



# modular design

January 13, 2017

Kevin Zolkiewicz

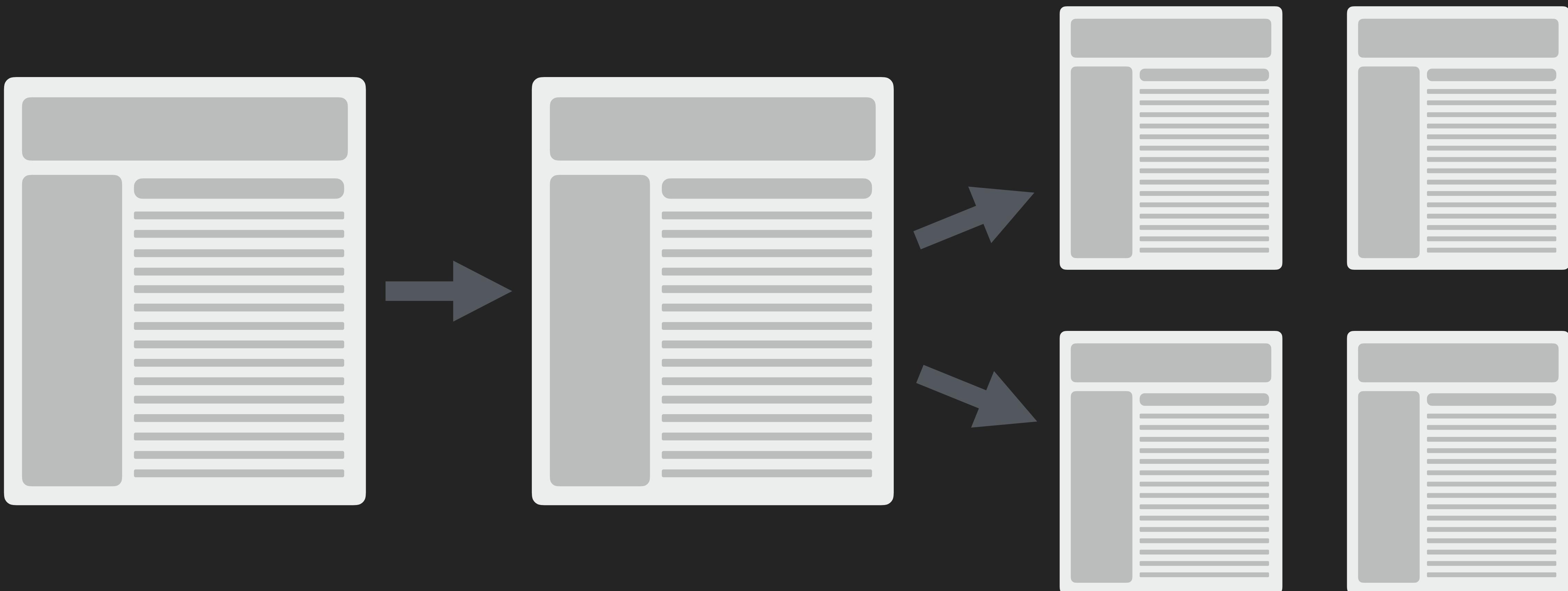
1. Why Modular Design?
2. Atomic Design Terminology
3. Creating a Design System
4. Next Steps

