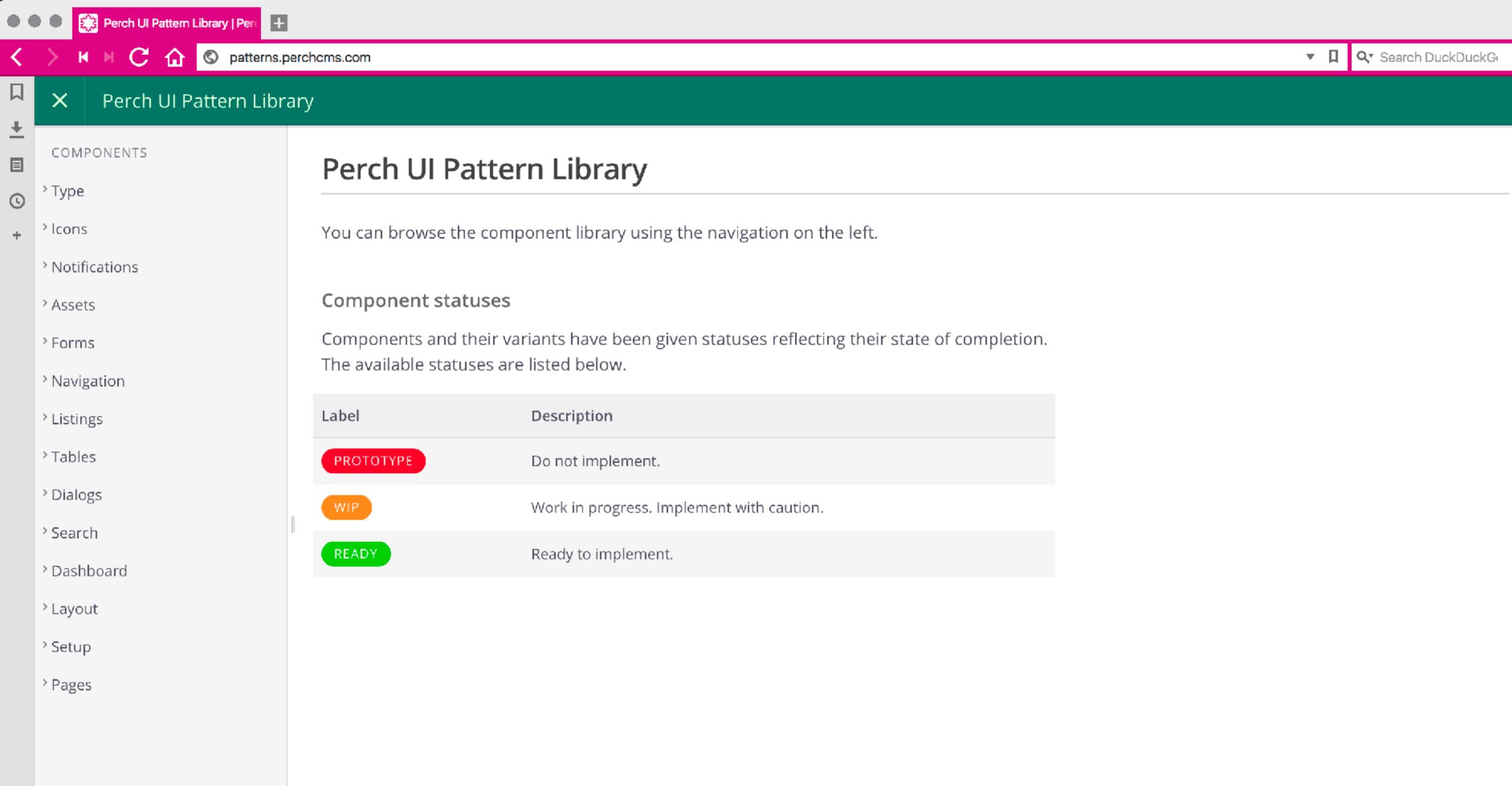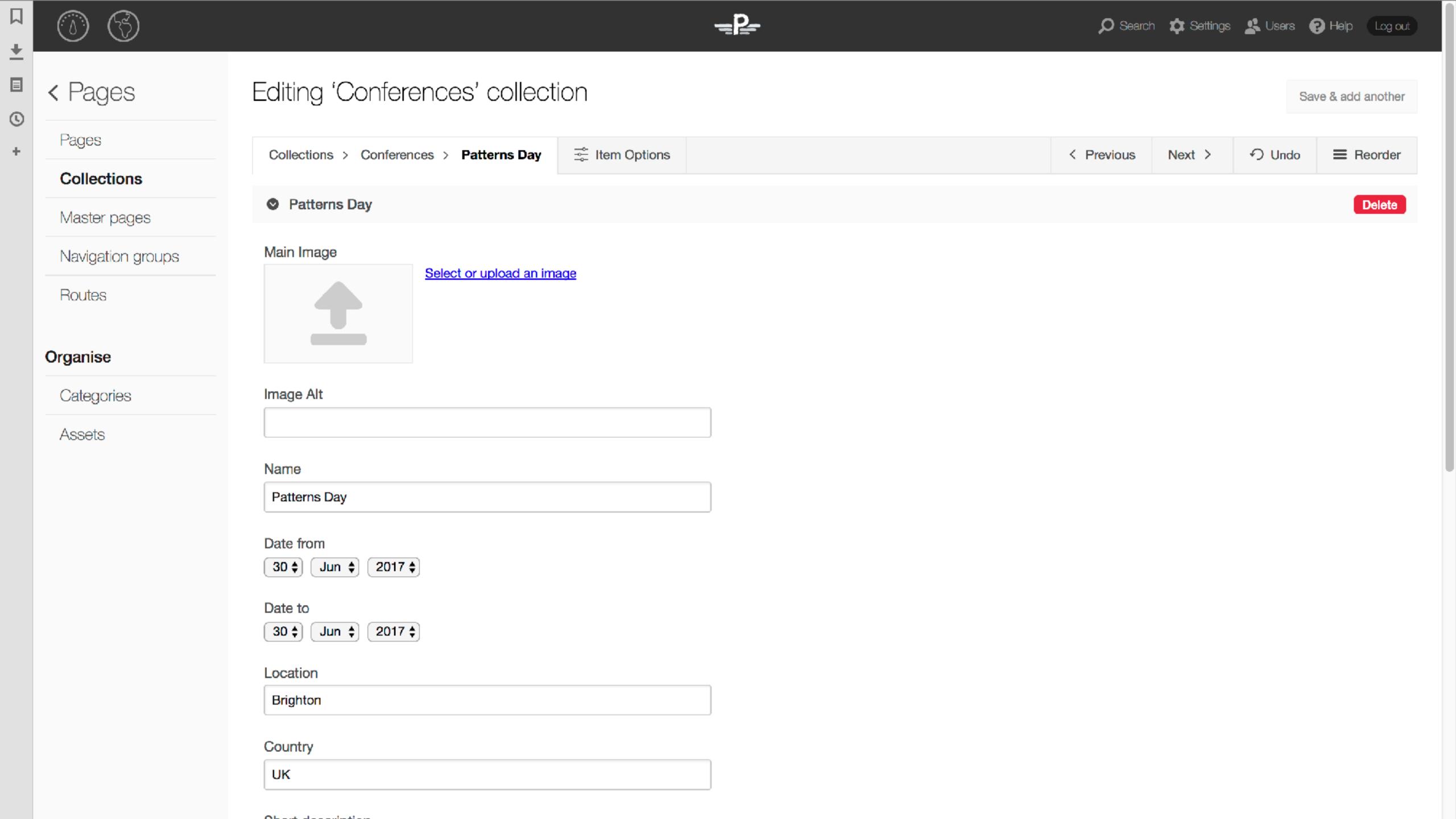Rachel Andrew @ Patterns Day
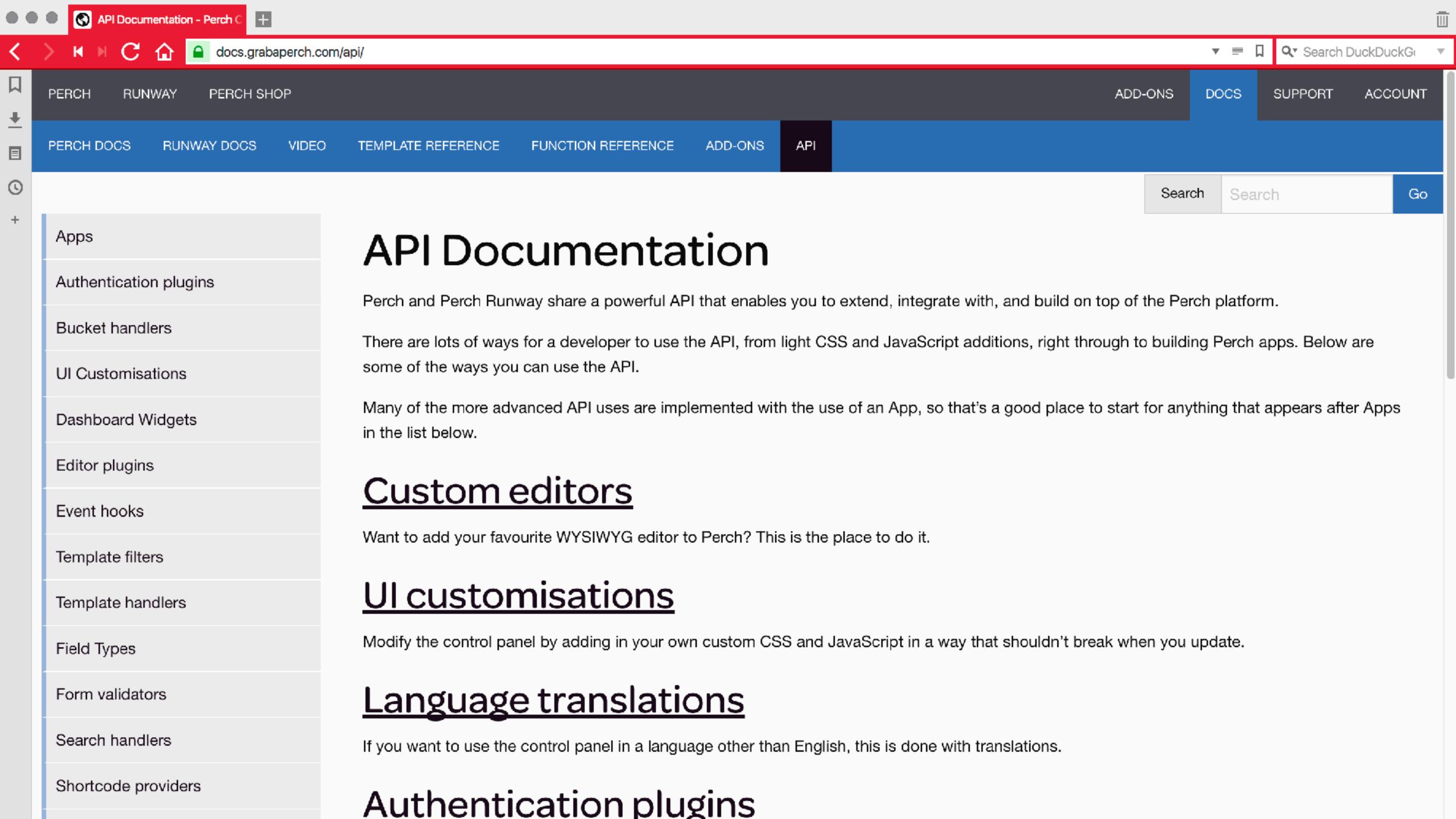
Perch, patterns, and old browsers.

