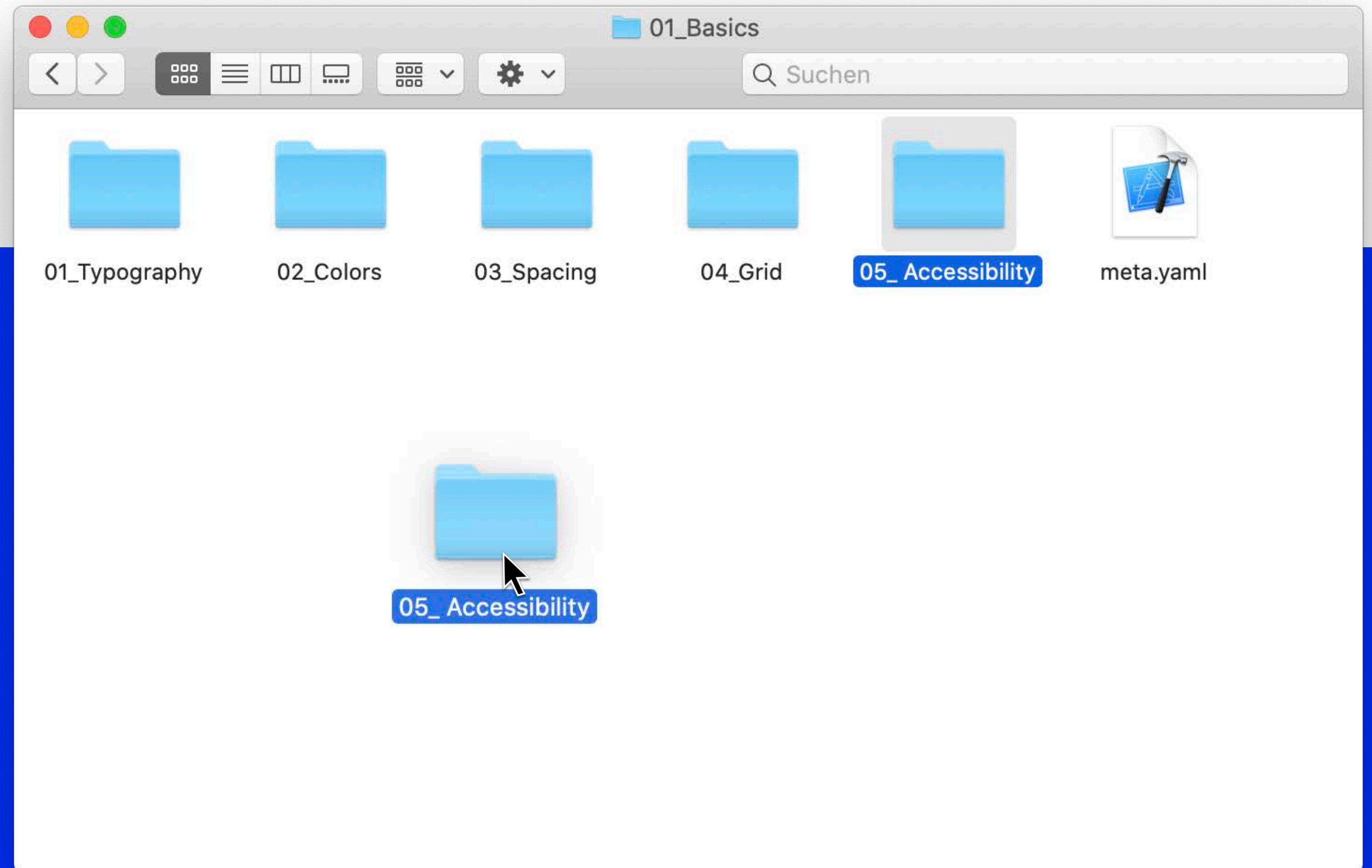


Start Locally

Direct Manipulation

Vanilla Markdown

Process in DSK



Start Locally

Direct Manipulation

Vanilla Markdown

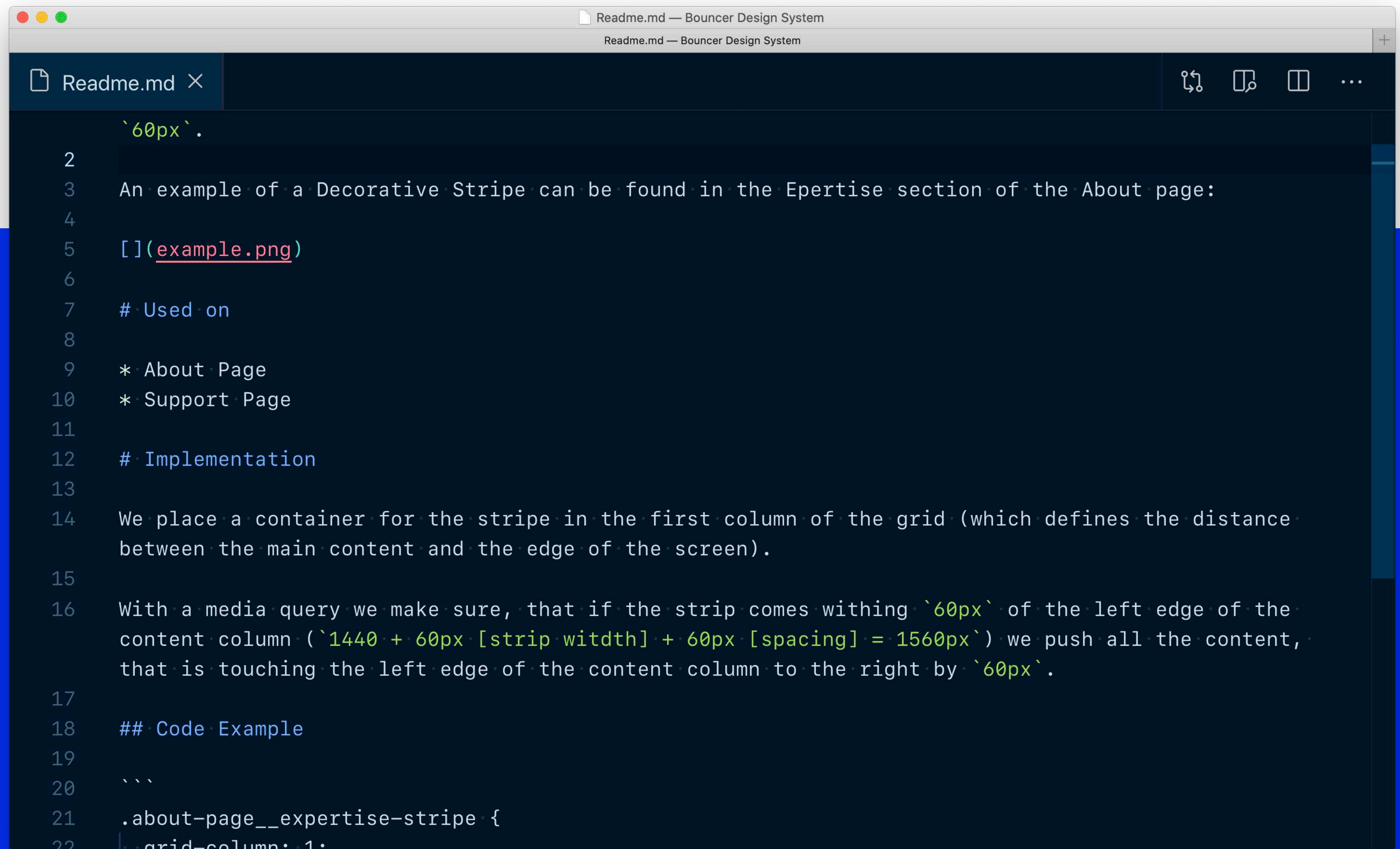
Process

in DSK

Start Locally

Direct Manipulation

Vanilla Markdown



```
Readme.md — Bouncer Design System
Readme.md — Bouncer Design System

`60px`.

2
3 An example of a Decorative Stripe can be found in the Expertise section of the About page:
4
5 [](example.png)
6
7 # Used on
8
9 * About Page
10 * Support Page
11
12 # Implementation
13
14 We place a container for the stripe in the first column of the grid (which defines the distance
  between the main content and the edge of the screen).
15
16 With a media query we make sure, that if the strip comes withing `60px` of the left edge of the
  content column (`1440 + 60px [strip width] + 60px [spacing] = 1560px`) we push all the content,
  that is touching the left edge of the content column to the right by `60px`.
17
18 ## Code Example
19
20 ```
21 .about-page__expertise-stripe {
22   grid-column: 1;
```

DSK is a tool for supporting
creativity, not a website
generator.



»For a technology to be effective, [Seymour Papert] said, it should provide easy ways for novices to get started (**low floor**) but also ways for them to work on increasingly sophisticated projects over time (**high ceiling**).«

[Resnick 2016]