1. Why Modular Design?
2. Atomic Design Terminology
3. Creating a Design System
4. Next Steps

# The Web Before



# Pages



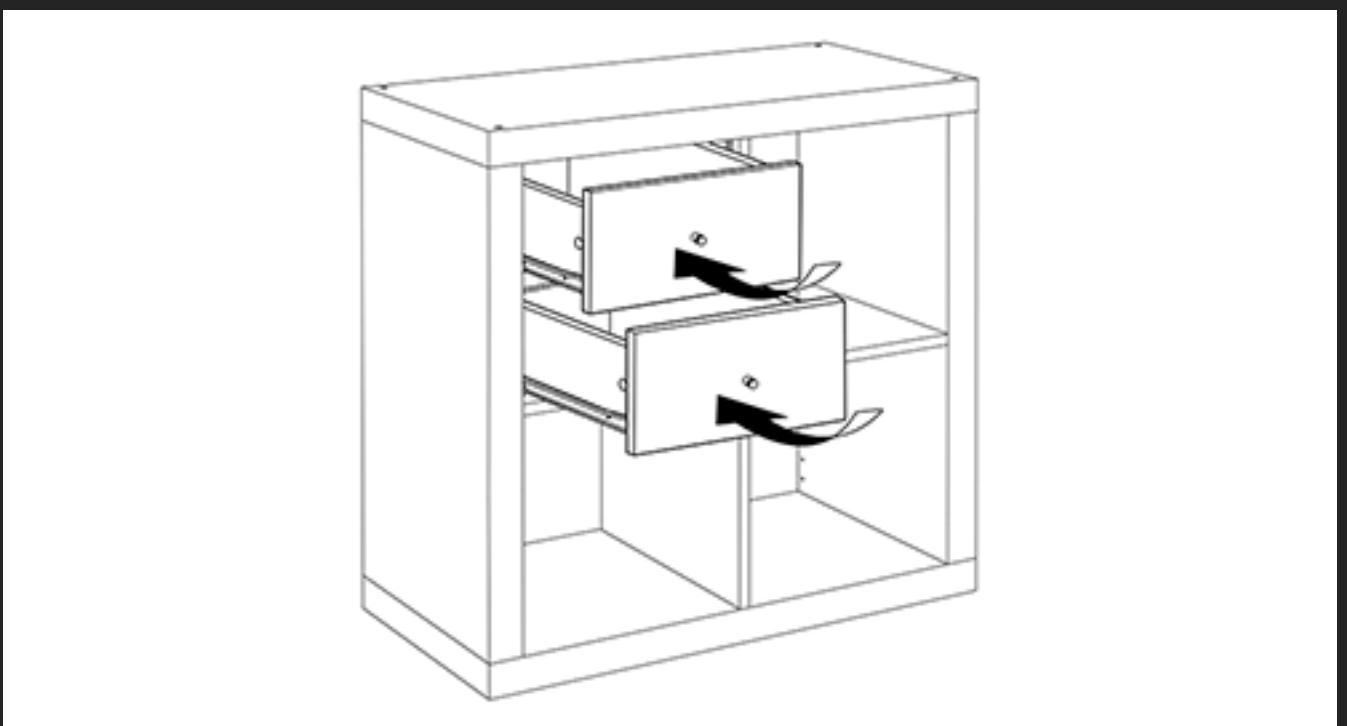
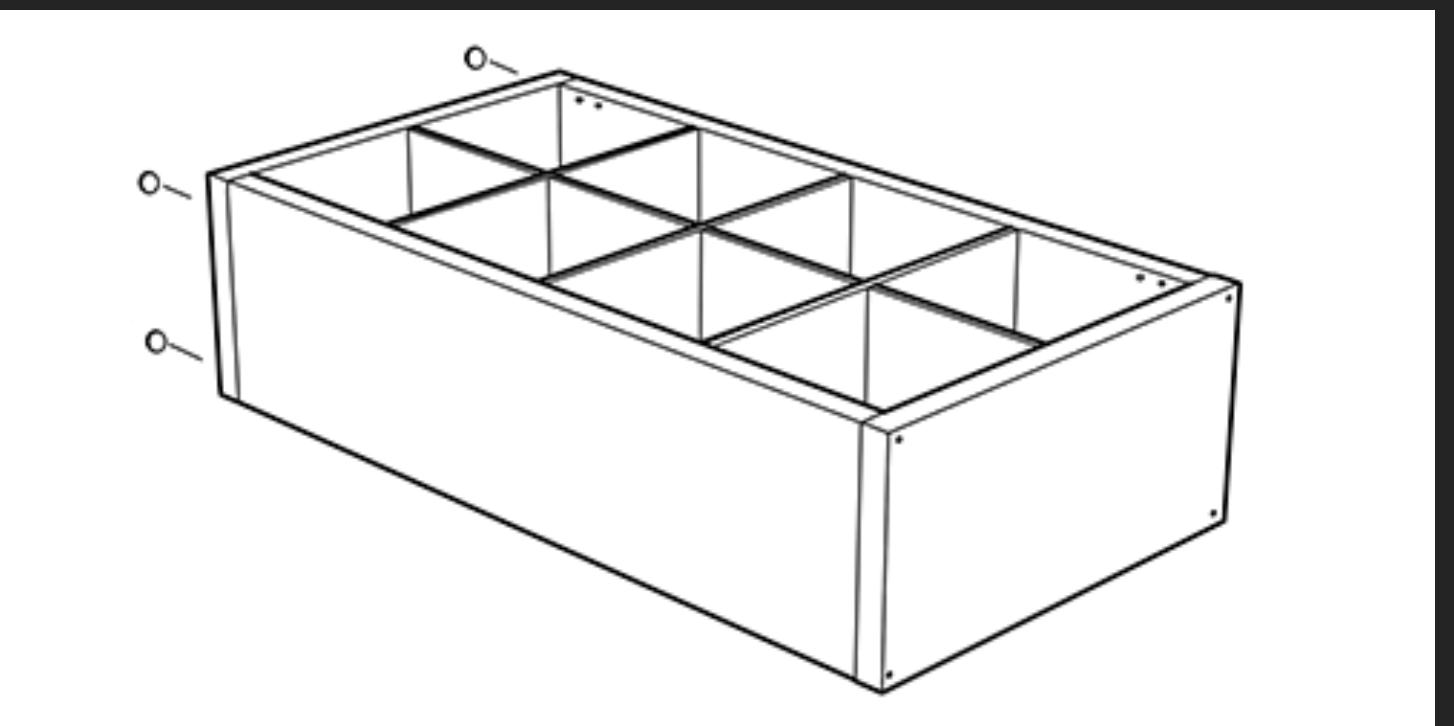
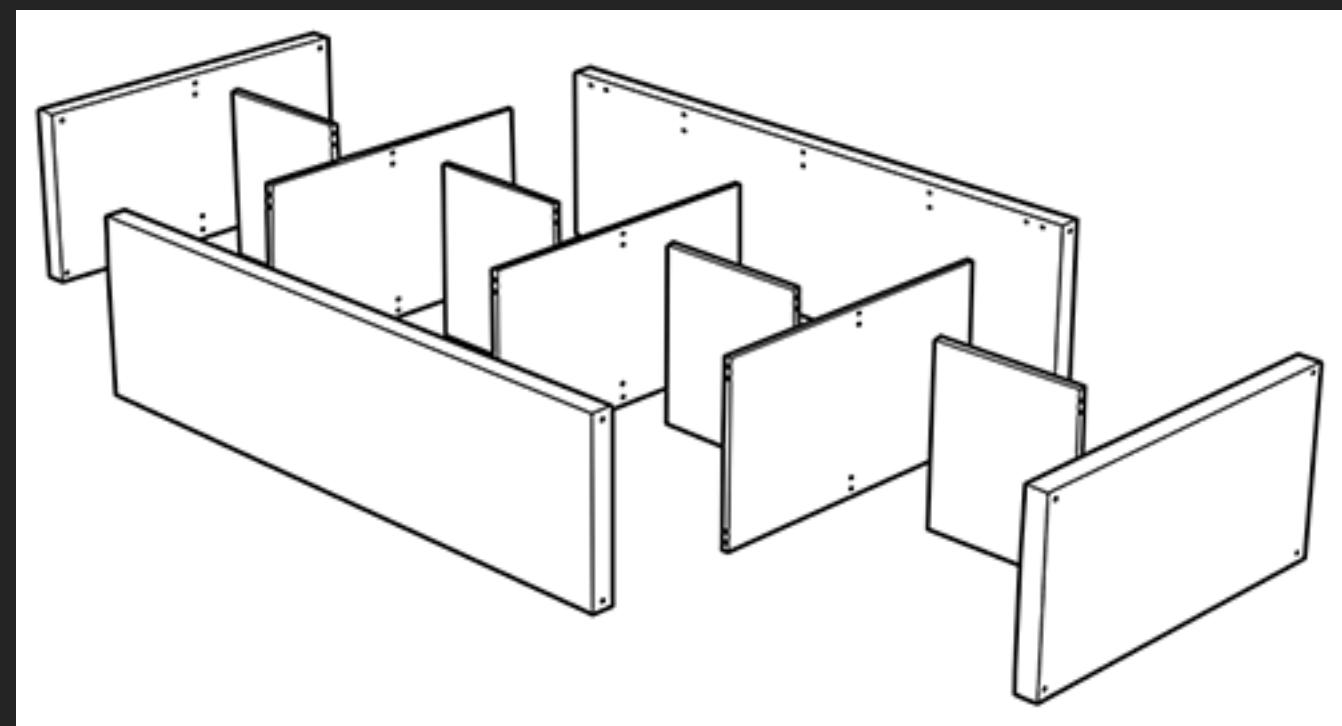
# The Web Today