I am:

▸ co-founder of Perch CMS

▸ An invited Expert to the CSS Working Group

▸ A Google Developer Expert

▸ A wearer of too many hats

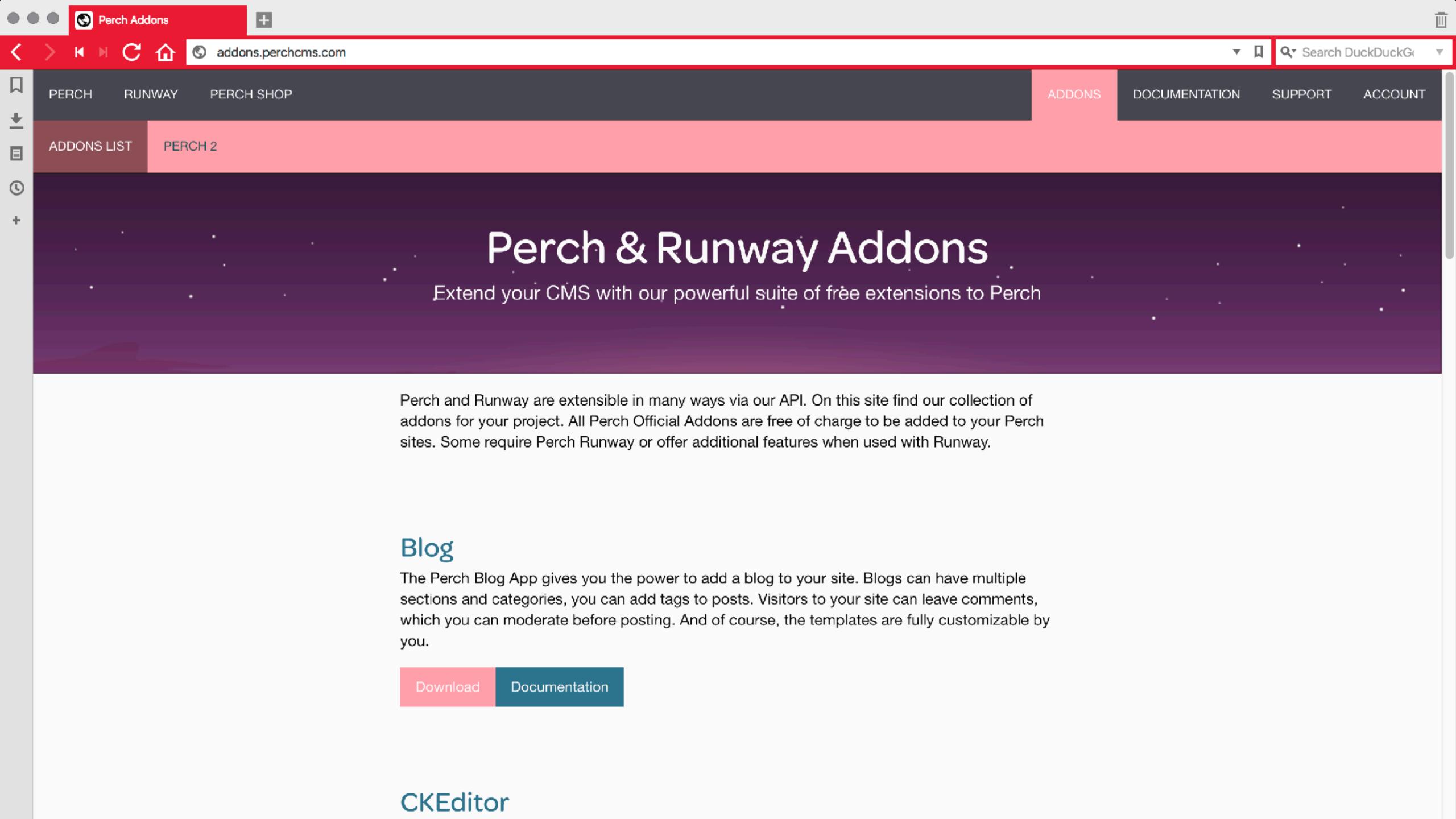▸ Blogging at rachelandrew.co.uk, on Twitter as @rachelandrew

patterns.perchcms.com

Perch UI Pattern Library

COMPONENTS

> Type

> Icons

> Notifications

> Assets

> Forms

> Navigation

> Listings

> Tables

> Dialogs

> Search

> Dashboard

> Layout

> Setup

> Pages

Perch UI Pattern Library

You can browse the component library using the navigation on the left.

Component statuses

Components and their variants have been given statuses reflecting their state of completion. The available statuses are listed below.

