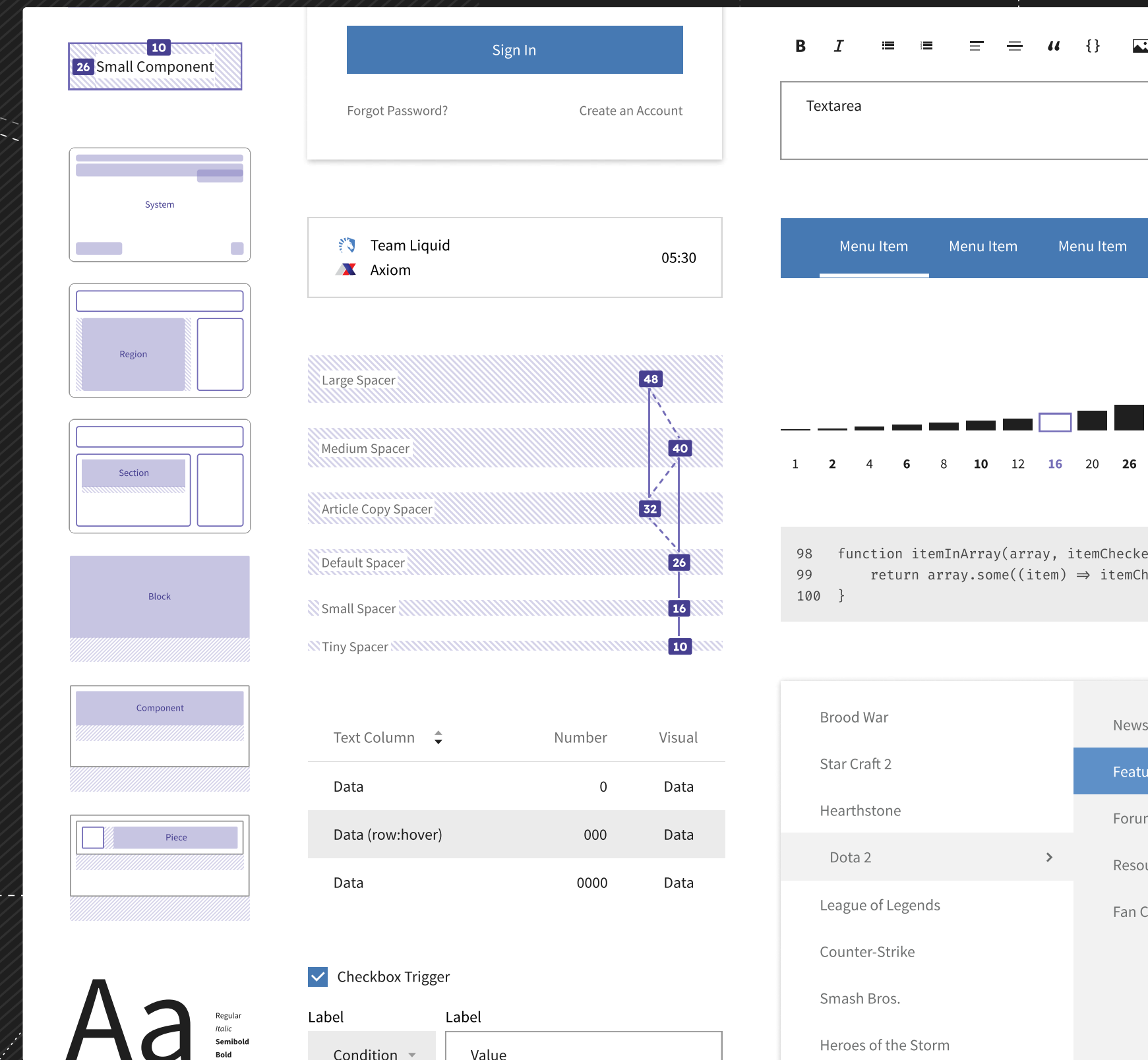


*Team Liquid Design System*

# Designing Modular Systems to Enable a Sustainable Future

*My Role: Project Lead, Design Lead, Writer*



# 1. Context



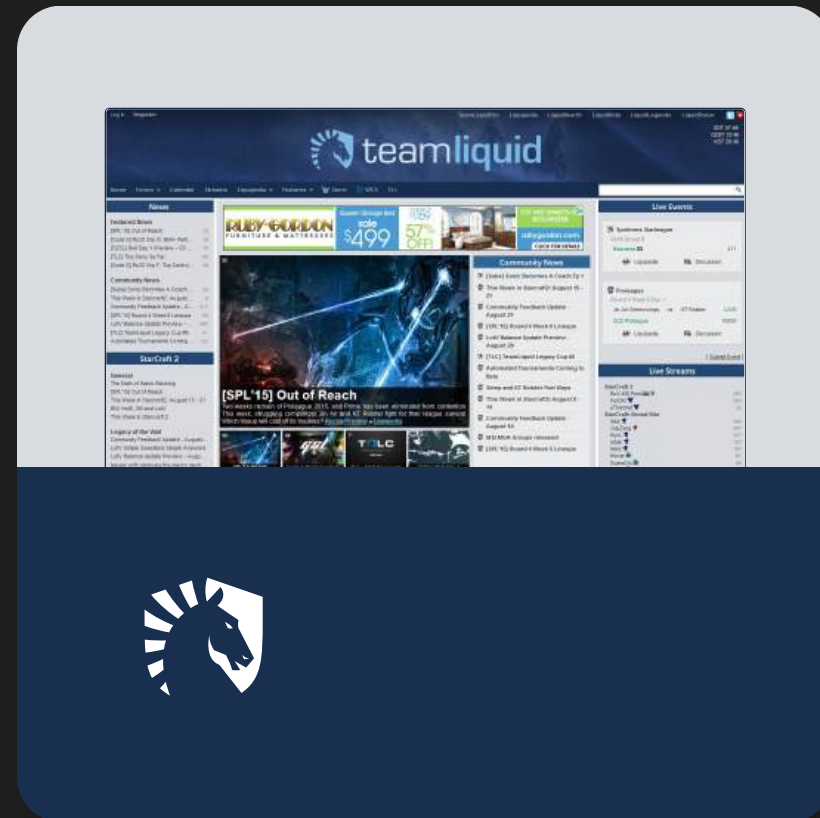
## Internal Challenges

- **1–2 Product People**
- **Lots of Friction**
- **Poor User Experiences**
- **Always Starting from 0**