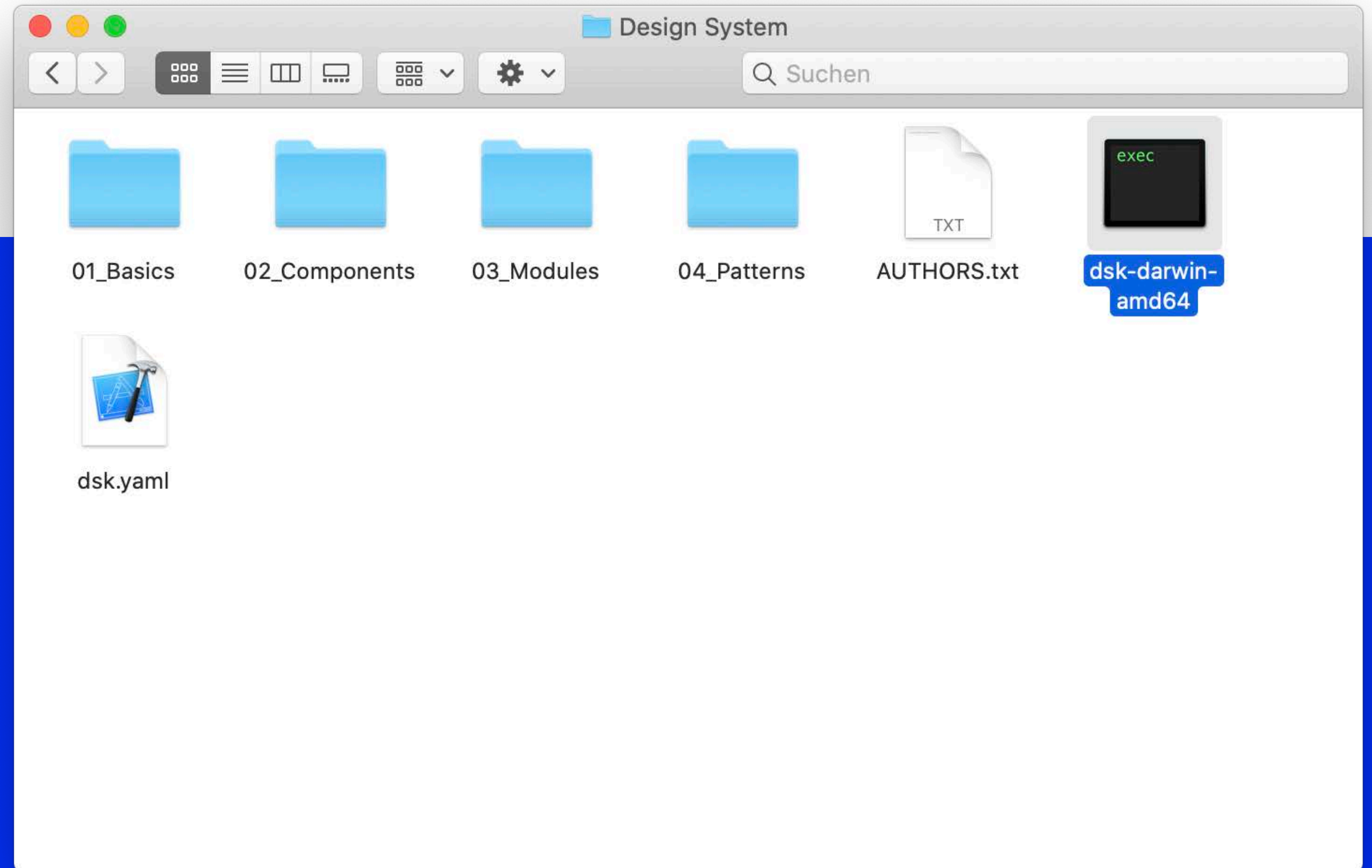


»For a more complete picture, we need to add an extra dimension: **wide walls**. It's not enough to provide a single path from low floor to high ceiling; we need to provide wide walls so that kids can explore multiple pathways from floor to ceiling.«

[Resnick 2016]

low floor — easy to start
high ceilings — scalable
wide walls — many ways

Low Floor in DSK

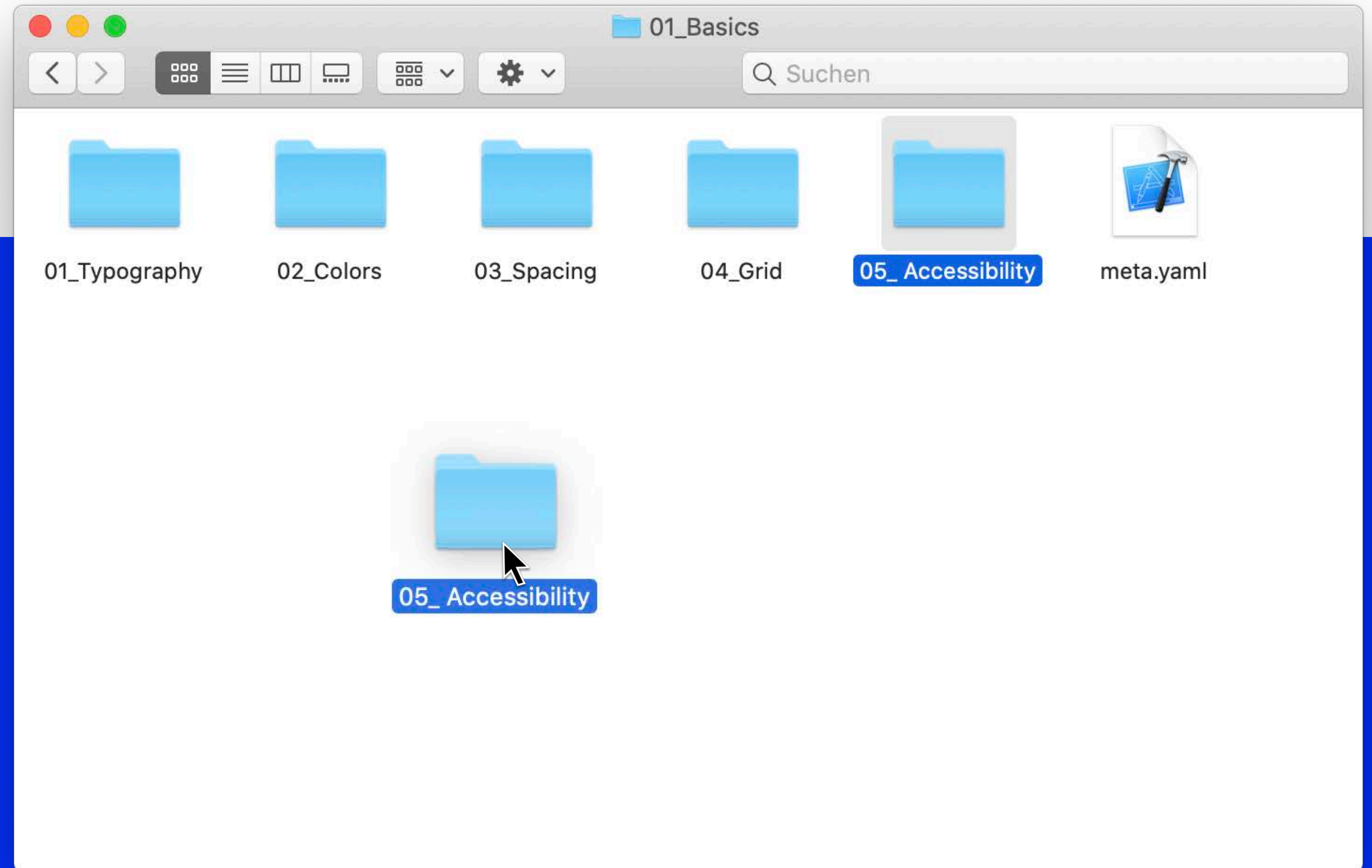


Start Locally

Direct Manipulation

Vanilla Markdown

Low Floor in DSK



Start Locally

Direct Manipulation

Vanilla Markdown

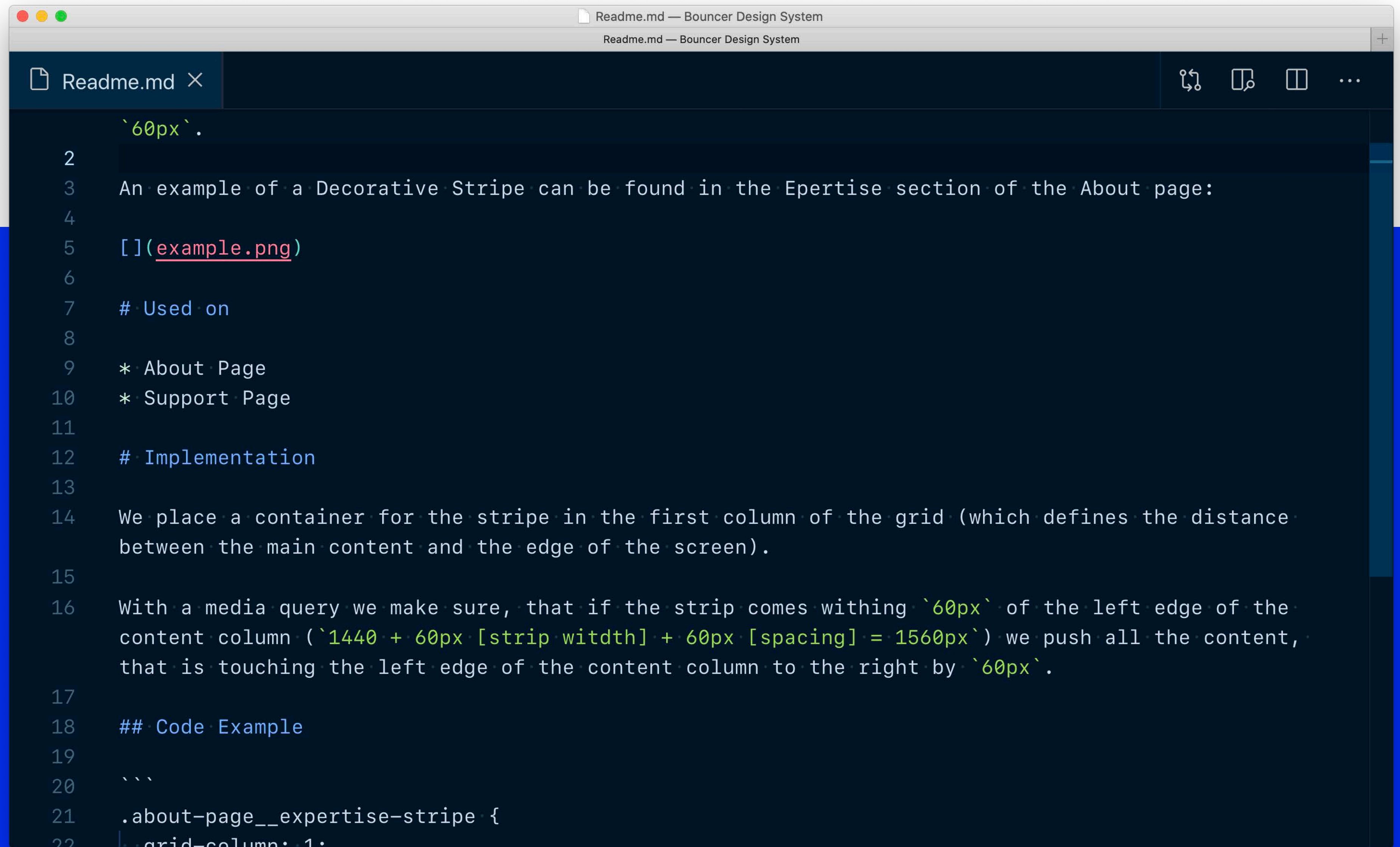
Low Floor

in DSK

Start Locally

Direct Manipulation

Vanilla Markdown



```
2   `60px`.
3   An example of a Decorative Stripe can be found in the Expertise section of the About page:
4
5   [](example.png)
6
7   # Used on
8
9   * About Page
10  * Support Page
11
12  # Implementation
13
14  We place a container for the stripe in the first column of the grid (which defines the distance
15  between the main content and the edge of the screen).
16
17  With a media query we make sure, that if the strip comes withing `60px` of the left edge of the
18  content column (`1440 + 60px [strip width] + 60px [spacing] = 1560px`) we push all the content,
19  that is touching the left edge of the content column to the right by `60px`.
20
21  ## Code Example
22
23  ...
24
25  .about-page__expertise-stripe {
26    grid-column: 1;
```