Label	Description
PROTOTYPE	Do not implement.
WIP	Work in progress. Implement with caution.
READY	Ready to implement.

Redesigning the Perch Control Panel.

Editing 'Conferences' collection

Save & add another

Item Options

Previous   Next   Undo   Reorder

Patterns Day

Delete

Main Image

Select or upload an image

Image Alt

Name

Patterns Day

Date from

30   Jun   2017

Date to

30   Jun   2017

Location

Brighton

Country

UK

Short description

```
1   <div class="single-col">
2
3   <perch:if exists="main_image">
4   <div class="topintro">
5     <img src="<perch:content id="main_image" label="Main Image" type="image" width="1080" />" alt="<perch:content id="main_image_alt" label="Image
      Alt" type="smarttext" />" />
6   </div>
7   </perch:if>
8
9     <h1><perch:content id="conference_title" label="Name" type="smarttext" title="true" /></h1>
10    <aside class="article-meta">
11      <p><perch:content id="conference_title" label="Name" type="smarttext" title="true" /> was held in <perch:content id="conference_date_from"
        label="Date from" type="date" required="true" format="F, Y" />
12      <perch:content id="conference_date_to" label="Date to" type="date" suppress="true" />
13      <perch:if id="conference_country_id" value="online" match="neq">
14        in <perch:content id="conference_location" type="smarttext" label="Location" />, <perch:content id="conference_country" type="smarttext"
          label="Country" />.
15      </perch:if>
16      </p>
17      <perch:related id="presentations" collection="Presentations" label="Select presentations">
18      <perch:before><p>Speaking about: </perch:before>
19    <a href="/speaking/topics/<perch:content id="presentation_slug" />"><perch:content id="presentation_title" label="Name" type="smarttext"
      title="true" /></a>
20
21    <perch:after></p></perch:after>
22
23      </perch:related>
24    </aside>
25    <div class="content">
26    <perch:content id="conference_desc" label="Short description" type="textarea" size="s" markdown="true" editor="markitup" />
27
28
29
30    <ul class="event-resources">
31      <li><a href="<perch:content id="conference_url" label="URL" type="text" />">Event website</a></li>
32      <perch:repeater id="resources" label="Resource Links">
```

docs.grabaperch.com/api/

PERCH   RUNWAY   PERCH SHOP

ADD-ONS   DOCS   SUPPORT   ACCOUNT

PERCH DOCS   RUNWAY DOCS   VIDEO   TEMPLATE REFERENCE   FUNCTION REFERENCE   ADD-ONS   API

Search   Search   Go

Apps

Authentication plugins

Bucket handlers

UI Customisations

Dashboard Widgets

Editor plugins

Event hooks

Template filters

Template handlers

Field Types

Form validators

Search handlers

Shortcode providers

API Documentation

Perch and Perch Runway share a powerful API that enables you to extend, integrate with, and build on top of the Perch platform.

There are lots of ways for a developer to use the API, from light CSS and JavaScript additions, right through to building Perch apps. Below are some of the ways you can use the API.

Many of the more advanced API uses are implemented with the use of an App, so that's a good place to start for anything that appears after Apps in the list below.

Custom editors

Want to add your favourite WYSIWYG editor to Perch? This is the place to do it.

UI customisations

Modify the control panel by adding in your own custom CSS and JavaScript in a way that shouldn't break when you update.

Language translations

If you want to use the control panel in a language other than English, this is done with translations.

Authentication plugins

addons.perchcms.com

Search DuckDuckG

PERCH   RUNWAY   PERCH SHOP   ADDONS   DOCUMENTATION   SUPPORT   ACCOUNT

ADDONS LIST   PERCH 2

Perch & Runway Addons

Extend your CMS with our powerful suite of free extensions to Perch

Perch and Runway are extensible in many ways via our API. On this site find our collection of addons for your project. All Perch Official Addons are free of charge to be added to your Perch sites. Some require Perch Runway or offer additional features when used with Runway.

Blog

The Perch Blog App gives you the power to add a blog to your site. Blogs can have multiple sections and categories, you can add tags to posts. Visitors to your site can leave comments, which you can moderate before posting. And of course, the templates are fully customizable by you.

Download   Documentation

CKEditor

The Perch UI has to exist as a set of independent components that can be displayed in any order.