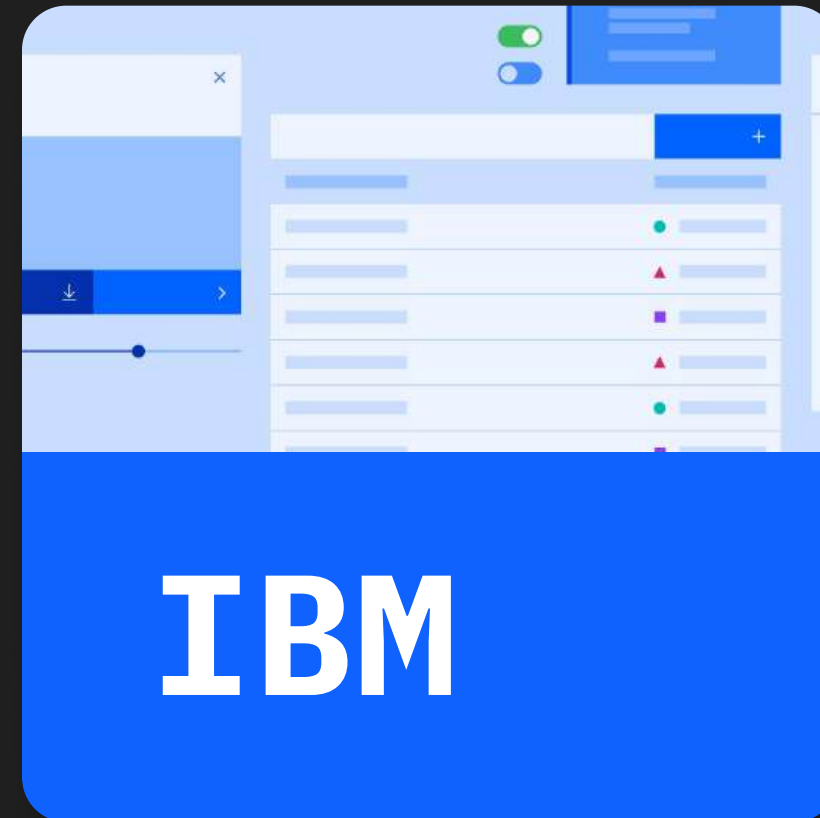
## Project Goals

- **Reduce design/development time.**
- **Create a strong core user experience.**
- **Enable maximal flexibility.**
- **Optimize aggressively for performance.**

# 2. Uncovering Patterns



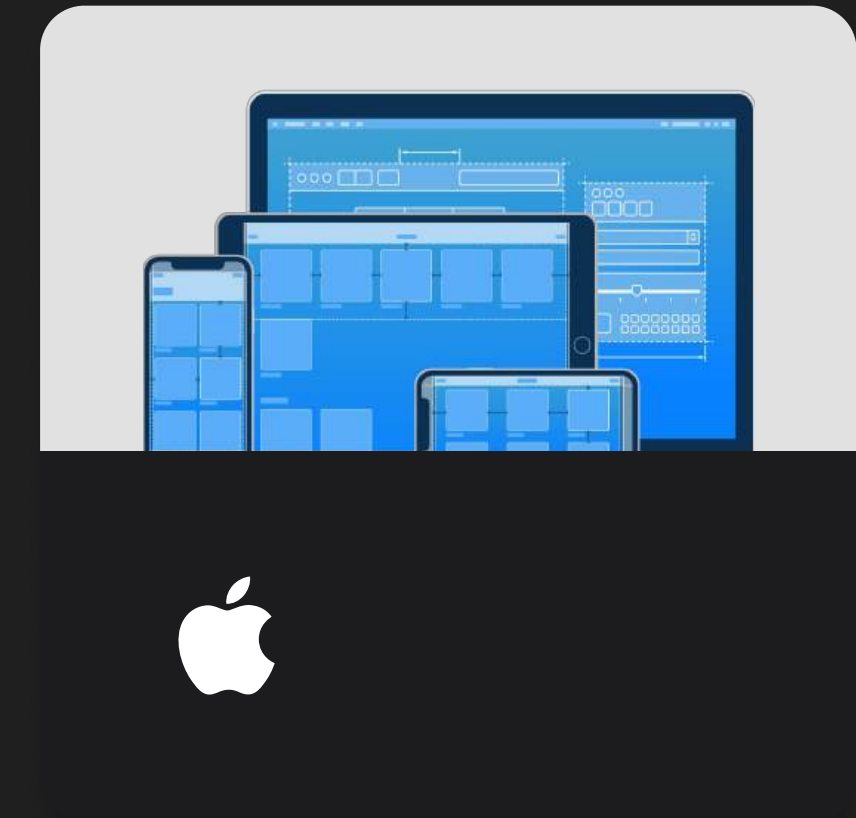
**UI Audit**



**IBM**



**G**



**Apple**

**Systems Analysis**

- Patterns depended on context
- Spatial systems had issues
- Grids created poor ux
- Typesetting already has rules

the same pattern

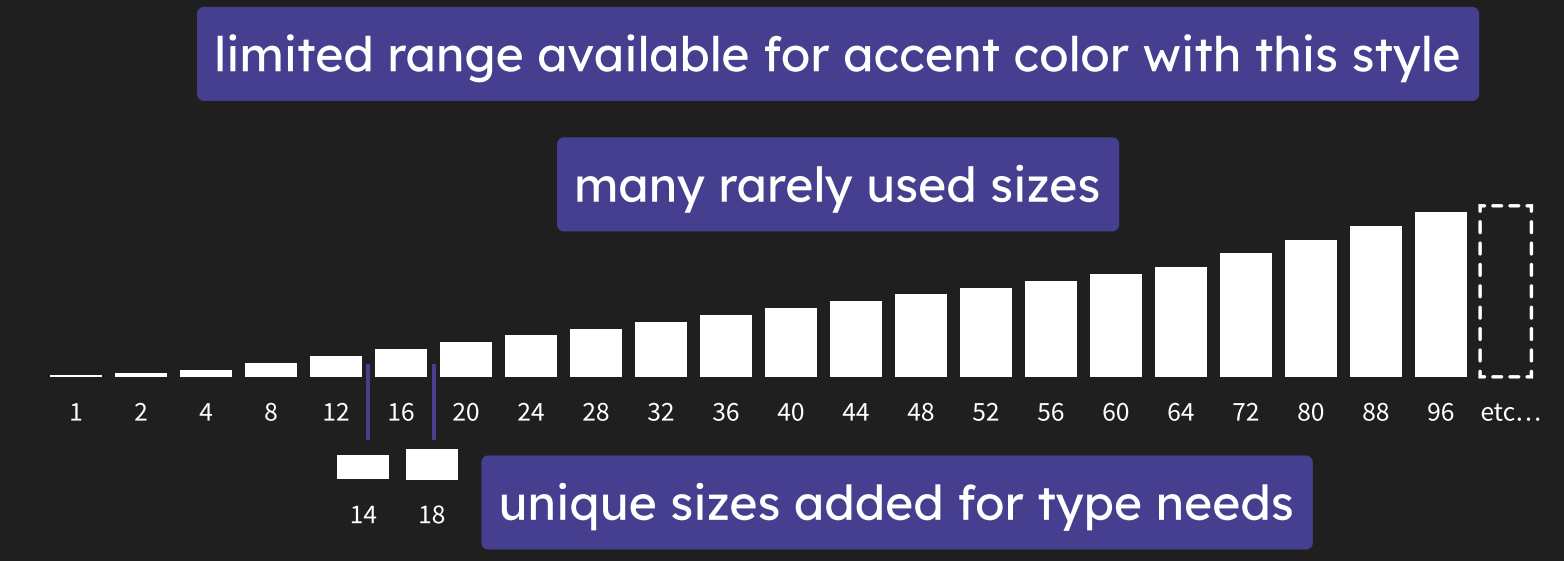
similar control group format

spaces relate to adjacent sizes

alignment across components

related scaling across sizes

limited range available for accent color with this style



1280w

poor result (common)