High Ceiling

in DSK

```
$ rsync -vru ./my-design-system \
    disko@web0.disko.io:/var/www/dsk
```

[Hosted](#)

[Documentation](#)
[Components](#)

[Search](#)

[Versions](#)

High Ceiling

in DSK

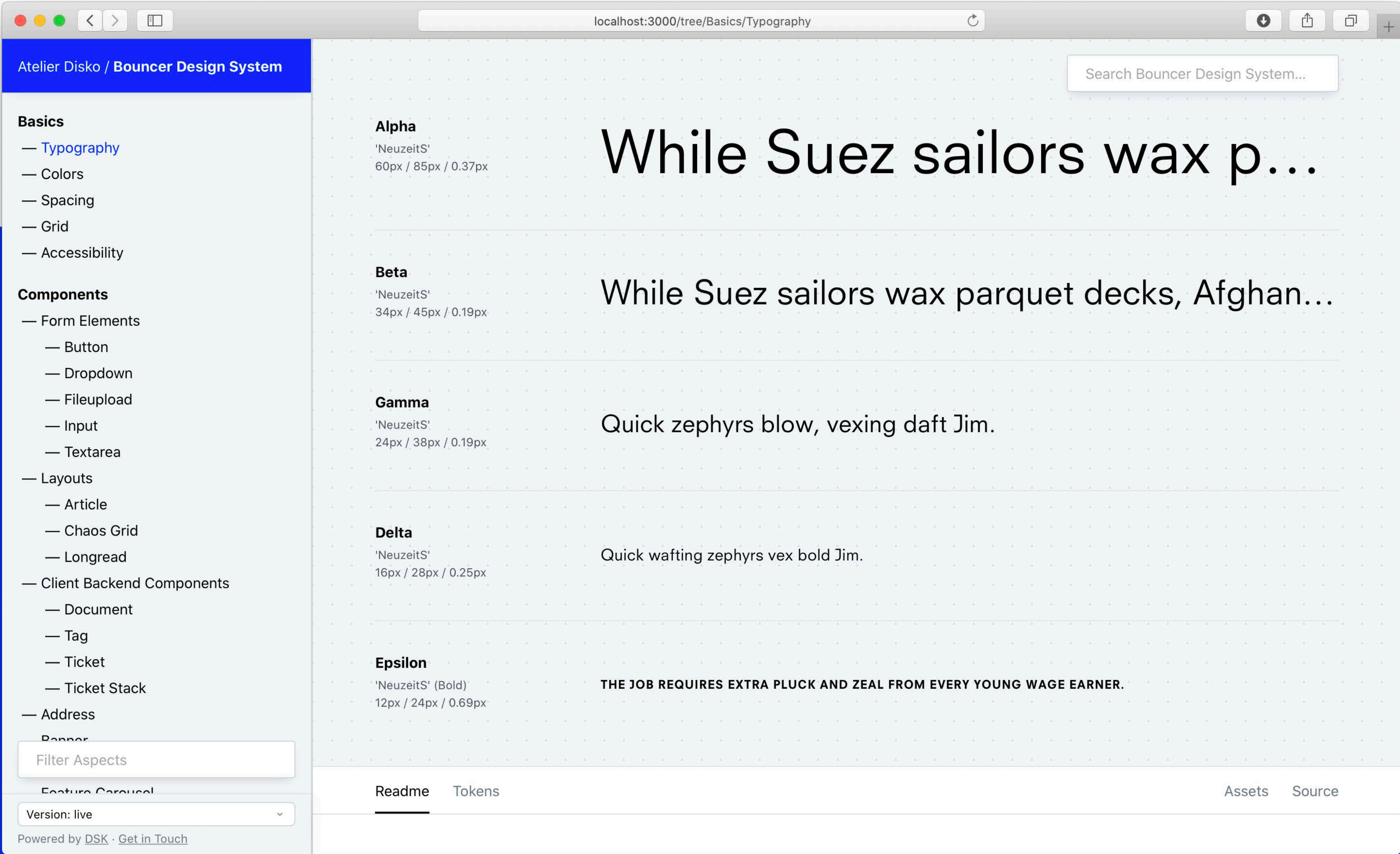
Hosted

Documentation

Components

Search

Versions



High Ceiling in DSK

Hosted

Documentation
Components

Search

Versions

Atelier Disko / Bouncer Design System

Basics

— Typography

— Colors

— Spacing

— Grid

— Accessibility

Components

— Form Elements

— [Button](#)

— Dropdown

— Fileupload

— Input

— Textarea

— Layouts

— Article

— Chaos Grid

— Longread

— Client Backend Components

— Document

— Tag

— Ticket

— Ticket Stack

— Address

— Banner

Filter Aspects

Feature Carousel

Version: live

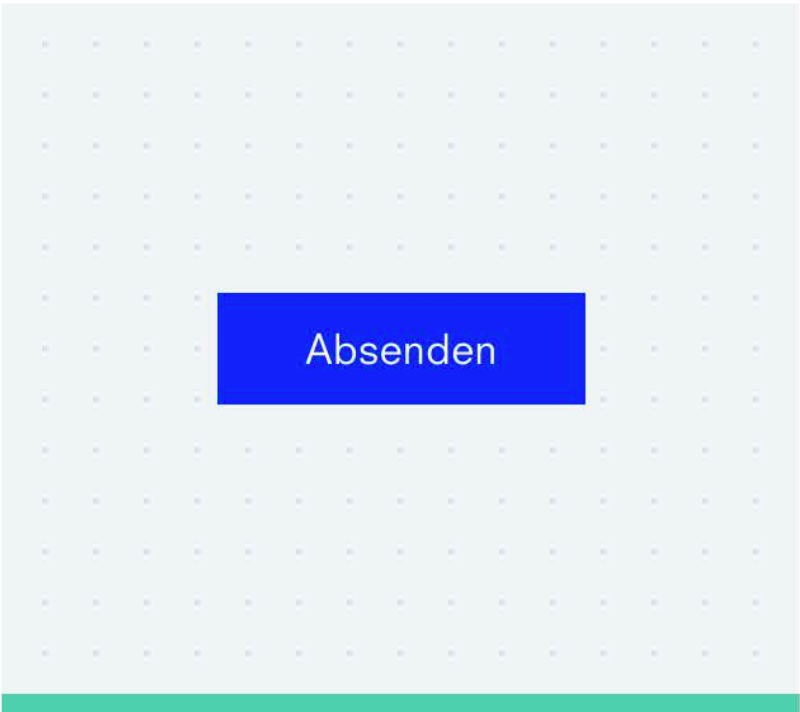
Powered by DSK · [Get in Touch](#)

localhost:3000/tree/Components/Form-Elements/Button

Search Bouncer Design System...