We needed a pattern library.
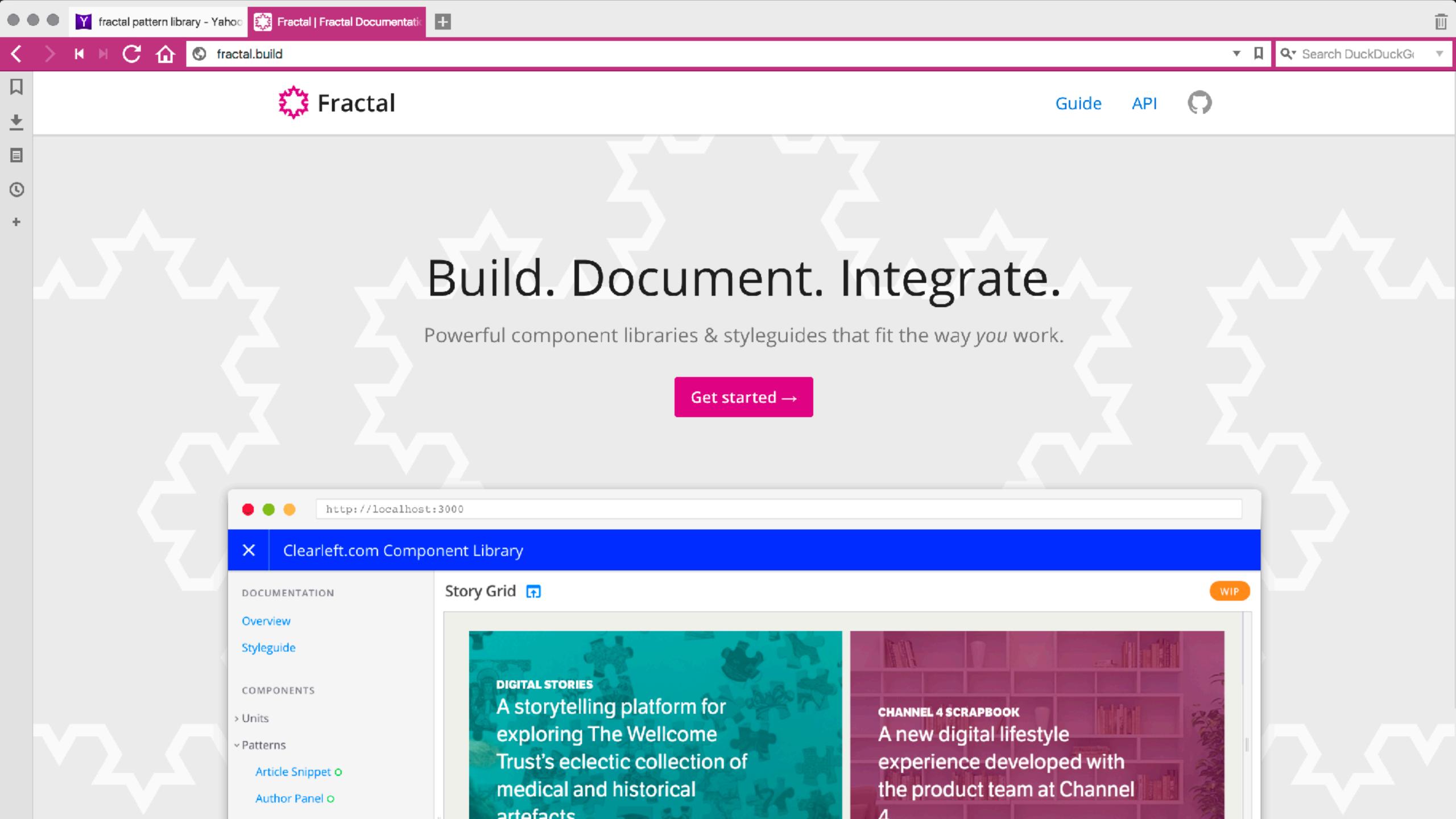
▸ Lots of duplication - copying and pasting code around

▸ Slow to make changes across items using the same markup

▸ Had to encode markup for display and also keep that up to date

▸ Would be unlikely to keep it up to date after launch as changes were painful

Pattern library tooling

▸ Somewhere to document design decisions

▸ A system to organise and separate components

▸ Something that would remain up to date once the product shipped

▸ Something we could make available to our third party add-on developers as a reference for their Perch add-ons

Many systems at the time assumed we were building a website.

Fractal

Guide   API

Build. Document. Integrate.

Powerful component libraries & styleguides that fit the way *you* work.

Get started →

http://localhost:3000

Clearleft.com Component Library

DOCUMENTATION

Overview

Styleguide

COMPONENTS

› Units

▾ Patterns

    Article Snippet ○

    Author Panel ○

Story Grid

WIP

DIGITAL STORIES

A storytelling platform for exploring The Wellcome Trust's eclectic collection of medical and historical artefacts

CHANNEL 4 SCRAPBOOK

A new digital lifestyle experience developed with the product team at Channel 4

We chose Fractal because:

▸ It didn't assume the shape of our project - no assumption of a 'homepage' for example