45 60 80

It's the small details that make a project shine. Solid typography, well-crafted with attention and care is one of them. A harmonious visual rhythm, typographic subtleties like soft caps, margin outdents or the correct use of hyphens and dashes — there are a lot of things that add up to it. In practice, however, publishing on the web is supposed to be fast, and the little details are often overlooked, which is a pity, because they are not only pleasing to the eye but also improve the reading experience.

foundational styles for typesetting

leading: 1.2 [ Heading Styles

measure: 45-80 characters (based on type size and leading)

font-size: 16 [ Body text. It's the small details that make a project shine. Solid typography, well-crafted with attention and care is one of them. A harmonious visual rhythm, typographic subtleties like soft caps, margin outdents or the correct use of hyphens and dashes...

leading: 1.4 [



# 3. Crafting Systems

# **Musical Recursion as a Creative Superpower**

# A few details helped guide my approach

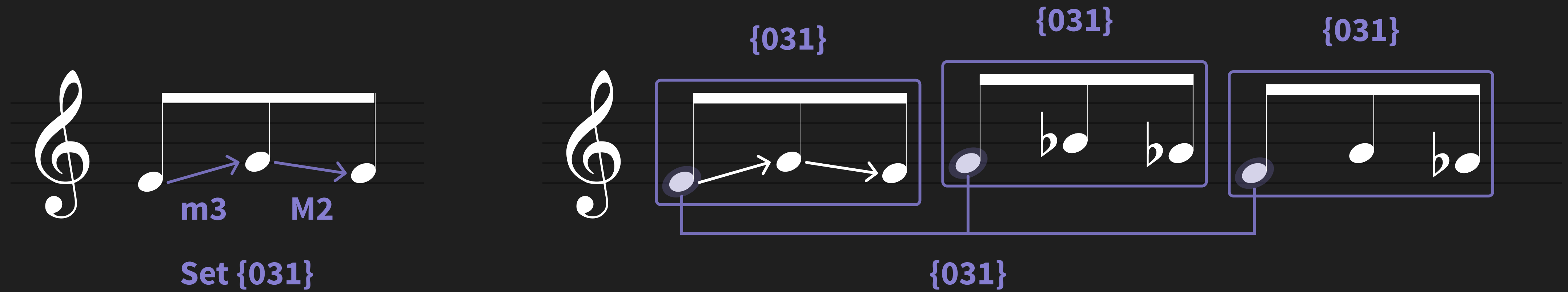


**Heading Styles** ] a tighter leading than copy

45-80 characters (based on type size and leading)

Body text. It's the small details that make a project shine. Solid typography, well-crafted with attention and care is one of them. A harmonious visual rhythm, typographic subtleties like soft caps, margin outdents or the correct use of hyphens and dashes... ] a readable size based on measure

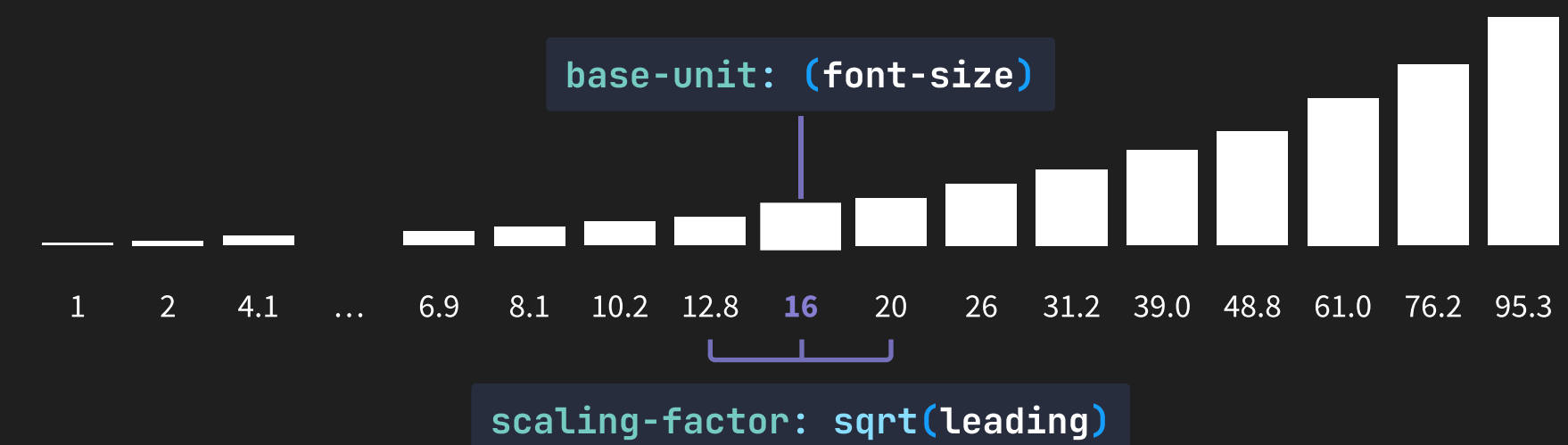
**Also... Performance is King**



**Recursion is a common tool in composition.**

# A recursive spatial system provided a few benefits:

- Predictable relationships
- Easier decision making
- Minimize footprint
- Highly adjustable
- Accessible
- More fluidity