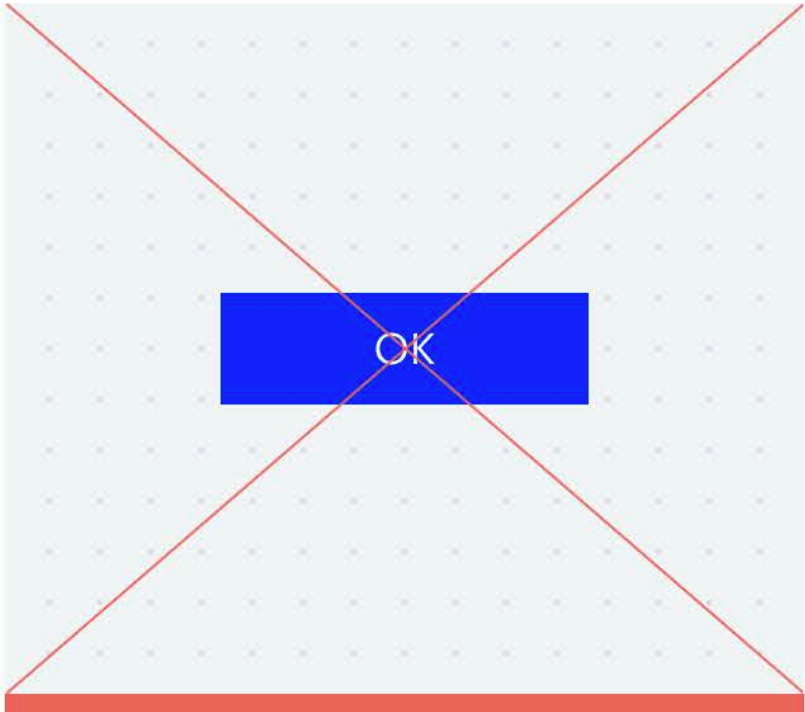
ReadmeAssetsSource

Guidelines



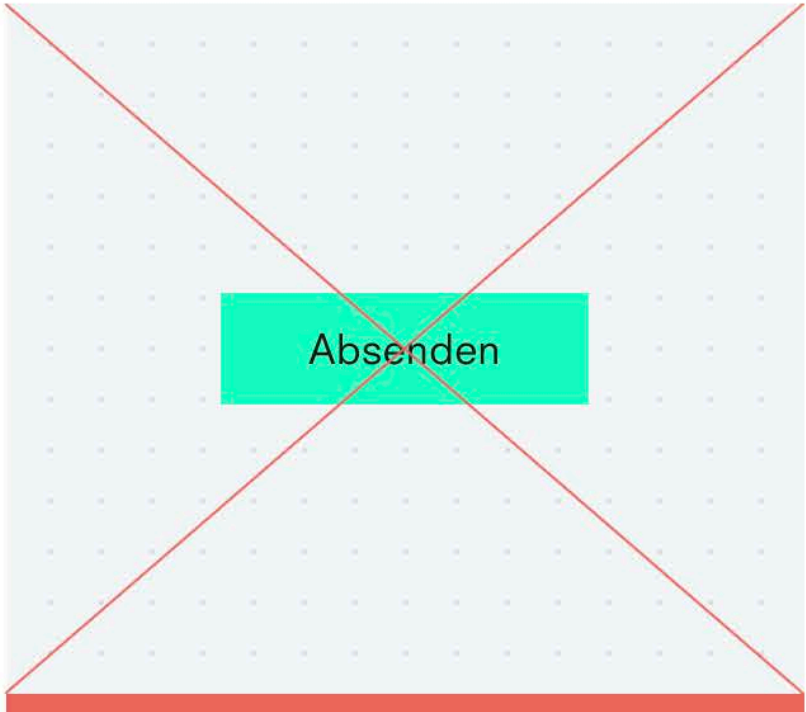
DO

Use an active verb as a label



DON'T

Use a non-descript label



DON'T

Use any color other than our signature color

PREVIOUS

Form Elements

NEXT

Dropdown

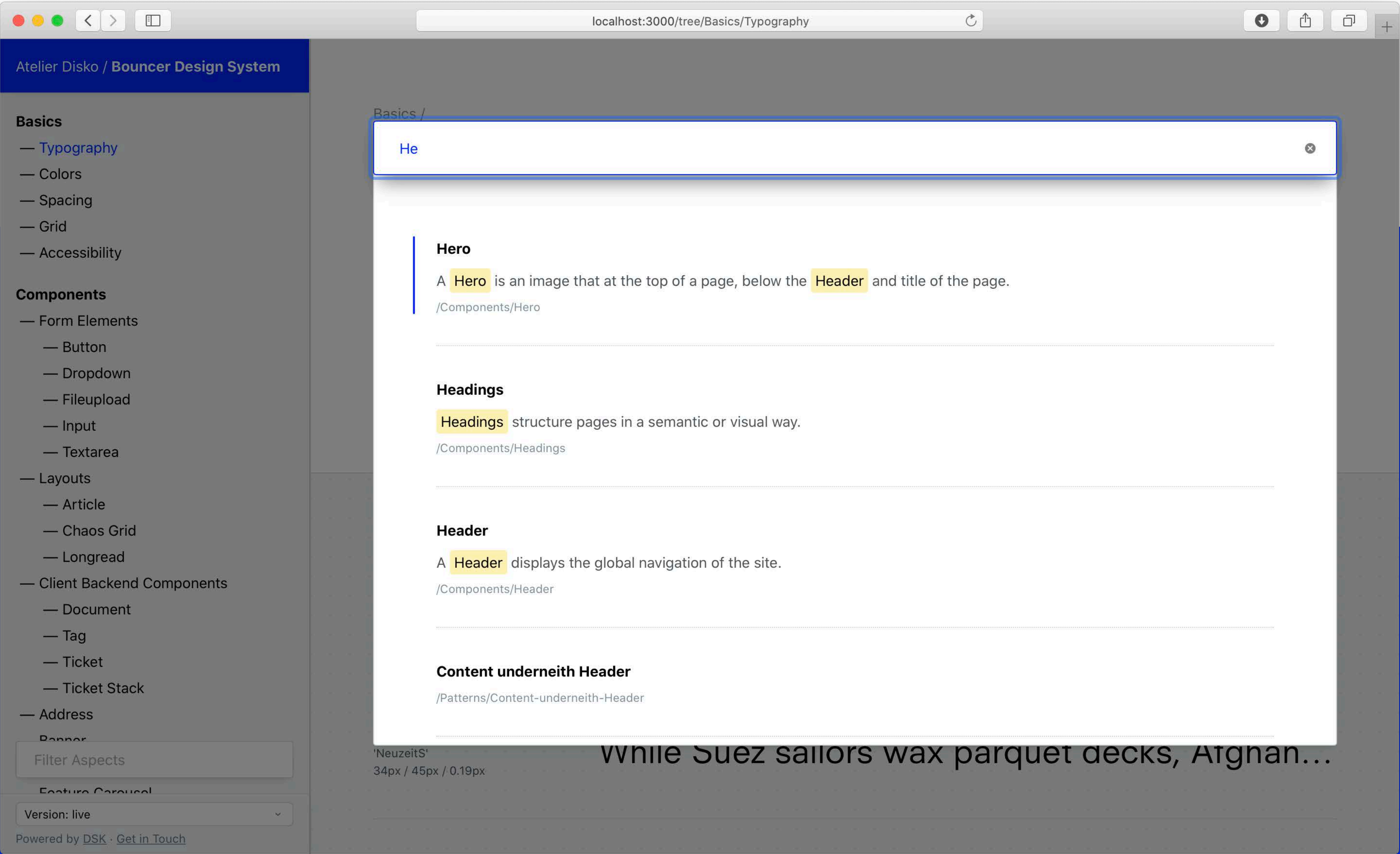
High Ceiling in DSK

Hosted

Documentation
Components

Search

Versions



High Ceiling
in DSK

Hosted

Documentation
Components

Search

Versions

- Input
- Textarea
- Layouts
 - Article
 - Chaos Grid
 - Longread
- Client Backend Components
 - Document
 - Tag
 - Ticket
 - Ticket Stack

— Address

Banner

Filter Aspects

Feature Carousel

Version: live

Powered by [DSK](#) · [Get in Touch](#)

Readme

Tokens

Desktop

The grid for Desktop is based around 10 columns of 60px. It is centered with a total max-width of 1



High Ceiling
in DSK

Hosted

Documentation
Components

Search

Versions

- Input
- Textarea
- Layouts
 - Article
 - Chaos Grid
 - Longread
- Client Backend Components
 - Document
 - Tag
 - Ticket
 - Ticket Stack
- Address

Banner

Filter Aspects

Version: version-1

Version: version-2

✓ Version: live

Powered by [DSK](#) · [Get in Touch](#)

Readme

Tokens

Desktop

The grid for Desktop is based around 10 columns
60px . It is centered with a total max-width of 1





»When evaluating the use of creativity support tools, we consider diversity of outcomes as an indicator of success.«

[Resnick et al. 2005]