▸ It left the organisation of components and naming up to us

▸ It didn't dictate which build tools were used for the end CSS

▸ Allowed documentation to be stored alongside patterns

▸ Could export to HTML in order that we could make it available online

Pattern Library as Source of Truth.
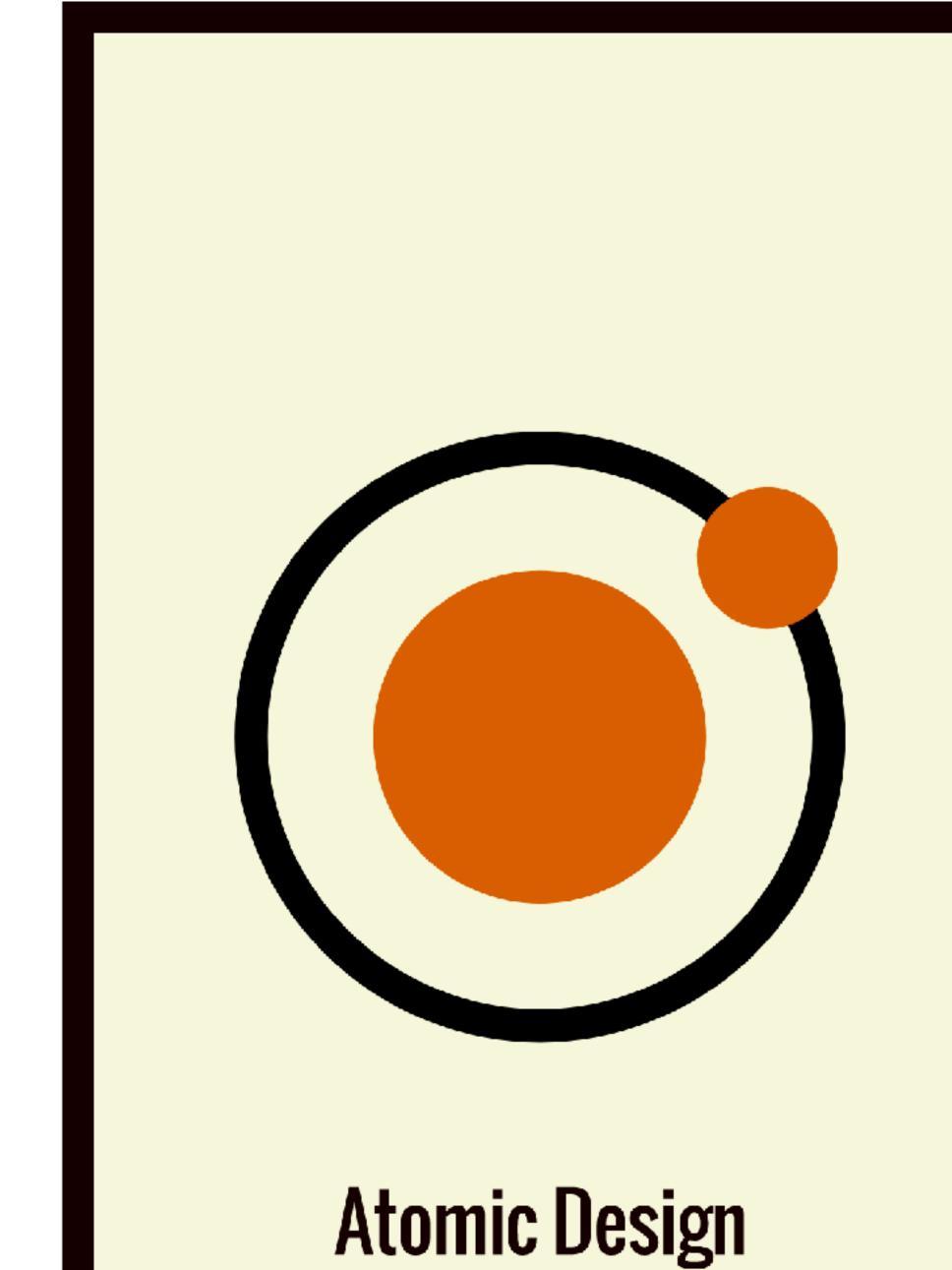
Fractal is where the CSS for the Perch UI is built.

Notification Bar ⬆️

READY

😣 Something very notable has occured. <u>Find out more about it.</u> Submit

⚠️ Something very notable has occured. <u>Find out more about it.</u> Submit

ℹ️ Something very notable has occured. <u>Find out more about it.</u> Submit

✅ Something very notable has occured. <u>Find out more about it.</u> Submit

~ notification-bar.hbs | 🔗 *notification-bar.scss* ✕

```scss
1   .notification {
2     padding: 10px $main-gutter;
3     @include font-scale(m, helvetica);
4   }
5
6   .notification .button {
7     float: right;
8   }
9
10  .notification svg {
11    vertical-align: middle;
12    margin-right: 5px;
13    margin-top: -3px;
14  }
15
16  .notification + .notification {
17    border-top: 1px solid ■#fff;
18  }
19
20  .notification.notification-alert,
21  .notification.notification-alert a.notification-link {
22    background-color: palette(alert, light);
23    color: palette(alert);
24  }
25
26  .notification.notification-alert svg {
27    fill: palette(alert);
```