font: Source Sans

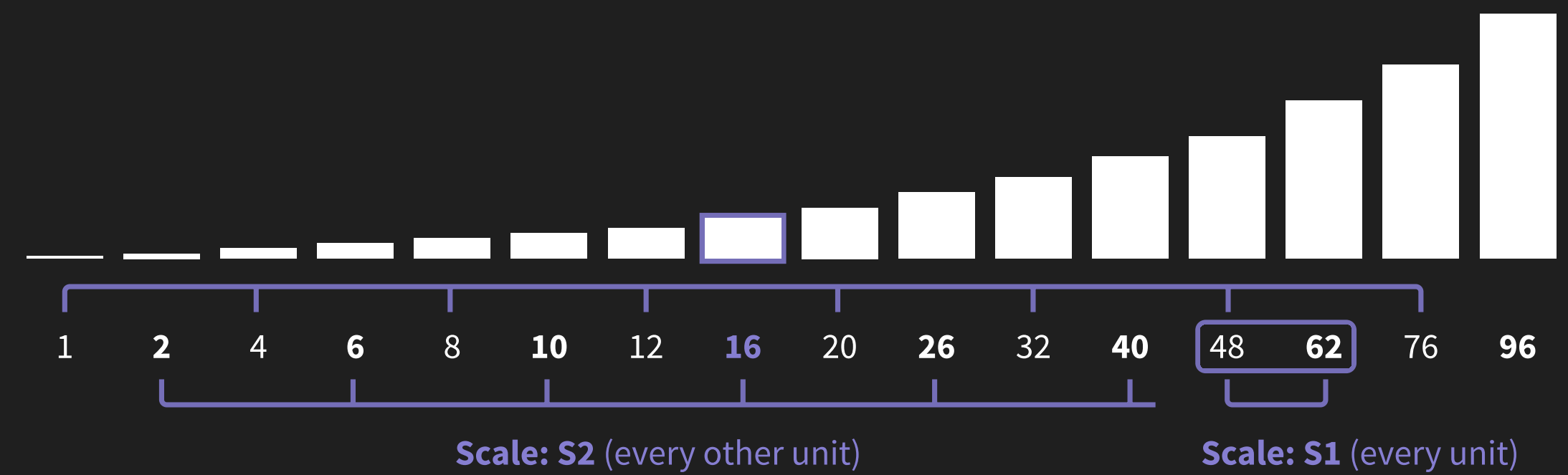
font-size: 16

It's the small details that make a project shine. Solid typography, well-crafted with attention and care is one of them. A harmonious visual rhythm, typographic subtleties like soft caps, margin outdents or the correct use of hyphens and dashes...

Leading: 1.5625

measure-maximum: 80

**An imperfect system maintained the core benefits and avoided sub-pixel issues.**

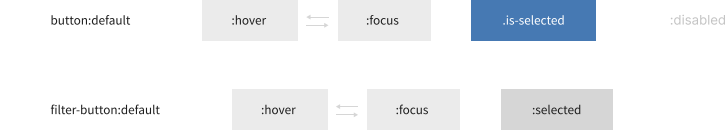


**The original problem:  
design was a monolith.**

Headings

Inline Heading Sub-Heading Default Heading Heading Heading

Buttons



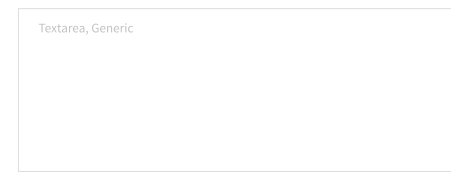
Lists

Flush List Item Flush List Item

List Item List Item

- List Item, Icon; Text Flow List Item, Bullet Spacing

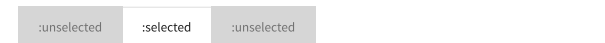
Input Styles



Tabs



Tablist, bordered



Bordered tablists should happen only in circumstances where the tablist itself functions as a heading for a page region

Tables

Table, Default

Table with 4 columns: Column Heading, Text Column, Number, Image. Rows with data and hover states.

Table, Header Size != Body Size (small)

Table with 4 columns: Column Heading, Text Column, Number, Image. Rows with data and hover states.

Table, Mobile Text-flow

Table with 3 columns: Column Heading, Num, Num Alignment. Rows with data and hover states.

Table, Mobile Data-Grouped

Table with 3 columns: Table Cell Tab, Table Cell Tab, Table Cell Tab. Rows with data and hover states.

Coding Elements

```
code-item
function getTemplateKey(source) {
  var string = `
}
200 function getTemplateKey(source) {
  var string = `
}
```

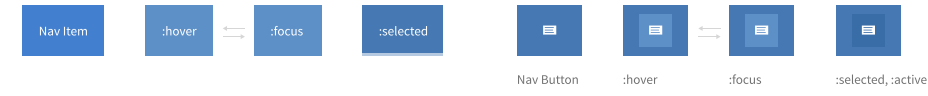
Site Announcement

Minimum touch target size



Nav Bar

some style explanation



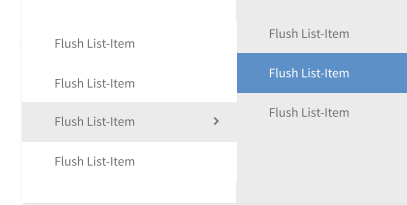
Search Bar

Select Controller, List Item, Icon Button, with height adjustment to nav bar size (61).



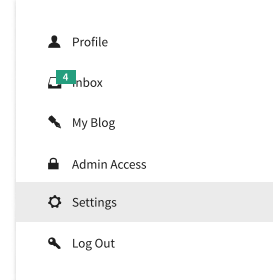
Nav Modals

Special Modal 1, and Flush List-Item



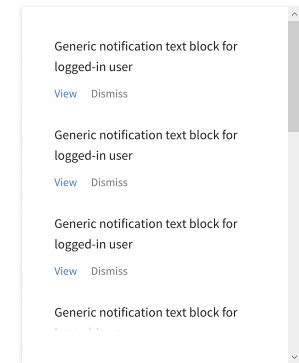
Logged-in Modal

Special Modal 1, Flush List-Item



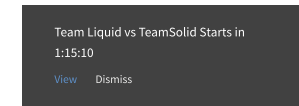
Notifications Modal

Default Modal, Modal Block-item, Truncated Heading



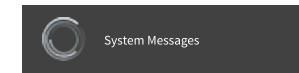
Notification Alert Modal

Special Modal 2, Truncated Heading



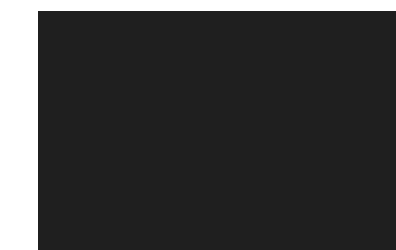
System Message Modal

Special Construct using default Block Item



Articles

Article Card, Vertical



Some Generic Article Title

Single-line teaser text for generic description.

by author • March 24

Article Card

Card Block-Item, Default Heading



Some Generic Article Title

Single-line teaser text for generic description.

by author • March 24

General Tag, Amber Tracking Block, Flags



Tooltips



Thread Topic, Table Item

Default Block-Item, Truncated Heading

Somewhat Longer Thread Title is Available Here

by User • Date 6 lastusercomment 20m

Recent News Topic

Compact Block-Item, Truncated Heading



Thread Topic, Table Item

Default Block-Item, Truncated Heading

Thread Title

by User • Date 6

Popular Topics List-Item

1. A Longer Article Title that Spans a Number of Rows in the Block

by User • Date 6

1. A Longer Article Title that Spans a Number of Rows in the Block

by User • Date 6

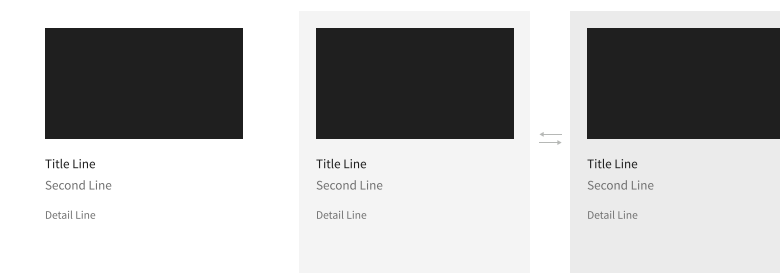
Subscribed Thread

default state



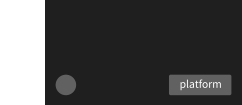
Cards

Card, Level 3



Stream Card

Card Block-Item



username | lang \*120.3k ☆

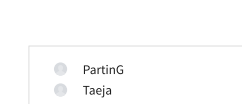
Space for short description, can be more than one line.