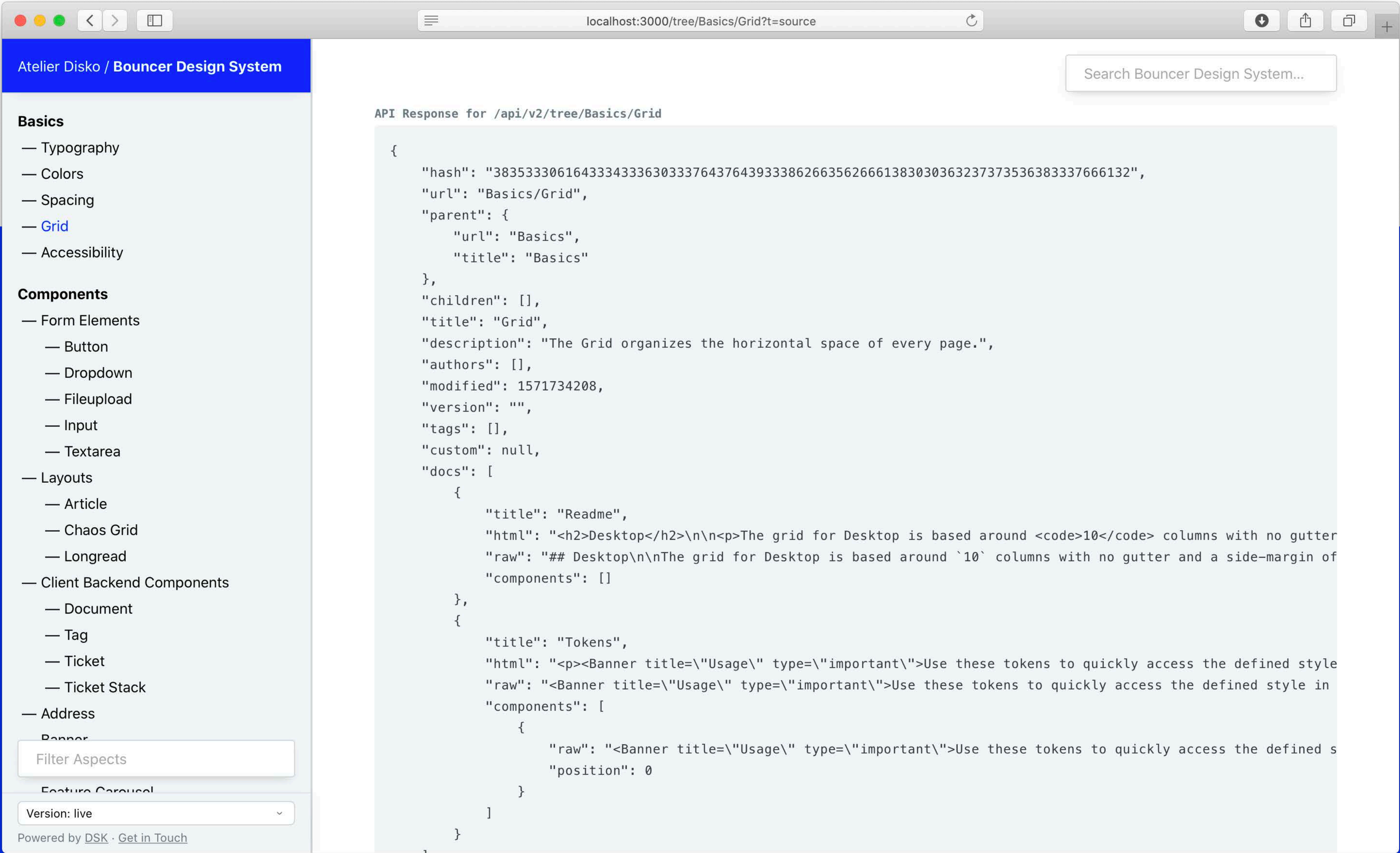
Wide Walls

in DSK

API

Custom Frontends

Custom
Documentation
Components

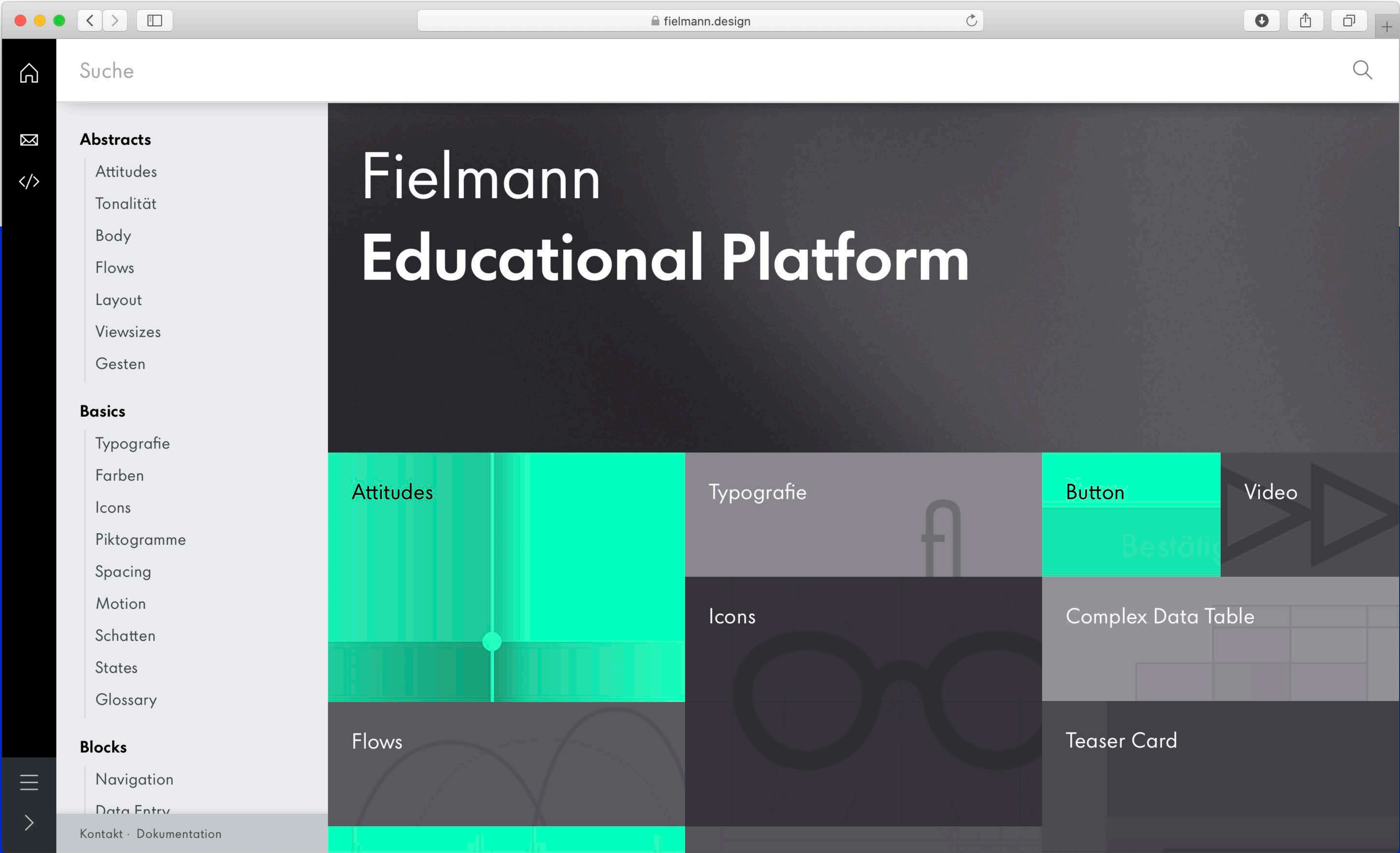


Wide Walls
in DSK

API

Custom Frontends

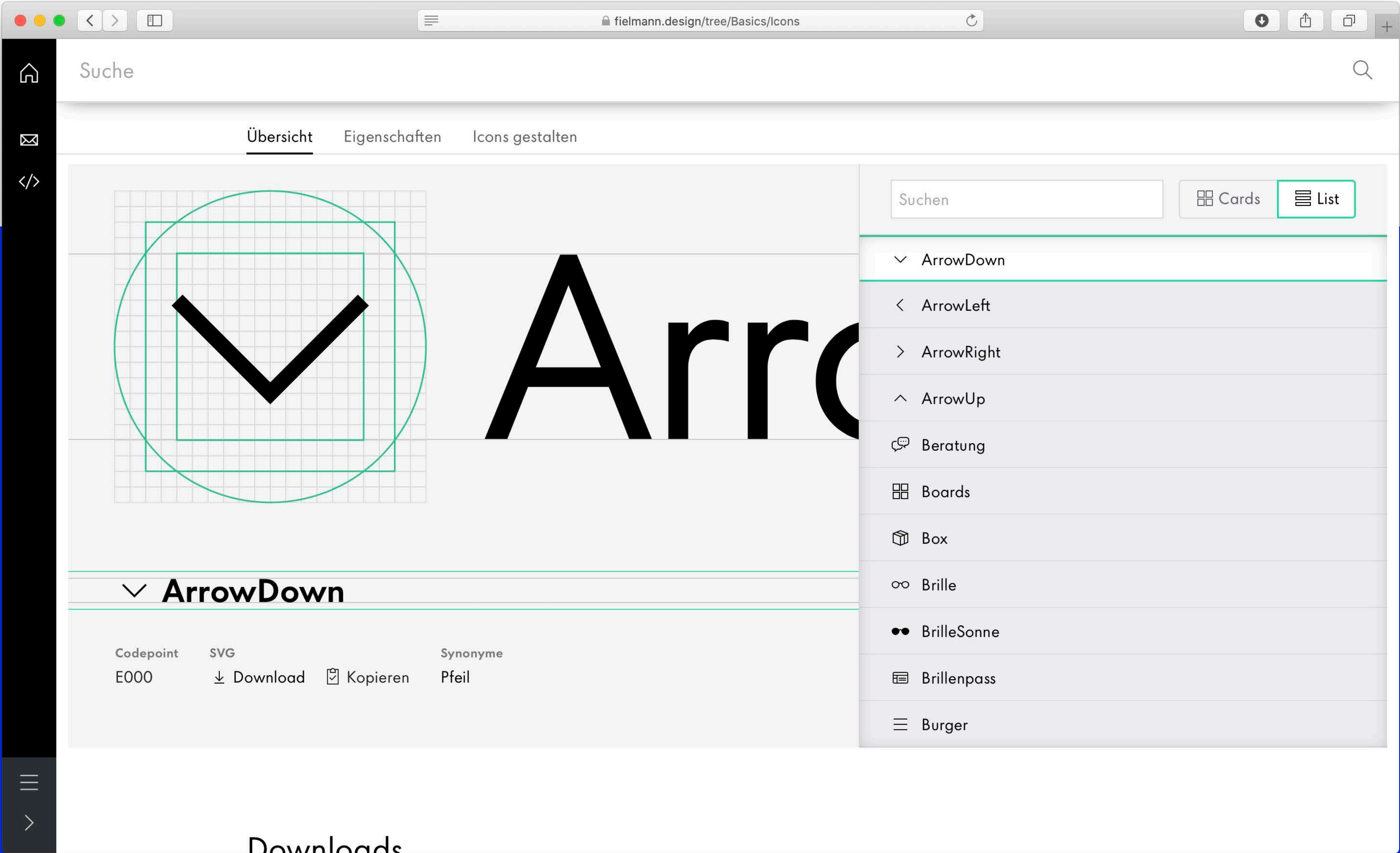
Custom
Documentation
Components



Wide Walls

in DSK

- API
- Custom Frontends
- Custom
- Documentation
- Components

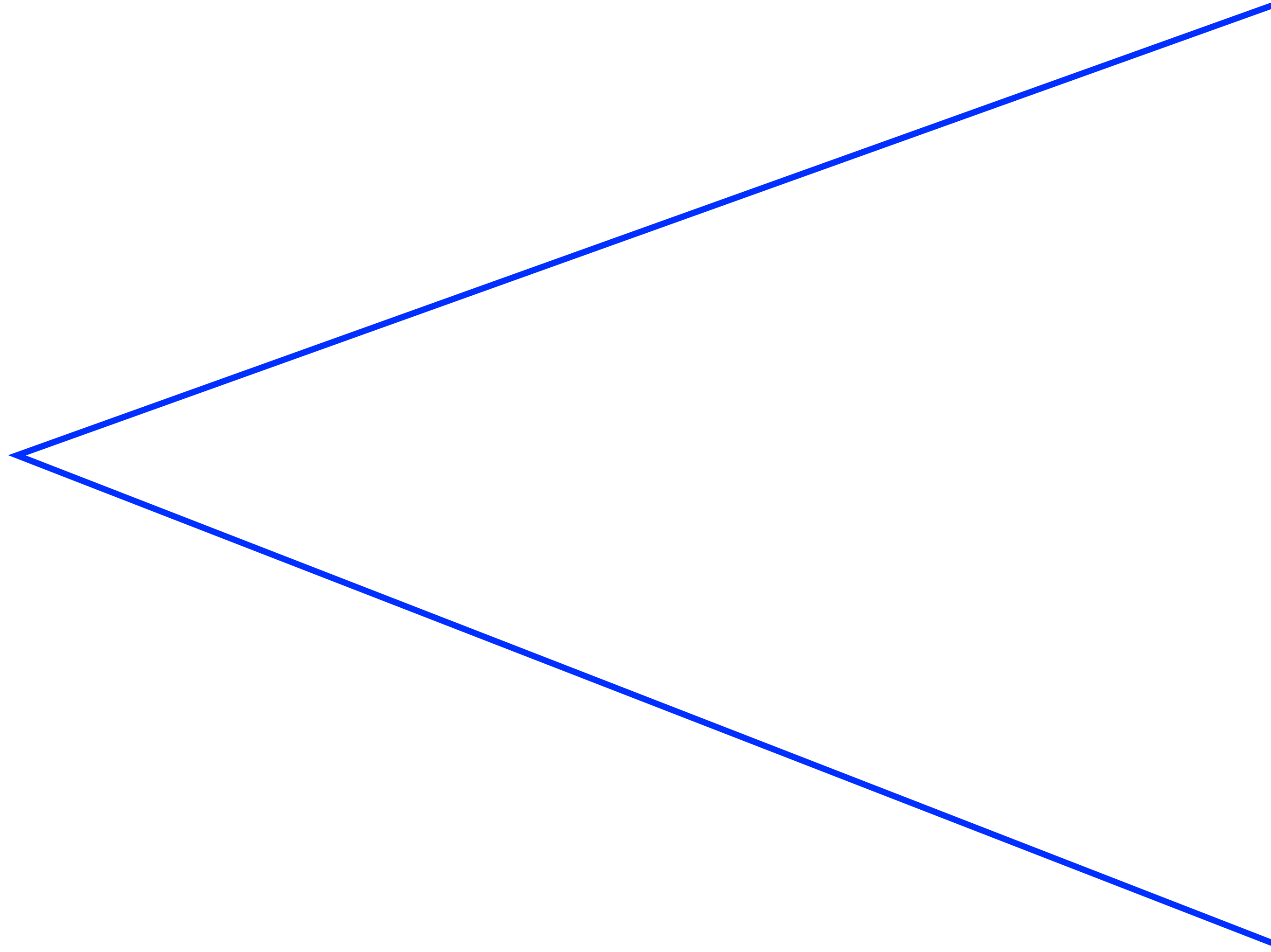


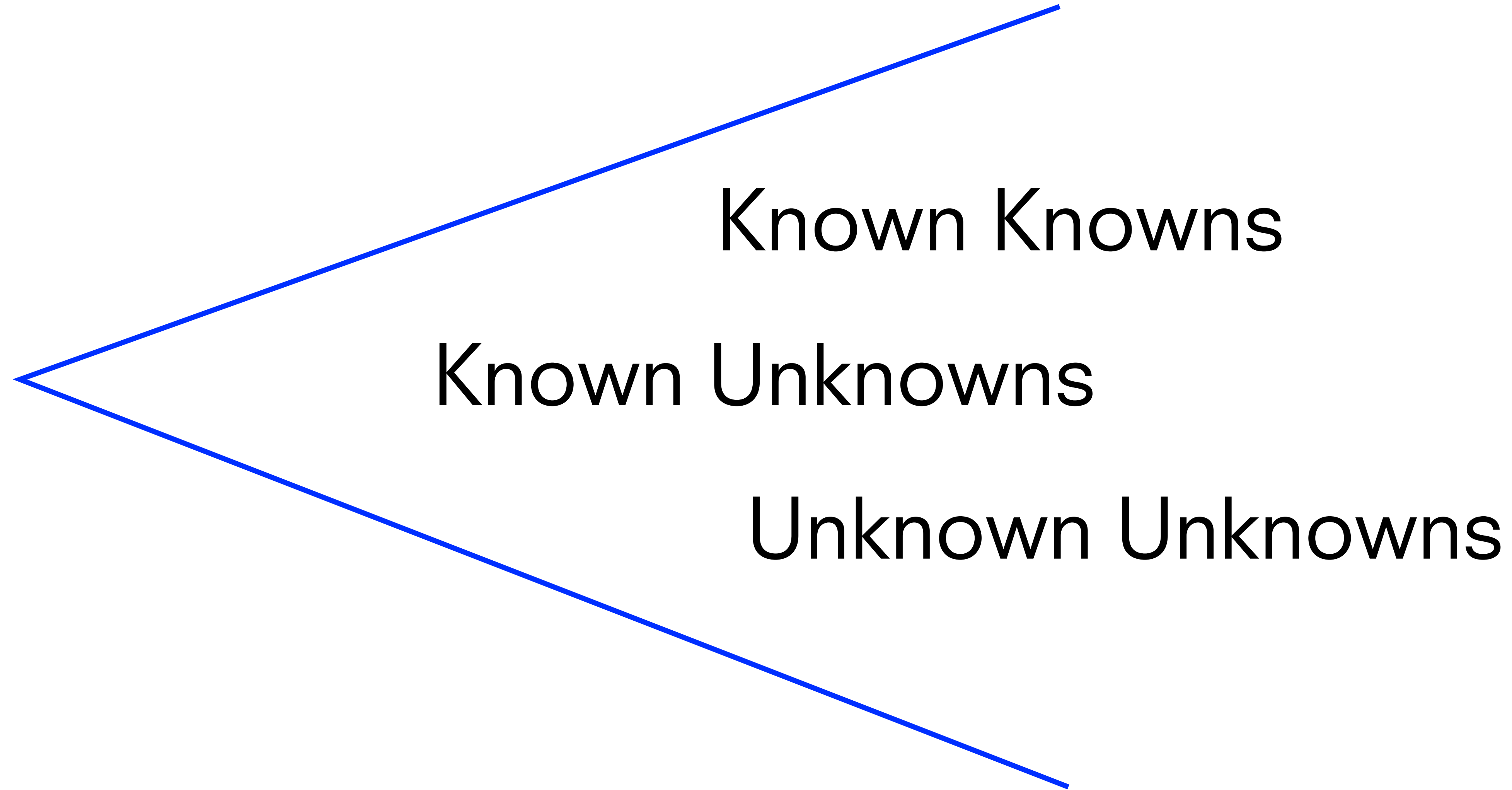
low floor — easy to start
high ceilings — scalable
wide walls — many ways

Designed for Uncertainty

Designed for Uncertainty

Principle III — Designed for [Uncertainty](#)





Principle III — Designed for [Uncertainty](#)

Designed for [Uncertainty](#)

Compass over Maps

- Develop new skills
- Reflect on past successes
- Seek support from ones you trust
- Control what you can
- Ask for help

Uncertainties in product development should [anticipated.](#)

Sustain uncertainties for
a while, resist immediate
clarification.

Have a phase of
divergence at all.

DSK is built for **content**
that is uncertain.

As users of DSK we needed a place...

... to »shape« the Design System

As users of DSK we needed a place...