~ notification-bar.hbs ✕ | 🔗 *notification-bar.scss*

```handlebars
1   <div role="alert" class="notification {{ class }}">
2   {{ icon icon }}
3   Something very notable has occured. <a href="#" class="notification-link">Find out more about it.</a>
4   {{ render button }}
5   </div>
```
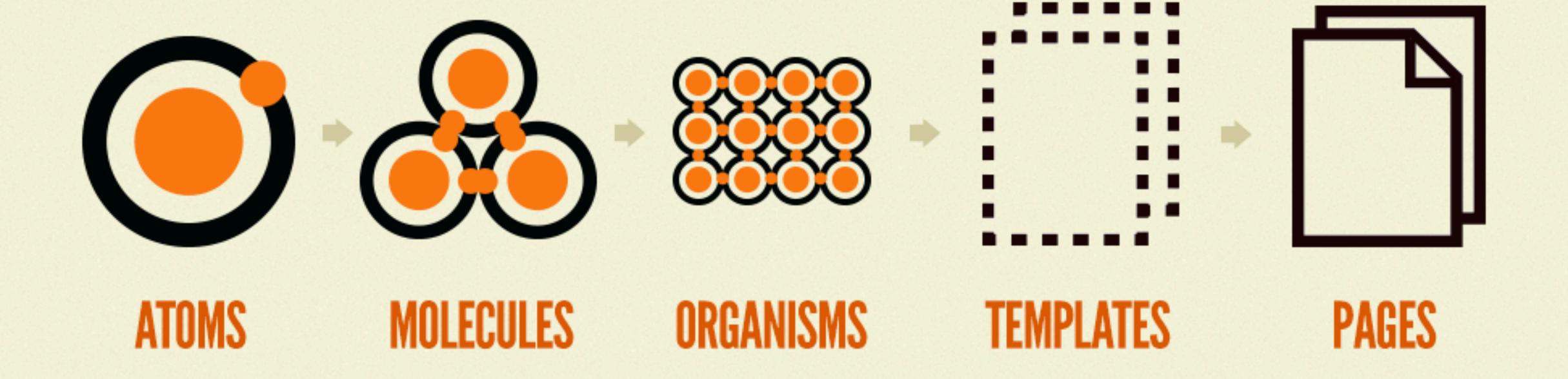
Naming things is hard.
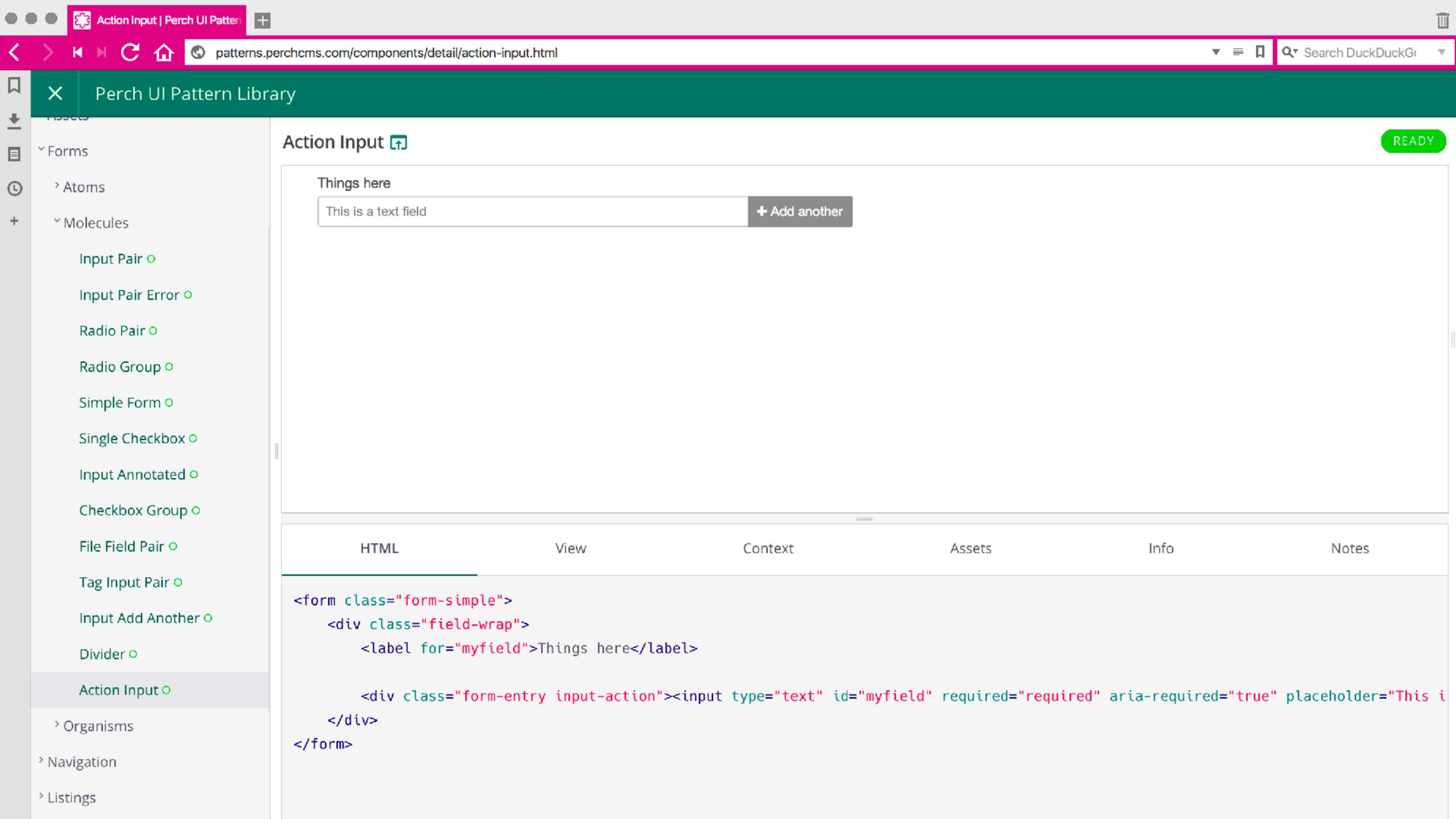
Atomic Design by Brad Frost