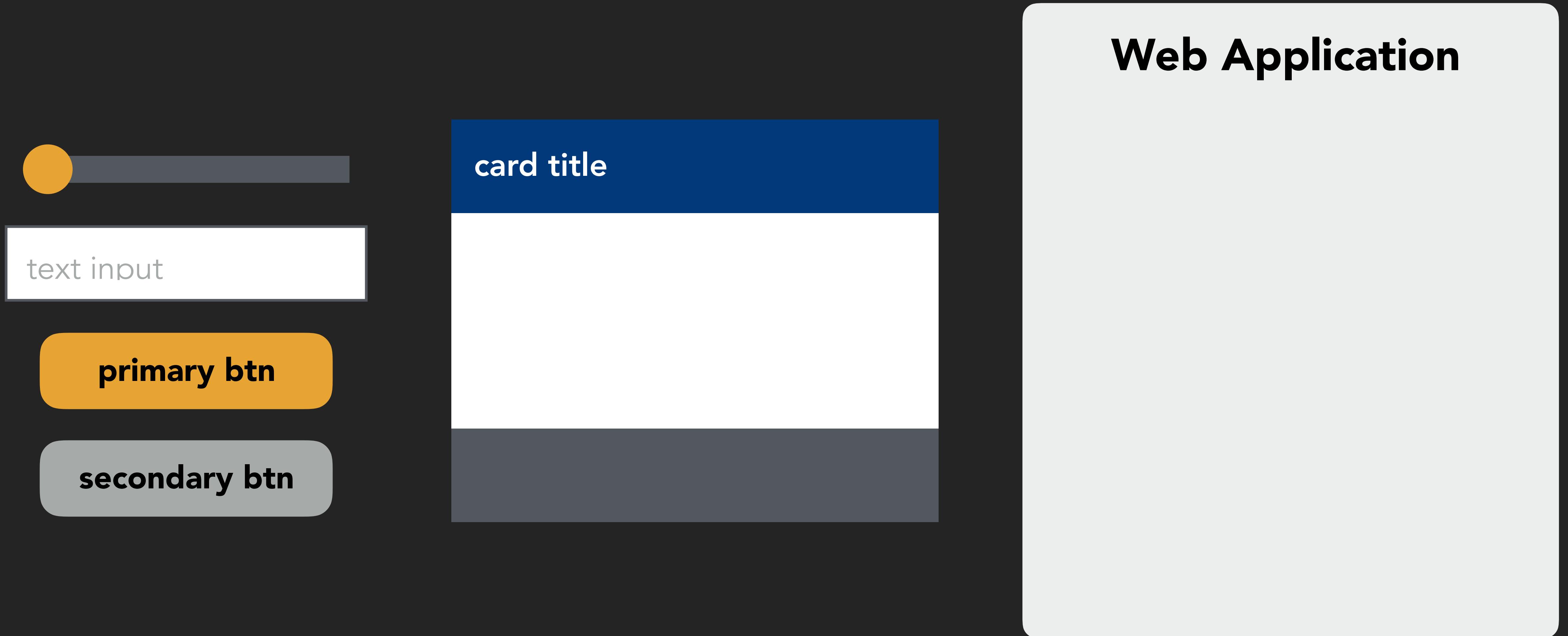
“We’re not designing pages,  
we’re designing systems of  
components.”