... for fragments

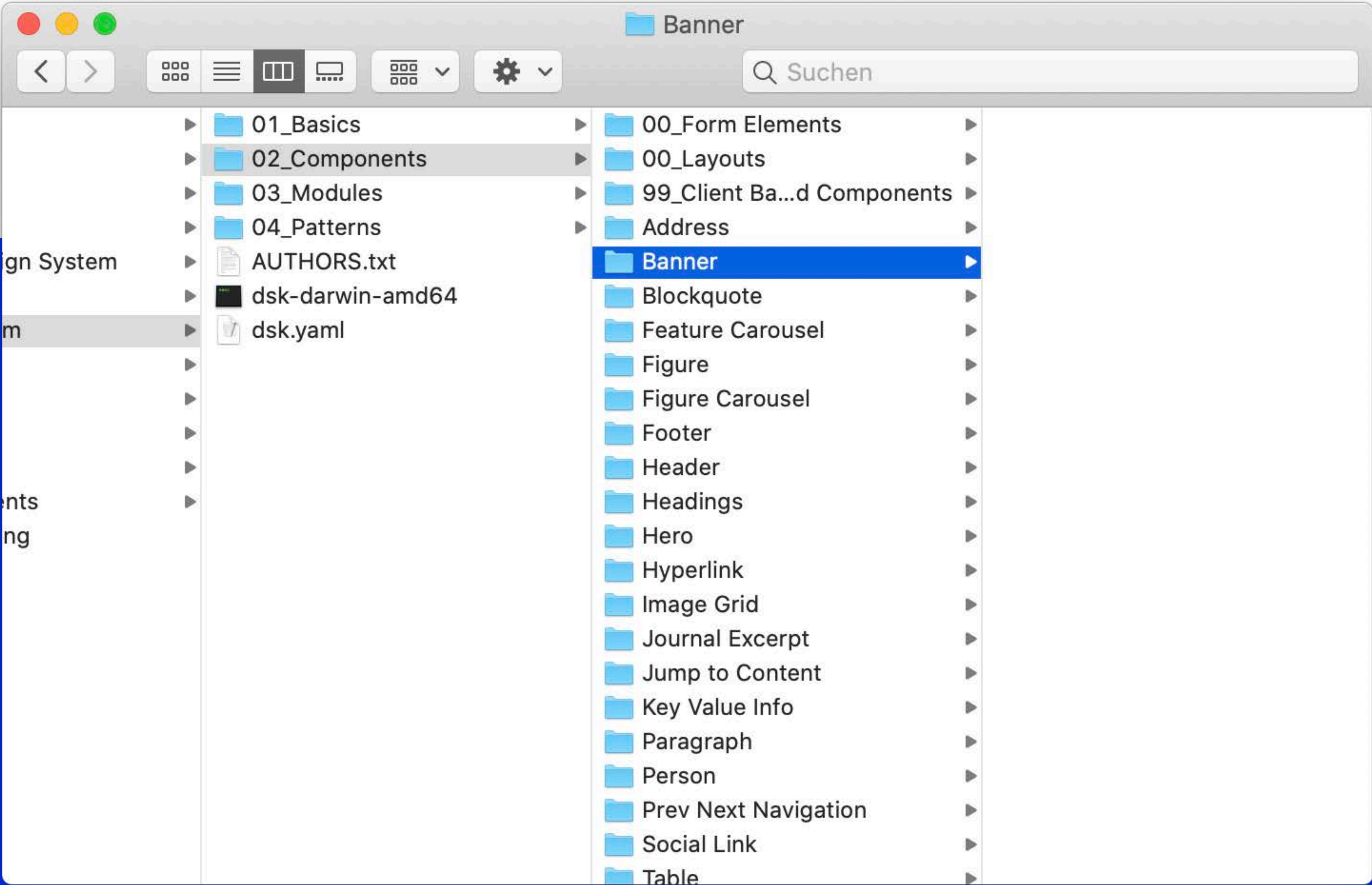
... that allows for chaos

... that allows for structure

... with flexibility to adapt

... to »shape« the Design System

Uncertainty
in DSK

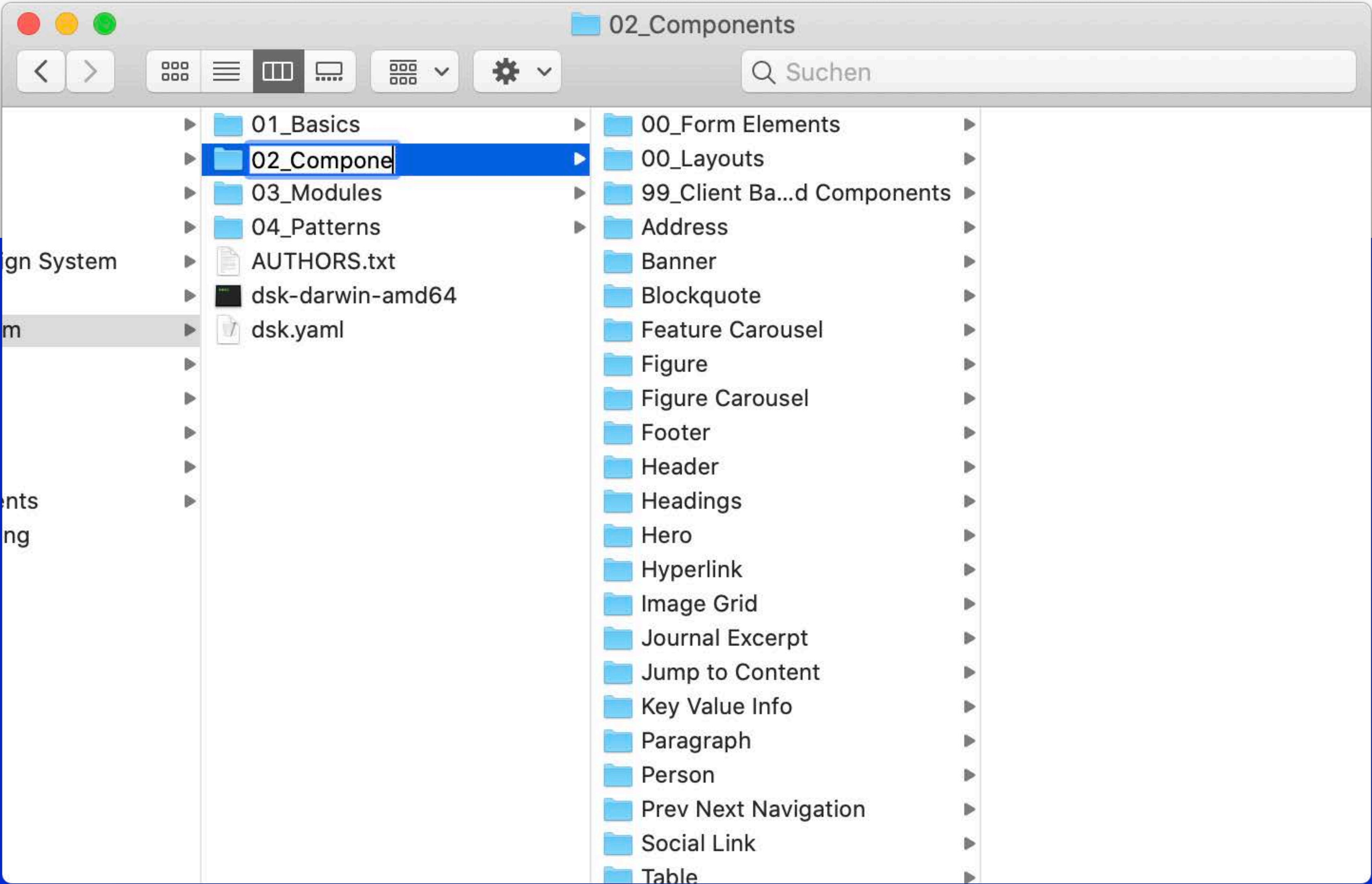


Stubs & Placeholders

Change Your Mind

Copies Are Cheap

Uncertainty
in DSK

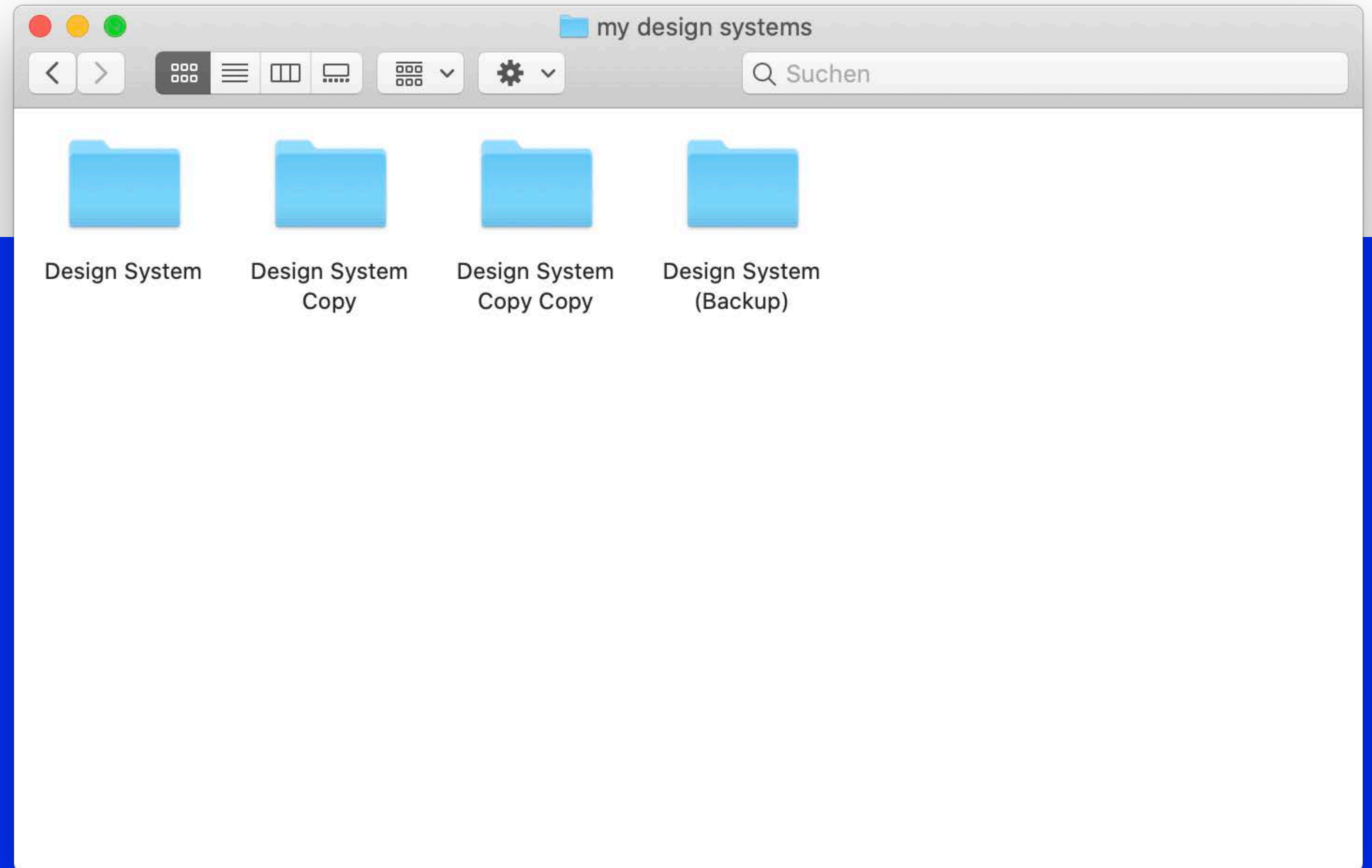


Stubs & Placeholders

Change Your Mind

Copies Are Cheap

Uncertainty in DSK



Stubs & Placeholders

Change Your Mind

Copies Are Cheap

Principle IV

Resourcefulness

Services are well practiced,
but long-term product building
is not fully understood.

No extra budget, therefore
a by-product on a running
project.

DIY?

NIH?

We are no geniuses and are
not infinitely capable.

Principle IV

Resourcefulness

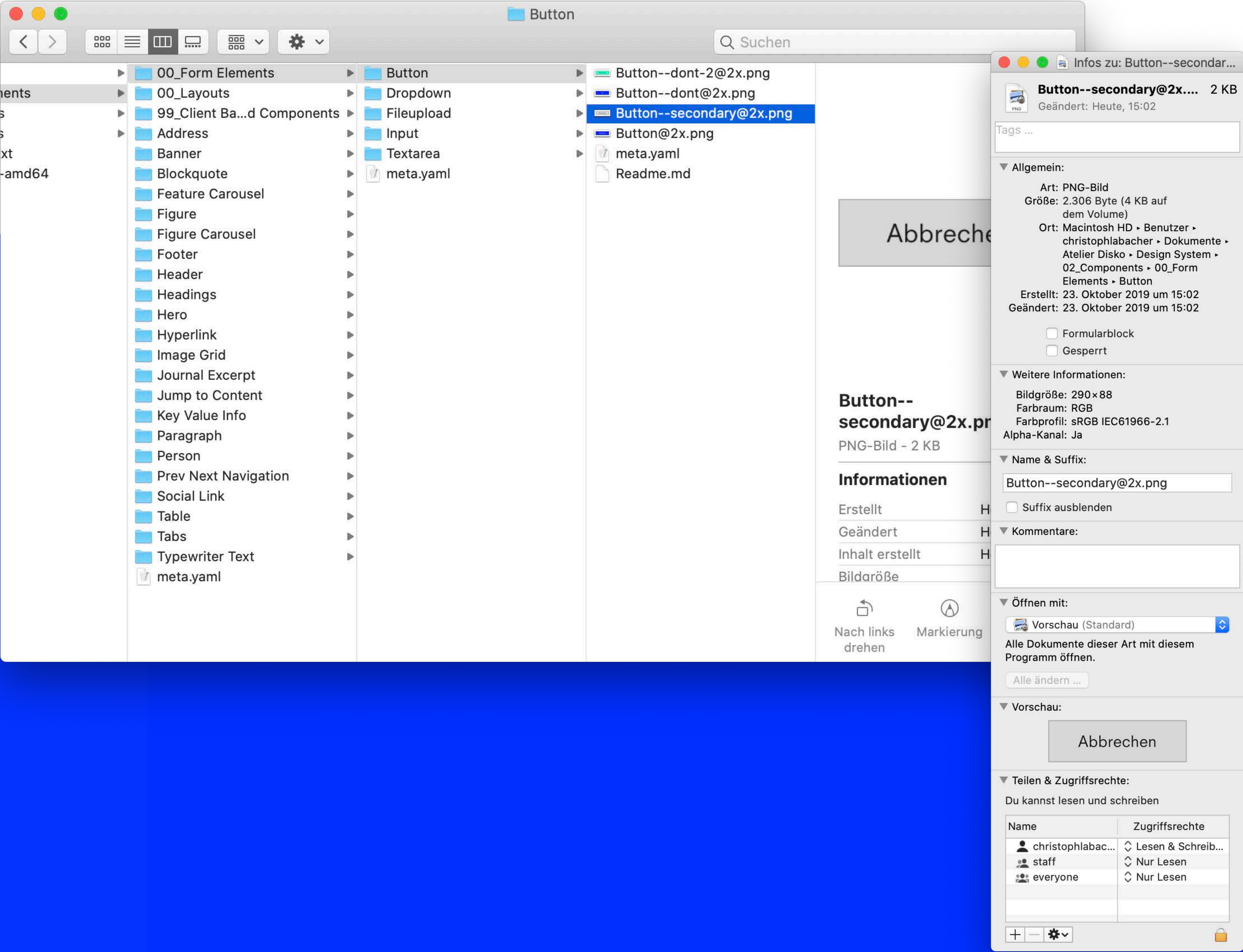
Prioritized features by our
capabilities.