\* current shows, start denotes user favorited stream

stream

Tournament Card

Card Block-Item



Title Line

Dates

Space for short description, can be more than one line.

Tournament Card: hover, :focus

Match Item

Default Block-Item



Fill Bars

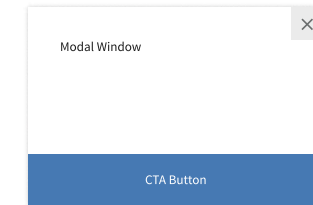


Text Formatting Options



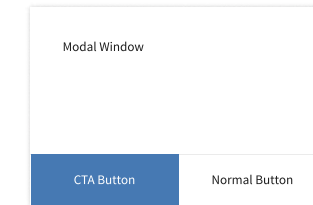
Modal, Unary Action

Default Modal, Default Header, Control Tray



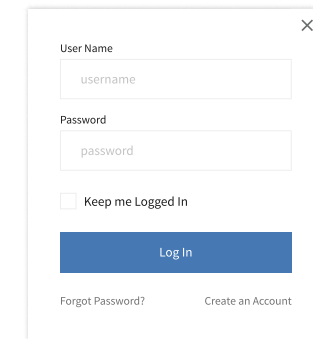
Modal, Binary Action

Default Modal, Default Header (no-close), Control Tray



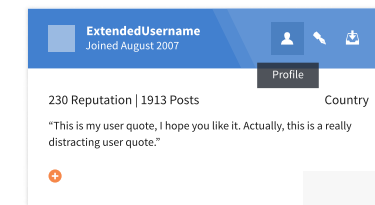
Log In Modal

Default Modal, Default Header



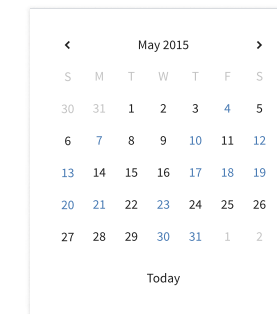