– Stephen Hay

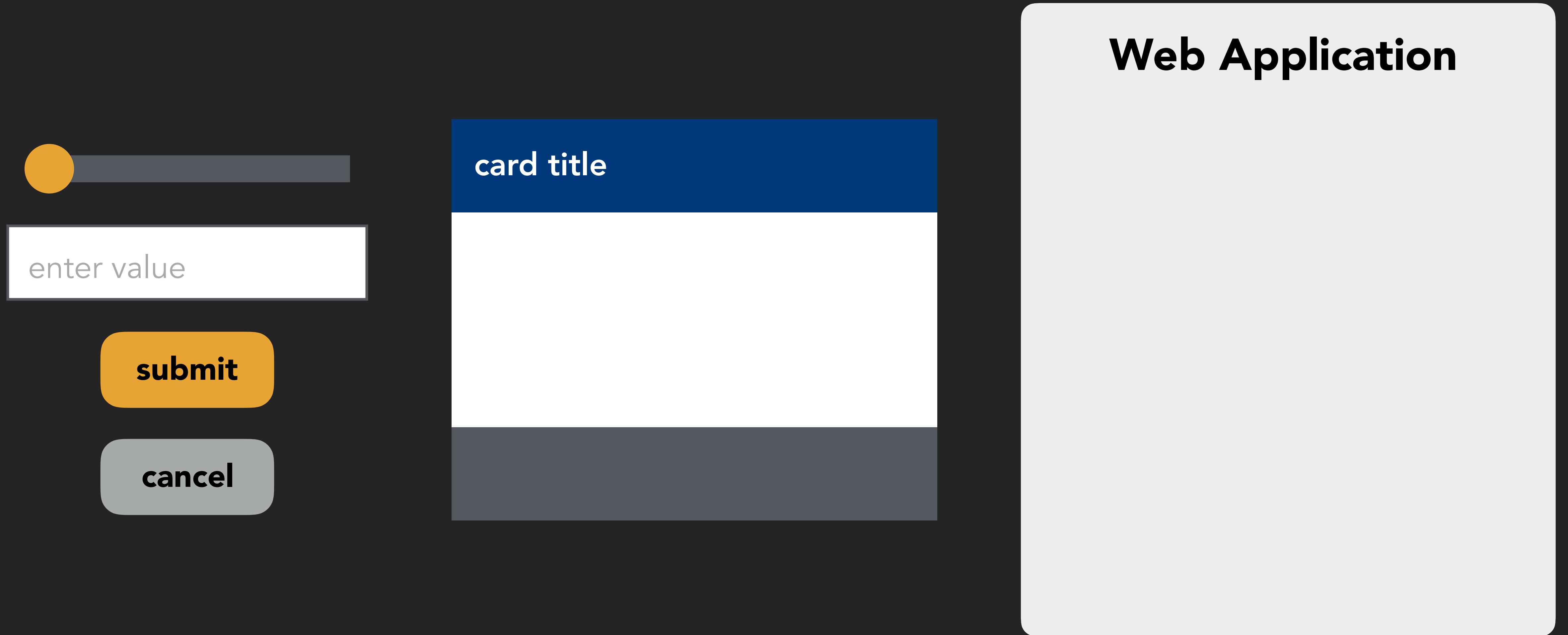
# Modular Design



# Modular Design In Web Apps



# Modular Design In Web Apps



# Modular Design In Web Apps

**Web Application**

update information

A modular design for a web application. It consists of several distinct components: a title bar at the top with the text "update information"; a horizontal slider with a yellow circular trackball and a dark grey bar; a rectangular input field containing the placeholder text "enter value"; and a row of two buttons at the bottom, one orange labeled "submit" and one grey labeled "cancel".

# Modular Design In Web Apps

**Web Application**

update information



enter value

submit

cancel

# Benefits of Modular Design

1. Consistency

[Learn More](#)

[Search](#)

[Sign In](#)

[Go](#)

[Learn more](#)

[Offer Details](#)

 [Learn More](#)

[Search](#)

[Learn more >](#)

[Find out more >](#)

[Cruise  
Reservations](#)



# Benefits of Modular Design

1. Consistency
2. Maintainability
3. Performance
4. Accessibility

# Design Frameworks

The screenshot shows the official Bootstrap website. At the top, there is a dark navigation bar with the following menu items: 'Bootstrap' (which is highlighted in blue), 'Overview', 'Grid', 'Layouts', 'Typography', 'Tables', 'Forms', 'Navigation', 'Alerts', 'Popovers', and 'LESS'. Below the navigation bar is a large blue header section with a grid pattern. The title 'Bootstrap from Twitter' is centered in a large white font. Below the title, there is a brief description: 'Bootstrap is a toolkit from Twitter designed to kickstart development of webapps and sites. It includes base CSS and HTML for typography, forms, buttons, tables, grids, navigation, and more.' A note below the description says: 'Nerd alert: Bootstrap is built with LESS and was designed to work out of the gate with only modern browsers in mind.' The main content area has three columns. The first column is titled 'HOTLINK THE CSS' and contains instructions: 'For the quickest and easiest start, just copy this snippet into your webpage.' followed by a code snippet: <link type="text/css" href="http://twitter.github.com/bootstrap/css/bootstrap.css" />. The second column is titled 'USE IT WITH LESS' and contains instructions: 'A fan of using LESS.js? No problem, just clone the repo and add these lines:' followed by a code snippet: <link rel="stylesheet/less" type="text/css" href="http://twitter.github.com/bootstrap/less/bootstrap.less" /><script src="less.js"></script>. The third column is titled 'FORK ON GITHUB' and contains instructions: 'Download, fork, pull, file issues, and more with the official Bootstrap repo on Github.' followed by a blue 'Bootstrap on GitHub' button.

Bootstrap from Twitter

Bootstrap is a toolkit from Twitter designed to kickstart development of webapps and sites. It includes base CSS and HTML for typography, forms, buttons, tables, grids, navigation, and more.

Nerd alert: Bootstrap is built with LESS and was designed to work out of the gate with only modern browsers in mind.

HOTLINK THE CSS

For the quickest and easiest start, just copy this snippet into your webpage.

```
<link type="text/css" href="http://twitter.github.com/bootstrap/css/bootstrap.css" />
```

USE IT WITH LESS

A fan of using LESS.js? No problem, just clone the repo and add these lines:

```
<link rel="stylesheet/less" type="text/css" href="http://twitter.github.com/bootstrap/less/bootstrap.less" /><script src="less.js"></script>
```

FORK ON GITHUB

Download, fork, pull, file issues, and more with the official Bootstrap repo on Github.

[Bootstrap on GitHub](#)

**Grid system** Rock the standard 940px or roll your own

[Default grid](#)      [Example grid markup](#)

# Modular Design Systems in Practice



Grid System

Typography

Form Elements

Navigation

Tables

Lists

Slats

Stats/Data

Feedback

Dialogs

Freddicons

Helper Classes

# Tables

[Subscribers Table](#) [Responsive Tables](#) [Elements](#) [Add-on Classes](#) [Child Rows](#) [Stats](#)

## *Subscriber table*

### Example

	Email Address	First Name	Last Name	I'm a ...	Date	Birthday	Mem
<input type="checkbox"/>	sterling@scdp.com	Roger	Sterling	Partner			
<input type="checkbox"/>	cooper@scdp.com	Bert	Cooper	Partner			
<input type="checkbox"/>	draper@scdp.com	Don	Draper	Partner			
<input type="checkbox"/>	pryce@scdp.com	Lane	Pryce	Partner			

```
1 <div class="scdpsubscribers-table full-width" data-doj
2   margin-bottom-lv3>
3     <div class="st fixed-header selfclear re
latve" style="position: relative;">
4       <div class="full-width inner" data-doj
o-attach-point="accessibleTableHeaderBody">
```

# MailChimp

[ux.mailchimp.com](http://ux.mailchimp.com)

### Notes

This table helps identify and segment the list subscribers based on the merge fields defined by the list owner. Up to 60 merge fields are allowed per list.