Worked with **existing**
components and knowledge.

We didn't forget about our
emotional resources.

Practiced »release early —
release often« paradigm.

Resourcefulness in DSK

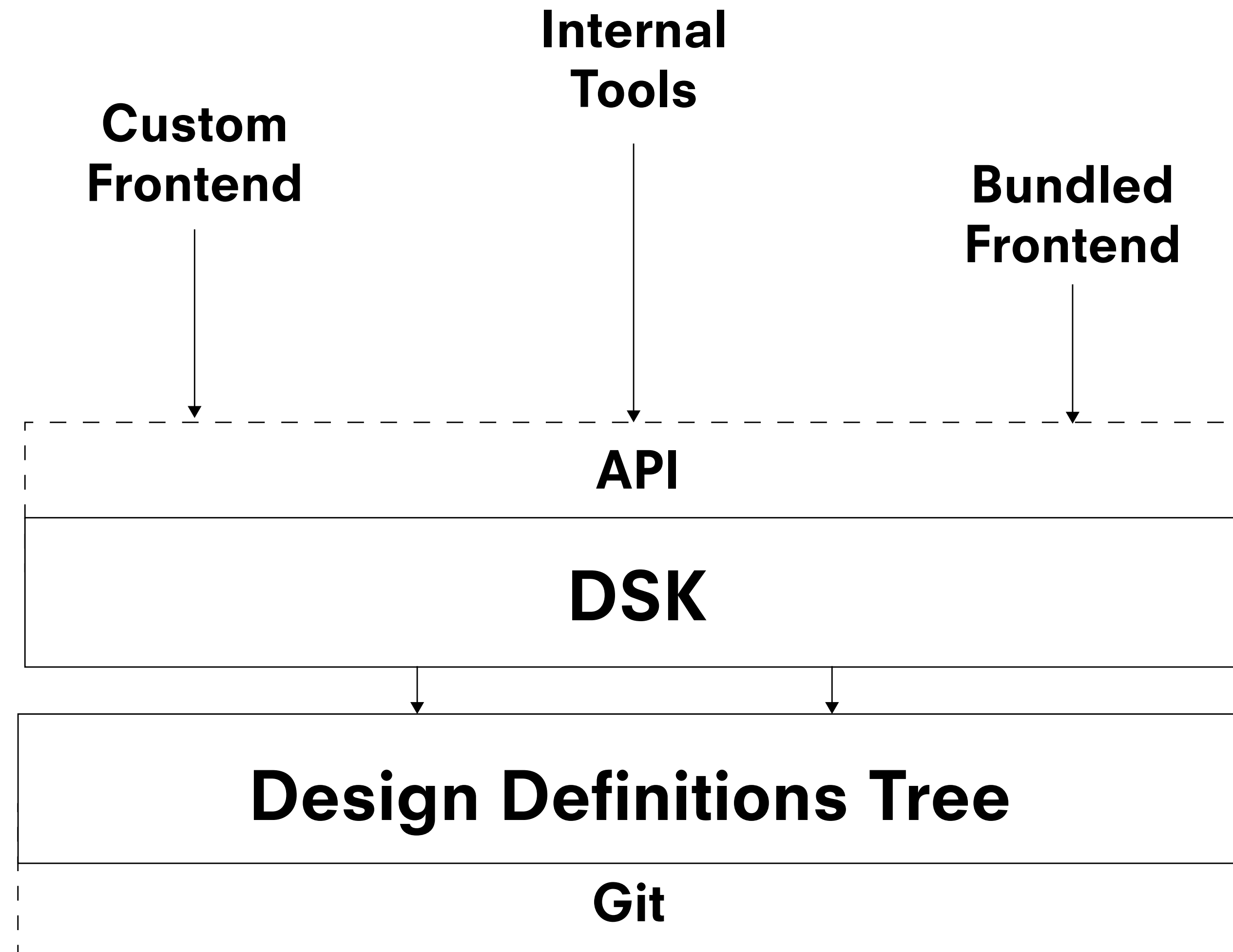


Filesystem

Architecture

Existing Formats

Resourcefulness in DSK



Filesystem

Architecture

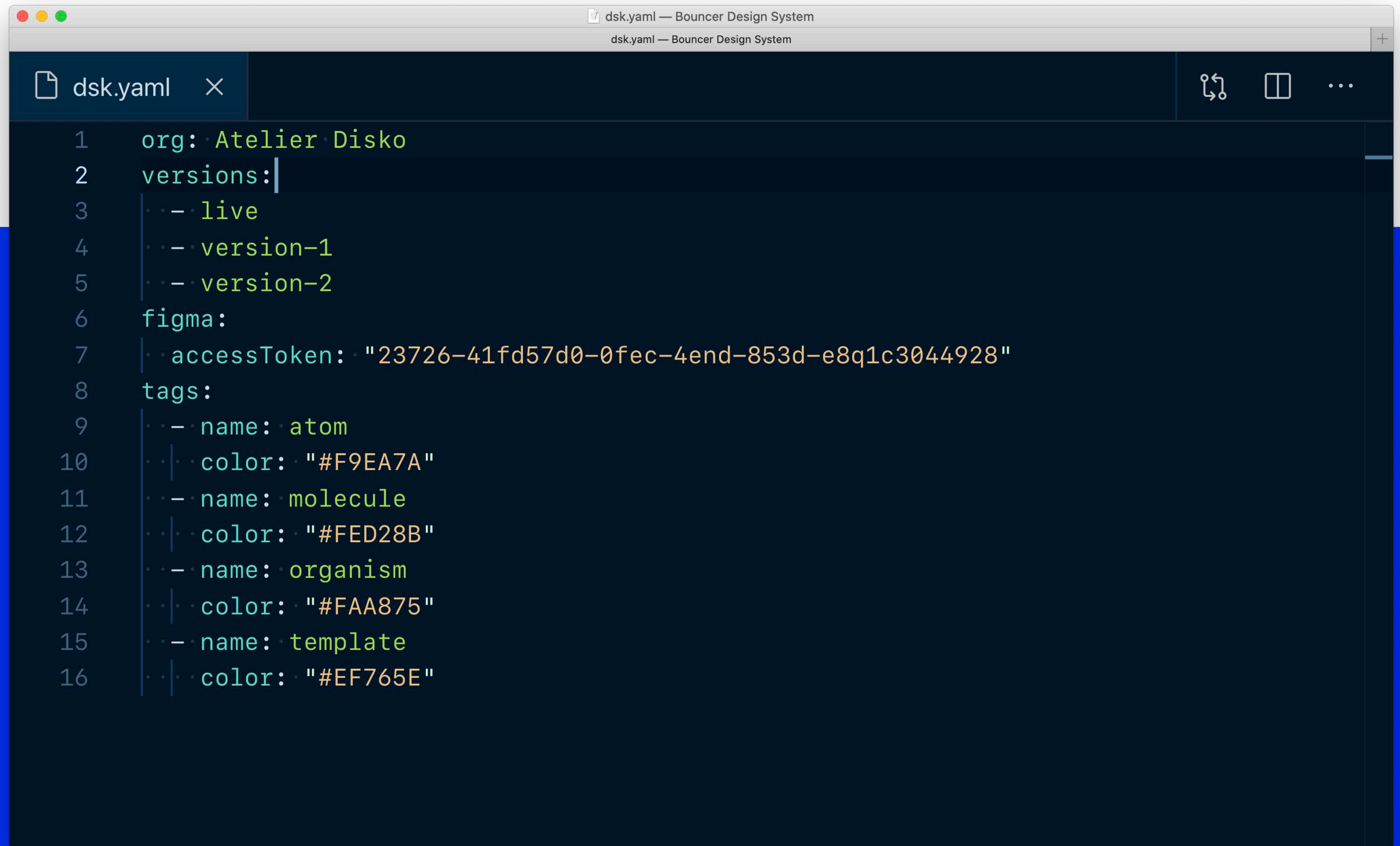
Existing Formats

Resourcefulness in DSK

Filesystem

Architecture

Existing Formats



```
1  org: Atelier Disko
2  versions:
3    - live
4    - version-1
5    - version-2
6  figma:
7    accessToken: "23726-41fd57d0-0fec-4end-853d-e8q1c3044928"
8  tags:
9    - name: atom
10     color: "#F9EA7A"
11    - name: molecule
12     color: "#FED28B"
13    - name: organism
14     color: "#FAA875"
15    - name: template
16     color: "#EF765E"
```

Principle V

Being Principled

Principles guide you and help
develop a coherent product.

Some principles are **worth sticking to** through the whole lifetime of a product.

Sometimes it's time to let go.

let go — zero configuration
sticked to — low floor
questioning — format agnostic

You don't need a principle to start: **discover** them.

Thank You!

rundsk.com

github.com/atelierdisko/dsk

atelierdisko.de

Data Entry

— Data Entry

- Components
- Counter
- DatePicker
- MultiSelect
- SingleSelect
- Enumeration
- RadioButton
- TextField
- Email
- Number
- Password

Displaying Data

- Badge
- Carousel
- ExpandableSection
- Hyperlink
- List

Data E

- Con
- C
- D
- M
- S
-
-
- Te

Displa

- Badg
- Carc
- Exp
- Hype
- List

References

- **Low Floor, High Ceiling:** Resnick, 2016, <https://design.blog/2016/08/25/mitchel-resnick-designing-for-wide-walls/>
- **Photography of Seymour Papert:** https://commons.wikimedia.org/wiki/File:Seymour_Papert.jpg
- **Photography of Mitchell Resnick:** https://en.wikipedia.org/wiki/Mitchel_Resnick#/media/File:Mitchel_Resnick.jpg
- **Wide Walls:** Resnick et al., 2005, <http://www.cs.umd.edu/hcil/CST/Papers/designprinciples.htm>
- **Double Diamond:** British Design Council, 2005, <https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond>
- **Compass over Maps:** Ito, 2012, <http://blog.media.mit.edu/2012/07/compasses-over-maps.html>
- **Tips for Dealing With the Stress of Uncertainty:** American Psychological Association, 2017, <https://www.apa.org/helpcenter/stress-uncertainty>