User Profile Modal

Compact Modal, Special Compact Block, Compact Heading



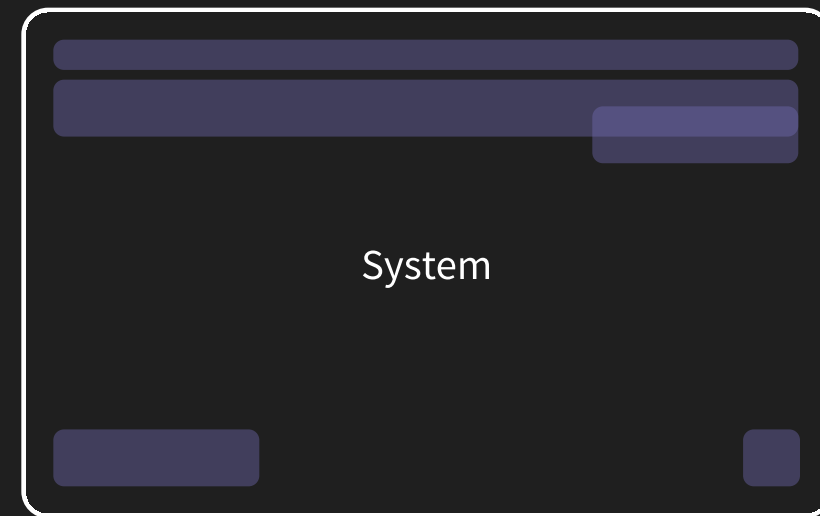
Date Picker

Compact Modal

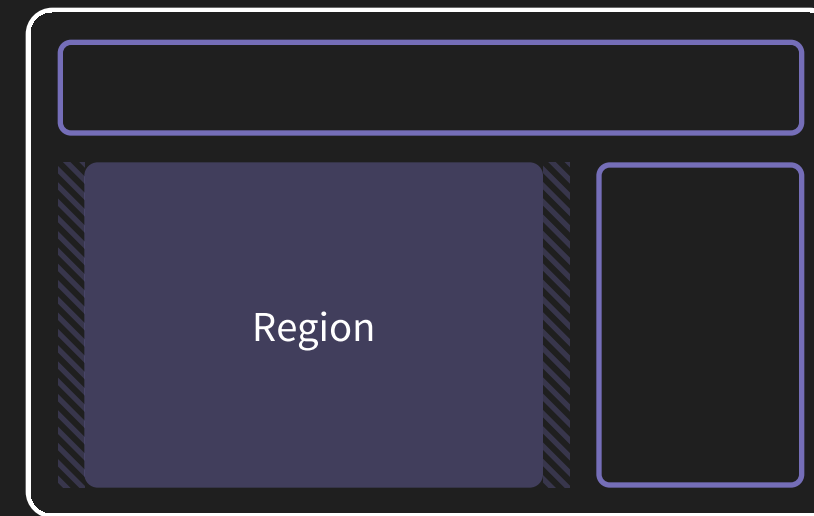




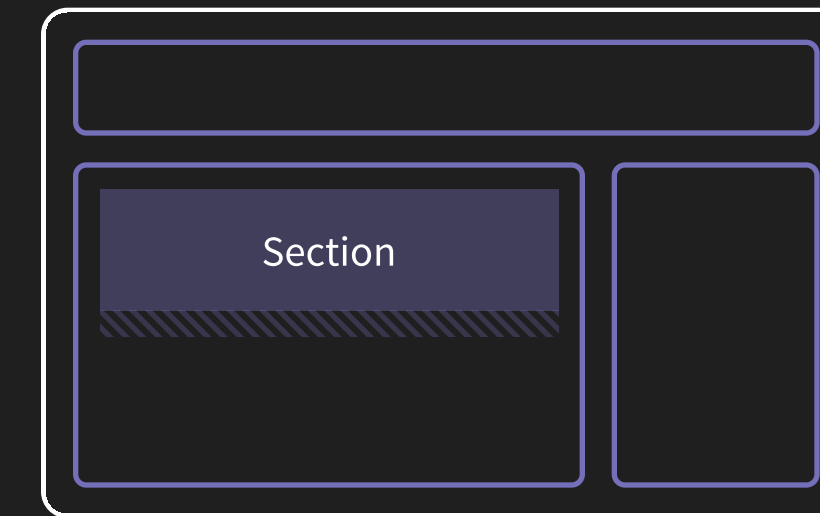
## System



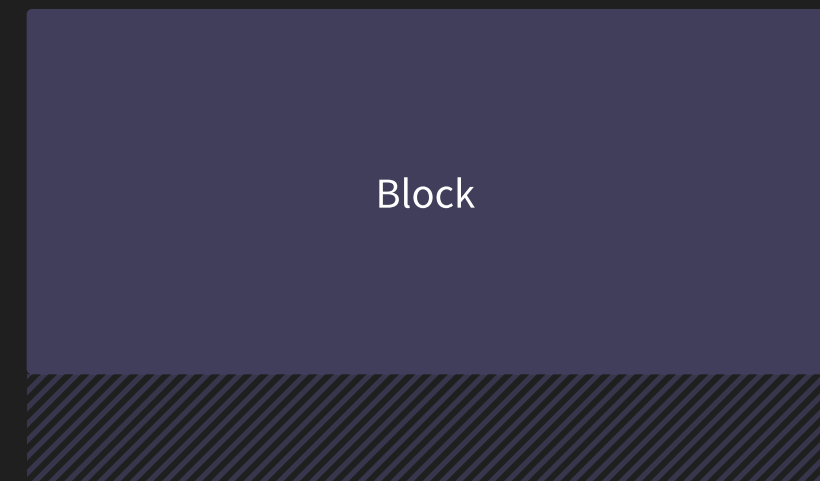
## Region



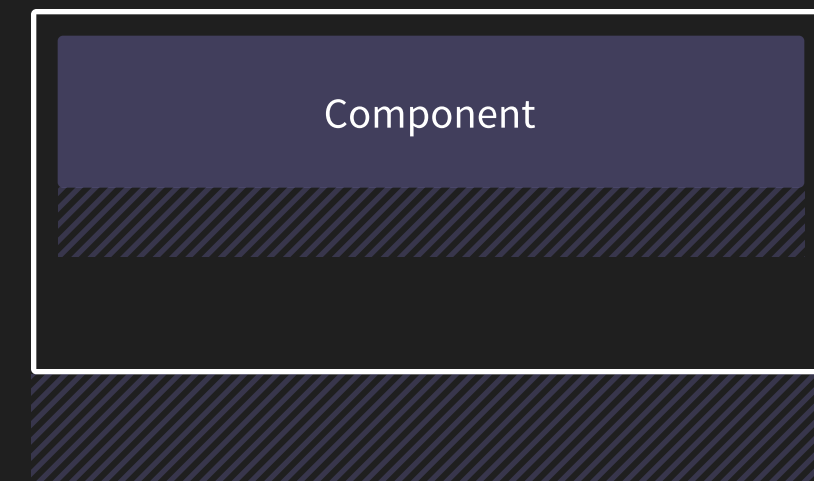
## Section



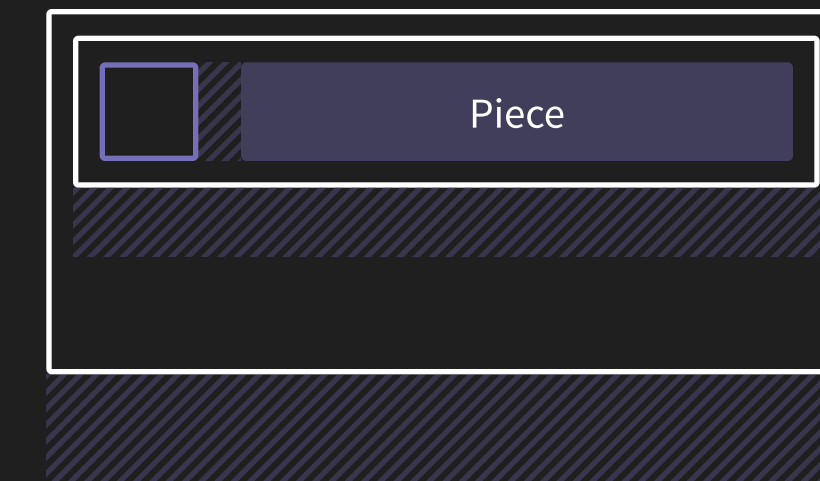
## Block



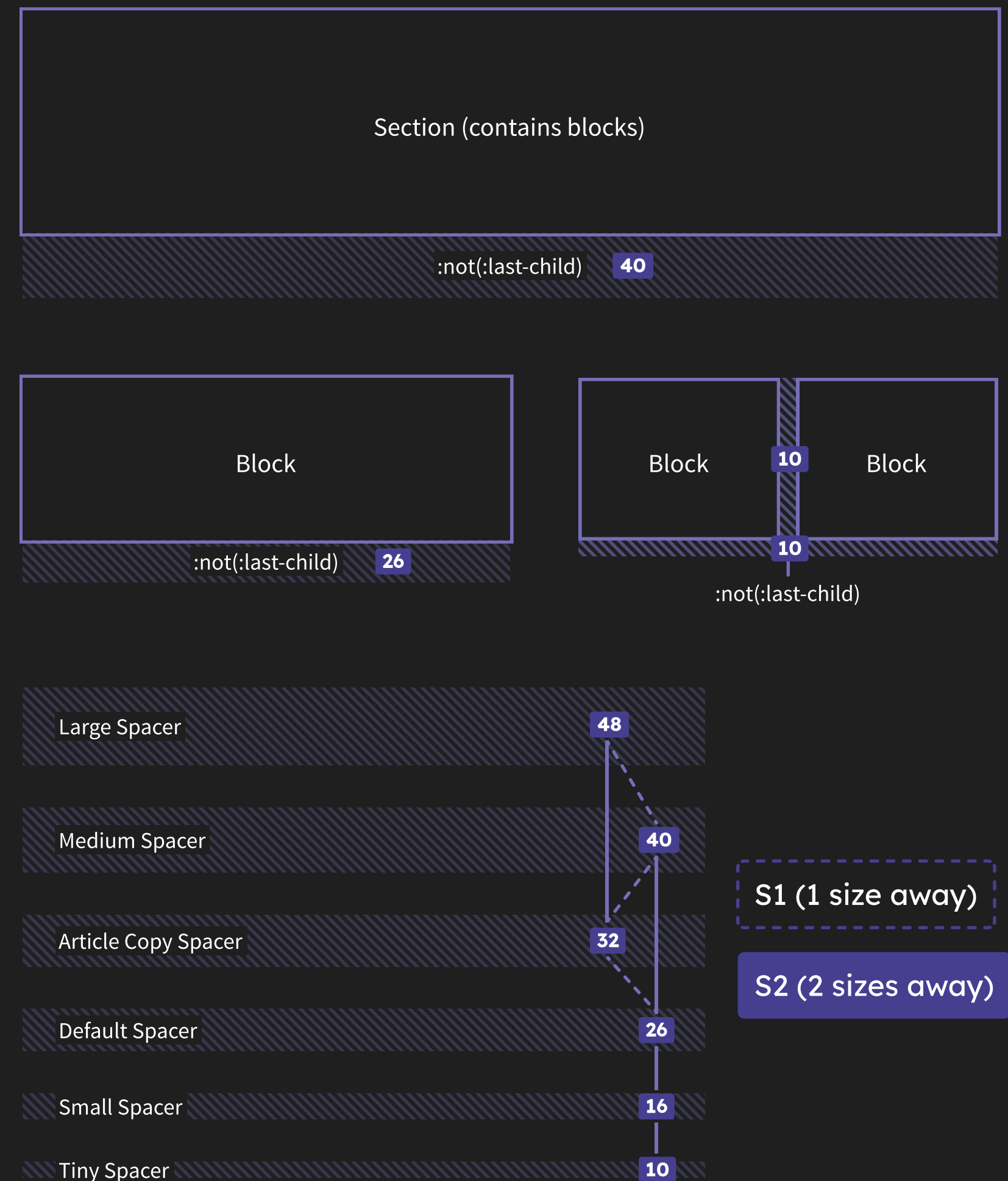
## Component



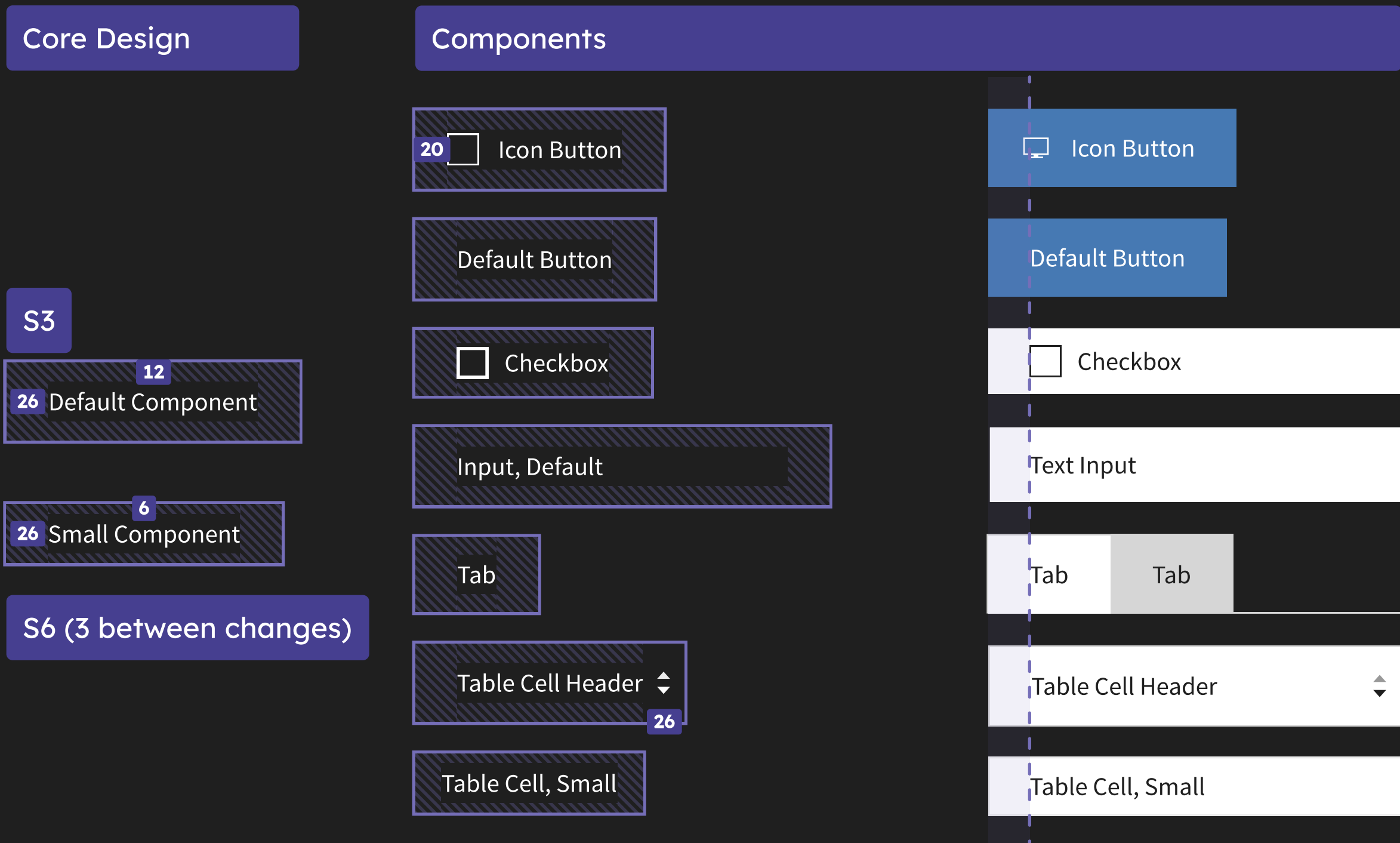
## Piece



**A clear hierarchy enabled highly targeted and modular systems to be created for many themes.**



**Components could also be built around abstractions that created predictability.**



# **Systems at the Build Layer**

## Foundations

Principles

Core Rules

Color

Space

## Project Fundamentals

Type

Colors

Space/Scale

Aesthetics

Composition

Core Layout

## Pattern Library (components)

Core

General Purpose

Specific

Specific

**Result: many projects could rely on a single core system.**

Default Button

Text Input

Tab Tab

Table Cell Header

● PartinG	05:30
● Taeja	

```
font: Source Sans  
base-unit: 16  
scaling-factor: 1.25  
relationship: S3
```

Default Button

Text Input

Tab Tab

Table Cell Header

● PartinG	05:30
● Taeja	

```
font: Work Sans  
base-unit: 14  
scaling-factor: 1.18  
relationship: S2
```