The Email Address column is absolutely-positioned, while the rest of the table scrolls horizontally when the



Search

Getting Started

Platforms ▾

Guidelines ▾

Components ▾

Utilities ▾

Touch ▾

Activity Timeline

App Launcher

Badges

Breadcrumbs

Buttons

Button Icons

Button Groups

Cards

Data Tables

Datepickers

Docked Composer

# Cards

Component Overview

Cards are used to apply a container around a related grouping of information.

## VARIANTS & STATES

Base

Default

Empty

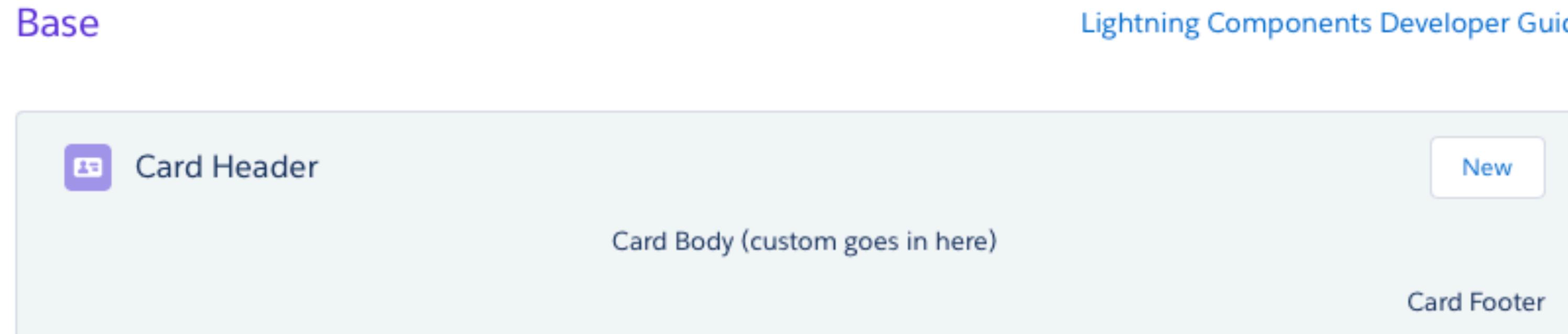
Base Narrow ▾

Related List With Tiles

Related List With Table

Related List Narrow

## DOCUMENTATION



```
<article class="slds-card">
  <div class="slds-card__header slds-grid">
    <header class="slds-media slds-media--center slds-has-flexi-truncate">
      <div class="slds-media__figure">
        <img alt="Placeholder for a contact icon" data-small="true" data-large="false" data-list-item="false" data-align="center" data-size="small">
        <use xlink:href="/assets/icons/standard-sprite/svg/glyphs.svg#contact"></use>
      </div>
      <div class="slds-media__body slds-truncate">
        <h2>
          <a href="#" data-pointmid="621" class="slds-link-link--host">
```

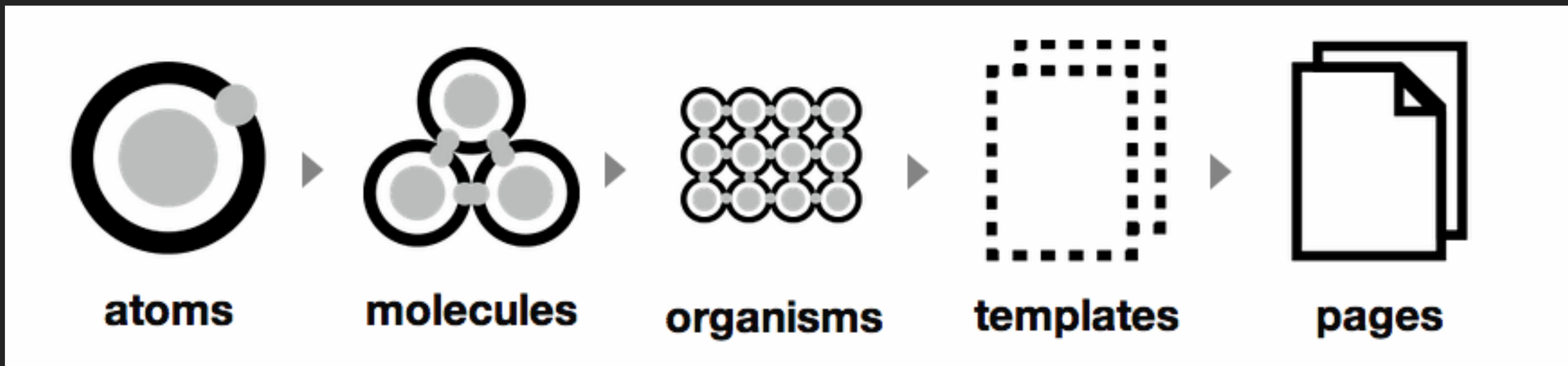
**Salesforce Lightning Design System**

[lightningdesignsystem.com](http://lightningdesignsystem.com)

1. Why Modular Design?
2. Atomic Design Terminology
3. Creating a Design System
4. Next Steps

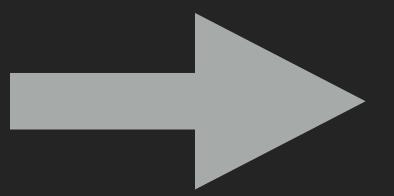
# Atomic Design

Brad Frost

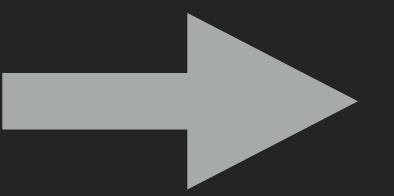




Atom



Molecule



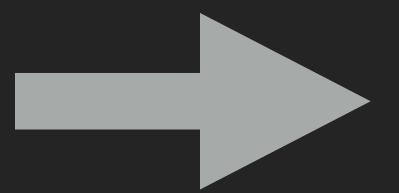
Organism

search the site

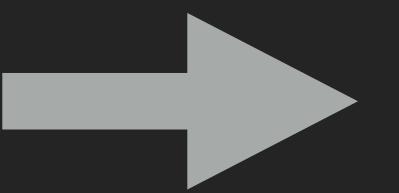
enter keyword

search

Atom



Molecule



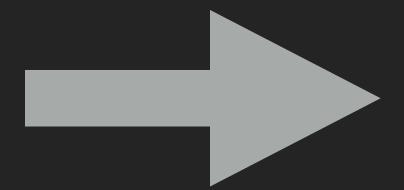
Organism

search the site

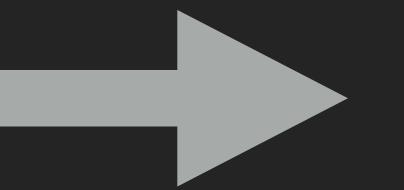
enter keyword

**search**

Atom



Molecule



Organism

**LOGO**

[Home](#)   [About](#)   [Contact](#)

search the site

enter keyword

**search**

# Template → Page

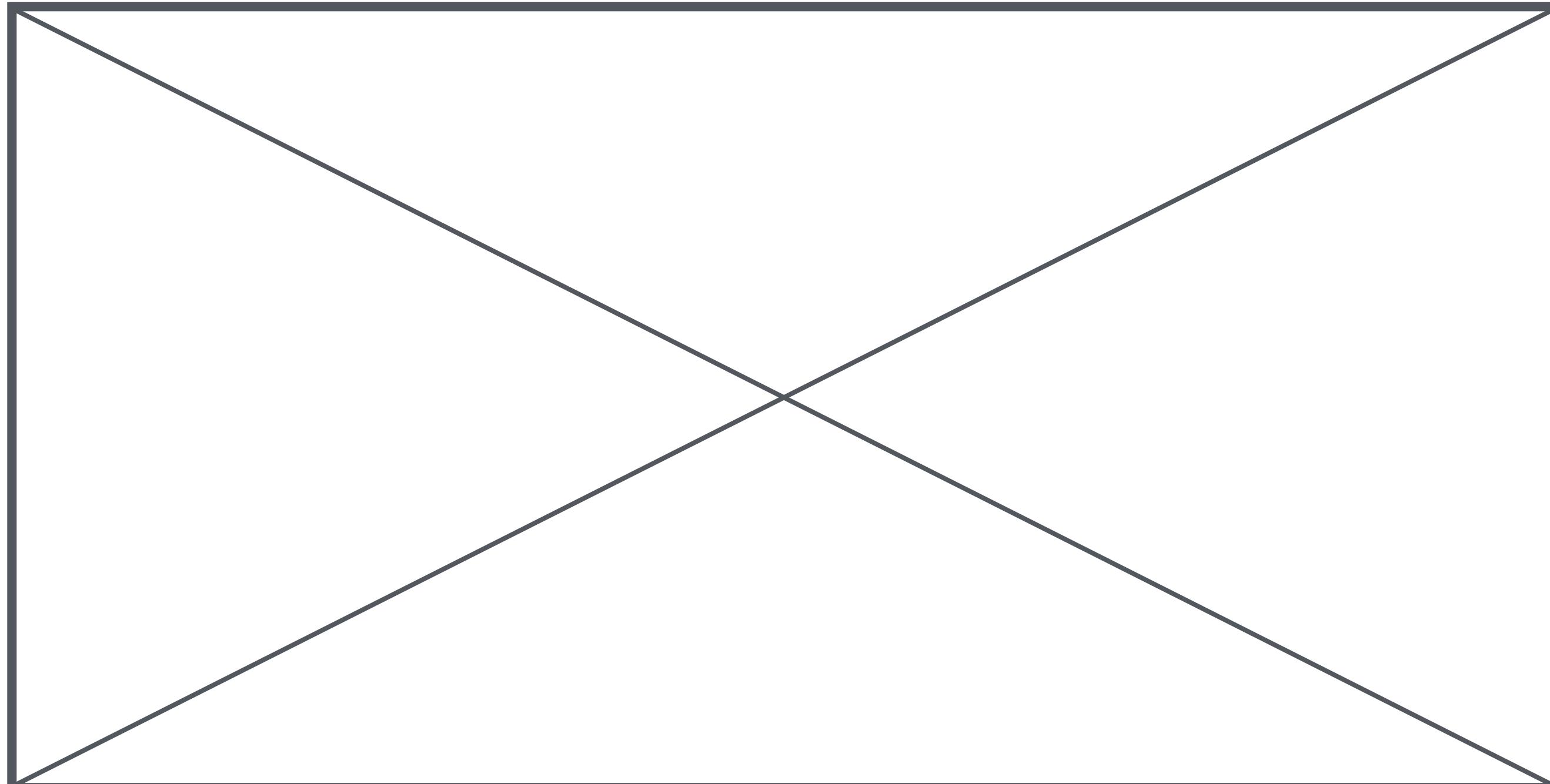
LOGO

Home About Contact

search the site

enter keyword

search



# Template → Page

**LOGO**

Home About Contact

search the site

enter keyword

search

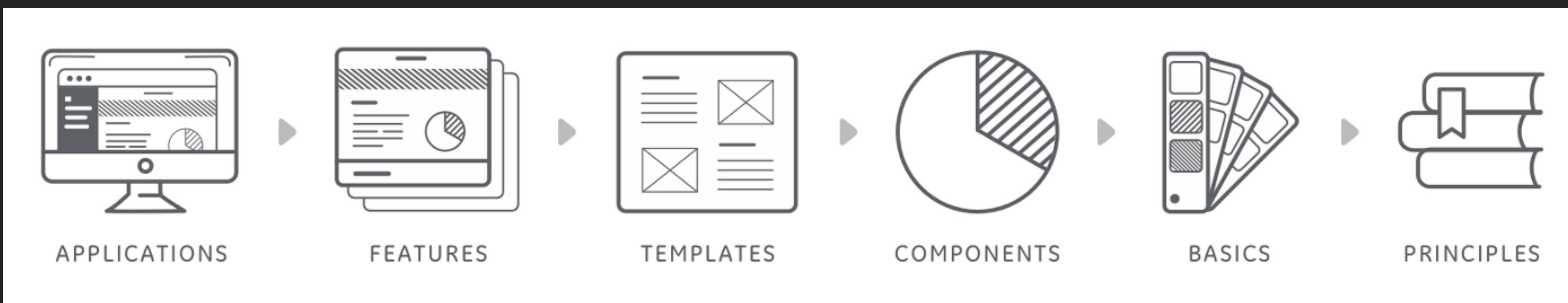


## Chicago's Top Rated Doggy Day Care Service

This is copy further describing our doggy day care services and additional offerings. This is copy further describing our doggy day care services and additional offerings. This is copy further describing our doggy day care services and additional offerings. This is copy further describing our doggy day care services and additional offerings.