# **Accessibility as a Core Driver**

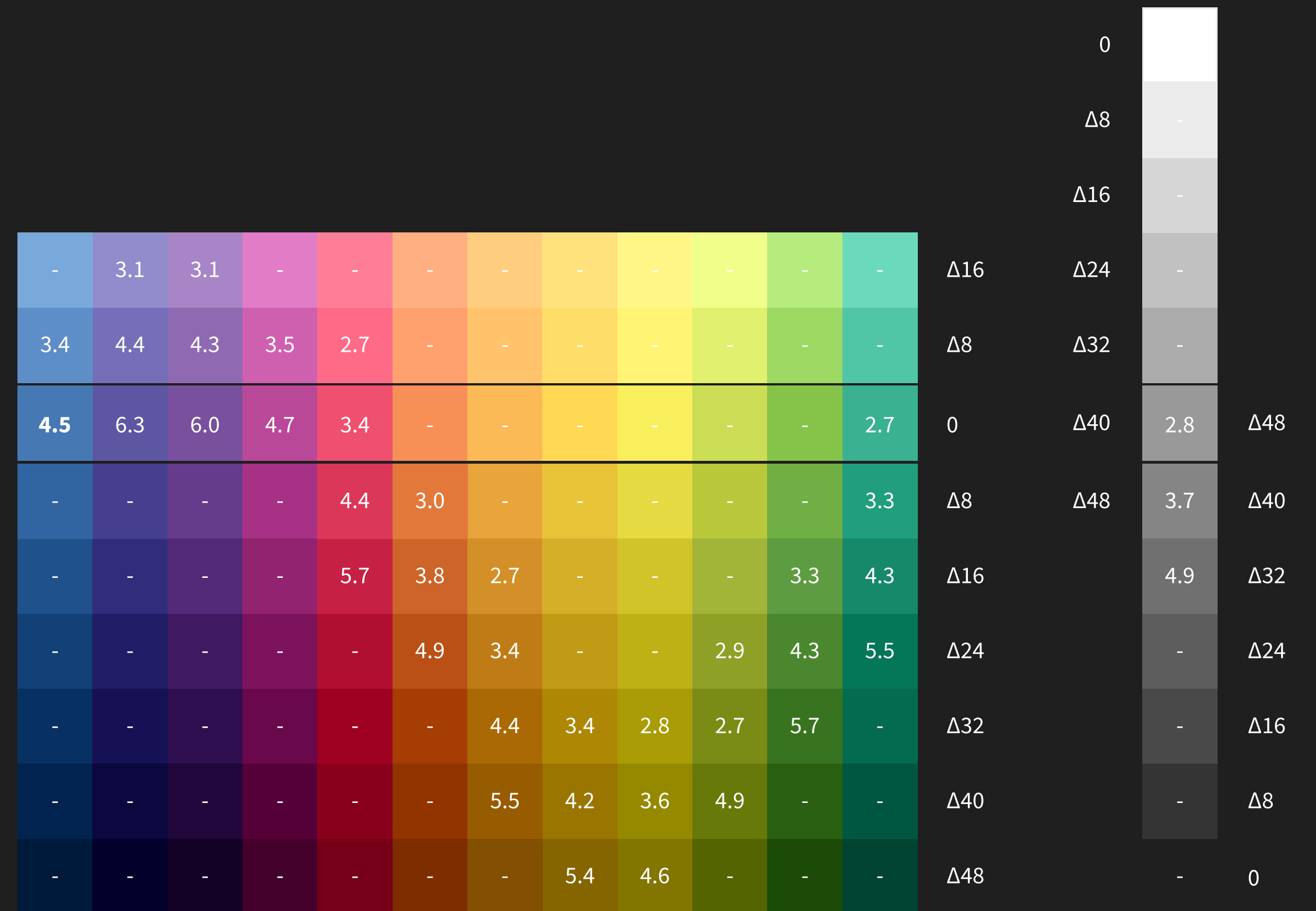
**Building around good typesetting delivered several accessibility benefits automatically.**





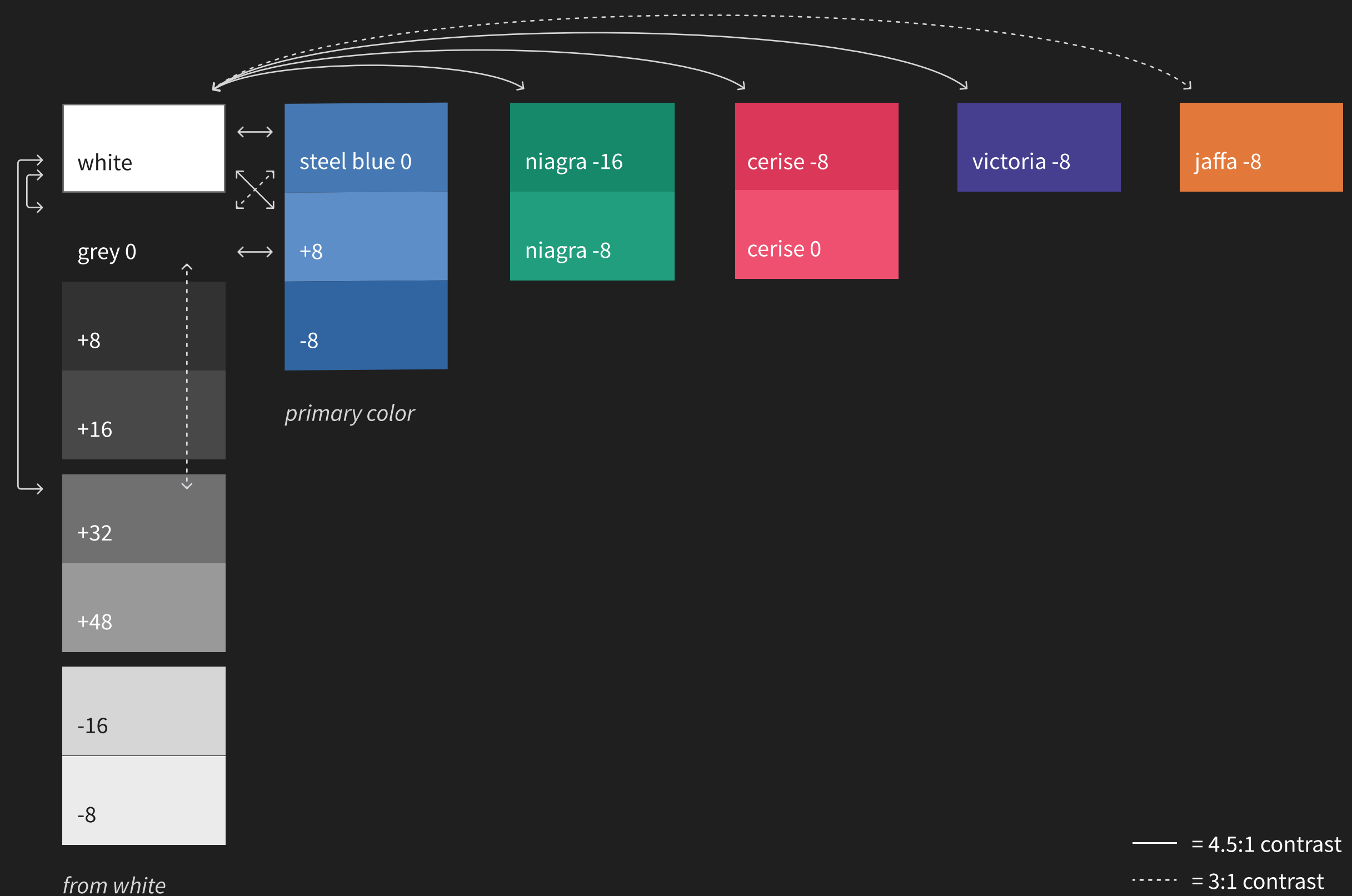
**Designing a color system  
that's both easy to use, and  
accessible is challenging.**

**Sampling colors at meaningful intervals helped to balance complexity with contrast needs.**



**Deviating by  $\pm 0.3$   
allowed for better color  
results, while still being  
close to the AA standard.**

*(more on this later)*



# 4. Outcomes

**400%**

Reduction in design-to-development time

**2.5x**

Increase in system usability

**25%**

Increase in accessibility compliance

**50%**

Reduced bundle sizes

Improvements that can be made

**More modularization for smaller themes would be beneficial.**

## Learnings

- **Pain Points with Design → Code Translation**
- **A Flawed Color Algorithm, and Good Intuition**

**Project Lead**

Nik Jeleniauskas

**Designers**

Nik Jeleniauskas