# Alternative Terminologies

## GE's Predix Design System



[goo.gl/w2IMCs](http://goo.gl/w2IMCs)

1. Why Modular Design?
2. Atomic Design Terminology
3. Creating a Design System
4. Next Steps

# Creating a Pattern Library

Pattern Lab  
[patternlab.io](https://patternlab.io)

# Demo

# Why Use a Pattern Library Tool?

1. Separates content & structure.
2. Establishes an ad hoc CMS.
3. Serves as a blueprint for back-end developers.
4. The first step in achieving the “holy grail.”

- COMPONENTS
- Cards >
  - Ad Units >
  - Alerts > **Selected**
  - Badges >
  - Breadcrumbs >
  - Buttons >
  - Hero Banner >
  - Month blocks >
  - Preloader >
  - Page Title >
  - Pagination >
  - Picture >
  - POI List >
  - POI Maps >
  - Price Label >

## Alerts

✓ Congratulations! You are now logged in.

```
= ui_component('alert', properties: {as_below} )
```

```
{  
  type: "success",  
  title: "Congratulations!",  
  message: "You are now logged in."  
}
```

**Lonely Planet's Rizzo Pattern Library**  
[rizzo.lonelyplanet.com](http://rizzo.lonelyplanet.com)

```
= ui_component('alert', properties: {as_below} )
```

✓ Congratulations! You are now logged in.

```
= ui_component('alert', properties: {as_below} )
```

```
{  
  type: "success",  
  title: "Congratulations!",  
  message: "You are now logged in.",  
  subtle: true  
}
```

## Lonely Planet's Rizzo Pattern Library

✗ Oops! Maybe check yourself before...

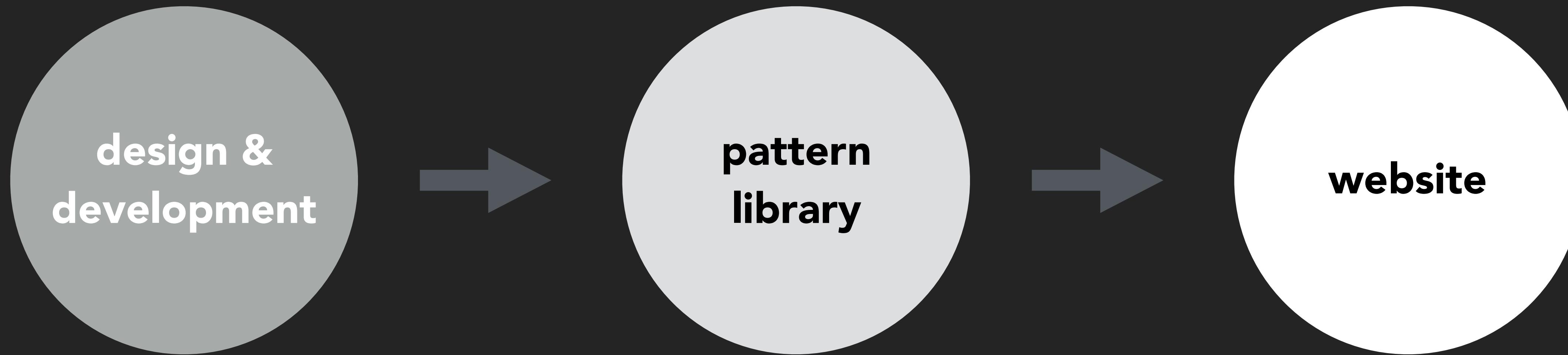
[rizzo.lonelyplanet.com](http://rizzo.lonelyplanet.com)

1. Why Modular Design?
2. Atomic Design Terminology
3. Creating a Design System
4. Next Steps

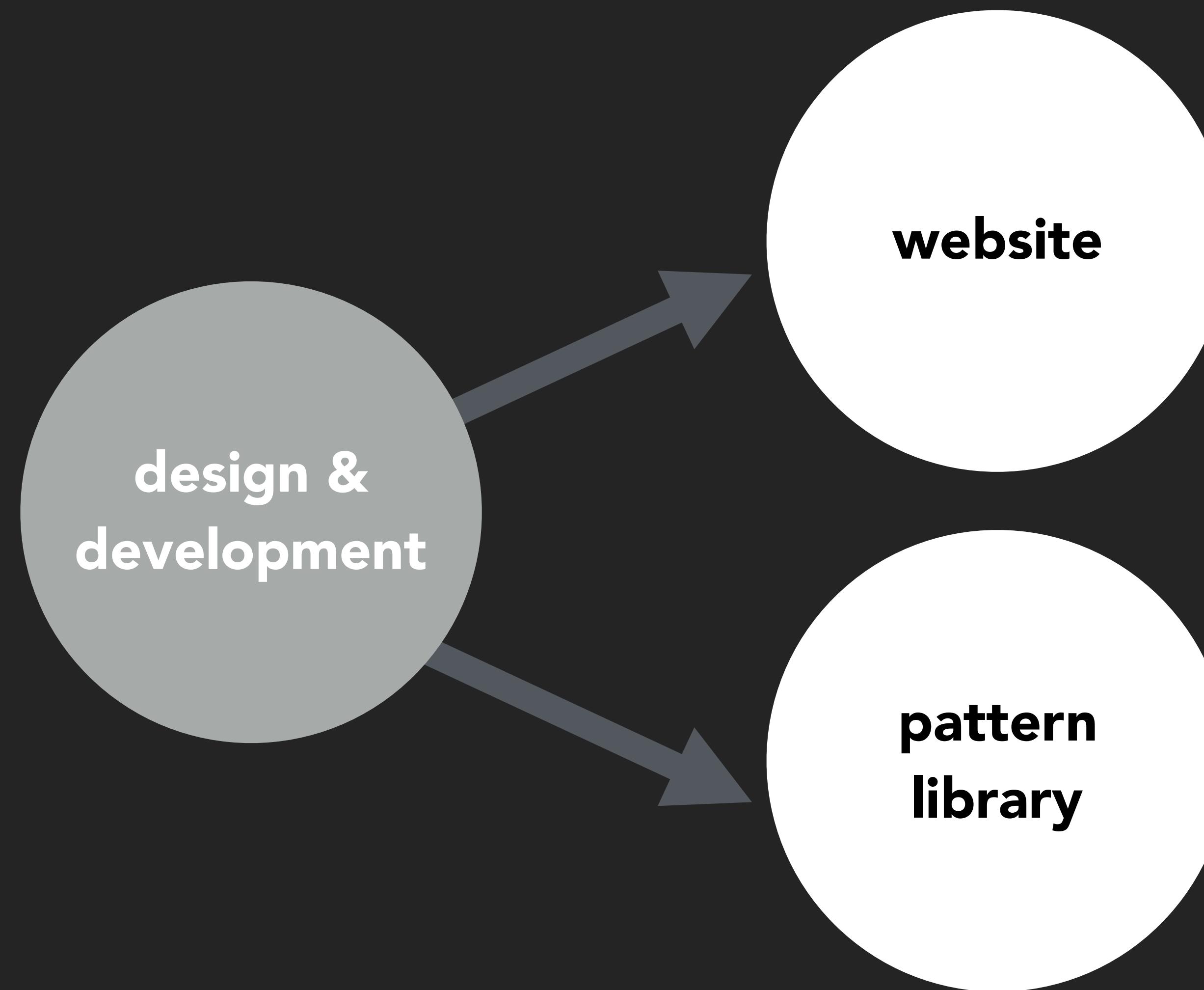
# Selling to Clients

1. Promotes consistent experiences.
2. Speeds up workflow.
3. Improves cross-browser/device compatibility, performance, and accessibility.
4. Serves as a foundation for future needs.

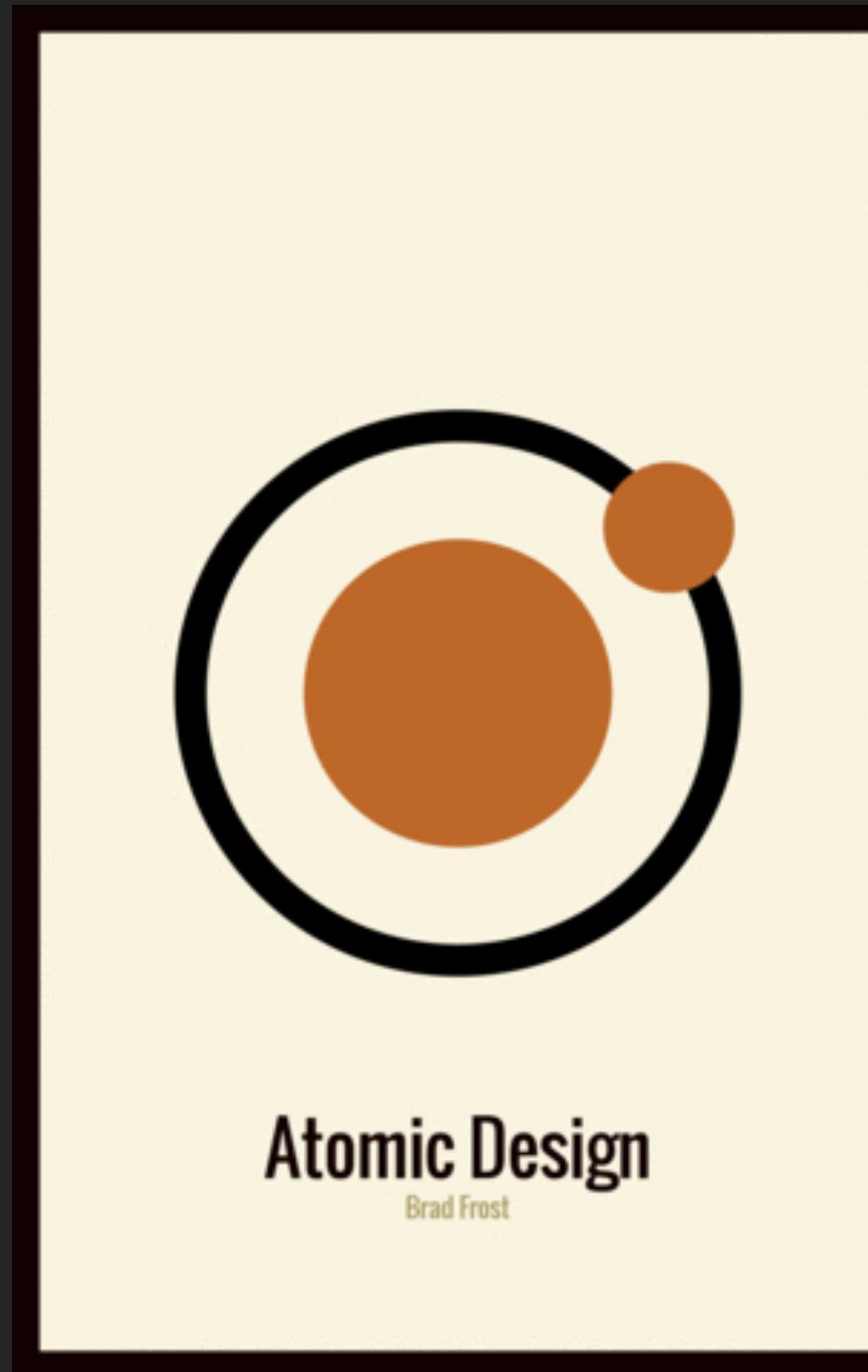
# Maintaining Design Systems



# Maintaining Design Systems



# Further Reading



*Atomic Design*  
by Brad Frost  
[atomicdesign.bradfrost.com](http://atomicdesign.bradfrost.com)



# Questions?



# Thank you.

[modular.zolk.com/resources](http://modular.zolk.com/resources)