We're tasked with making interfaces for more users in more contexts using more browsers on more devices with more screen sizes and more capabilities than ever before. That's a daunting task indeed. Thankfully, design systems are here to help.
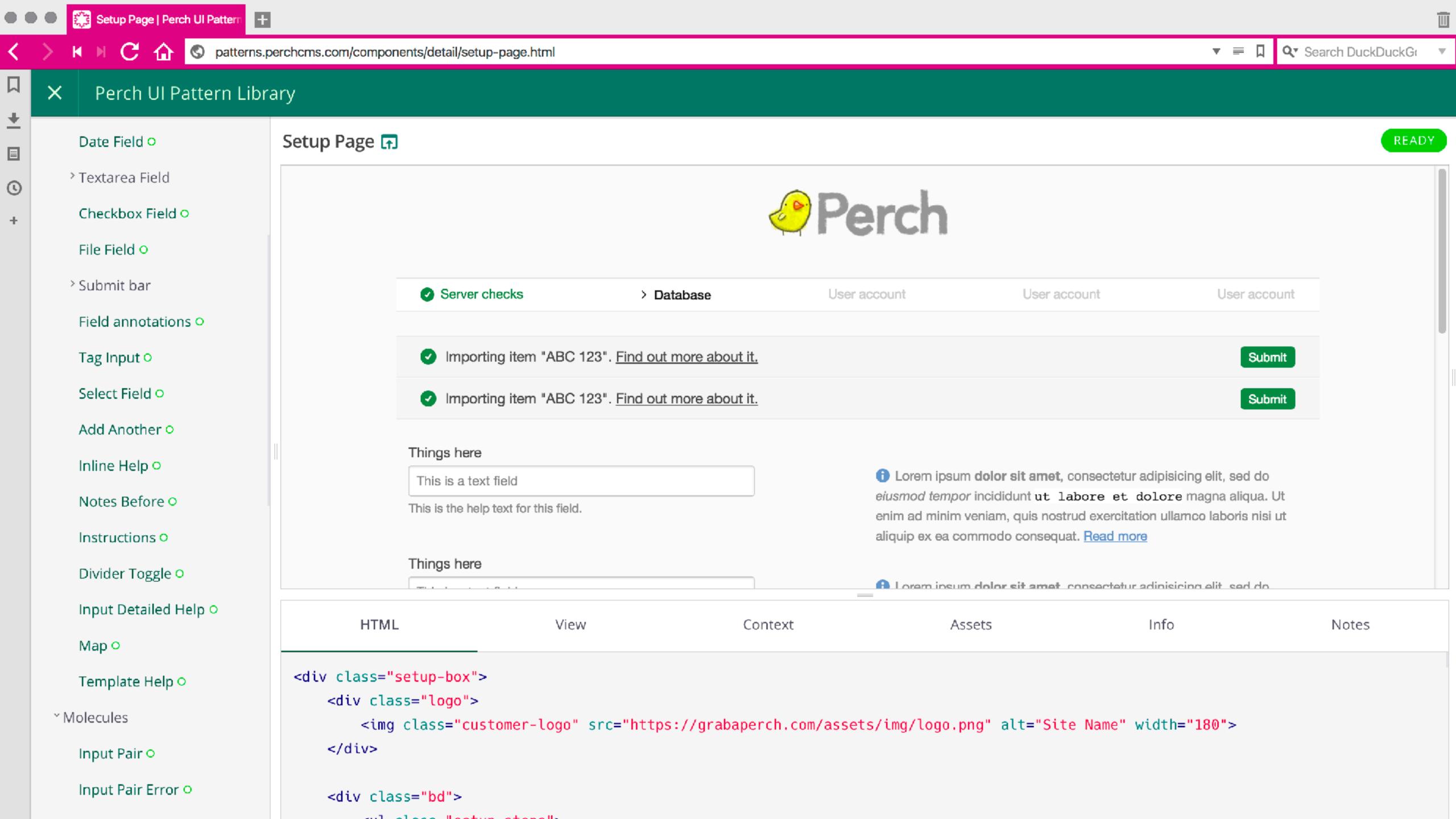
Atomic Design details all that goes into creating and maintaining robust design systems, allowing you to roll out higher quality, more consistent UIs faster than ever before. This book introduces a methodology for thinking of our UIs as thoughtful hierarchies, discusses the qualities of effective pattern libraries, and showcases techniques to transform your team's design and development workflow.

order the book

read now

ATOMS → MOLECULES → ORGANISMS → TEMPLATES → PAGES

patterns.perchcms.com/components/detail/action-input.html

Search DuckDuckG

Perch UI Pattern Library

Action Input

READY

Things here

| This is a text field | **+ Add another** |

Assets

Forms
- Atoms
- **Molecules**
  - Input Pair ○
  - Input Pair Error ○
  - Radio Pair ○
  - Radio Group ○
  - Simple Form ○
  - Single Checkbox ○
  - Input Annotated ○
  - Checkbox Group ○
  - File Field Pair ○
  - Tag Input Pair ○
  - Input Add Another ○
  - Divider ○
  - **Action Input ○**
- Organisms
- Navigation
- Listings

| HTML | View | Context | Assets | Info | Notes |

```
<form class="form-simple">
    <div class="field-wrap">
        <label for="myfield">Things here</label>

        <div class="form-entry input-action"><input type="text" id="myfield" required="required" aria-required="true" placeholder="This i
    </div>
</form>
```

Perch UI Pattern Library

Date Field ○

> Textarea Field

Checkbox Field ○

File Field ○

> Submit bar

Field annotations ○

Tag Input ○

Select Field ○

Add Another ○

Inline Help ○

Notes Before ○

Instructions ○

Divider Toggle ○

Input Detailed Help ○

Map ○

Template Help ○

˅ Molecules

Input Pair ○

Input Pair Error ○

Setup Page ⬆

READY

🐤 Perch

✓ **Server checks**   › **Database**   User account   User account   User account

✓ Importing item "ABC 123". Find out more about it.   **Submit**

✓ Importing item "ABC 123". Find out more about it.   **Submit**

Things here

This is a text field

This is the help text for this field.

ⓘ Lorem ipsum **dolor sit amet**, consectetur adipisicing elit, sed do *eiusmod tempor* incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Read more

Things here

ⓘ Lorem ipsum **dolor sit amet**, consectetur adipisicing elit, sed do

HTML	View	Context	Assets	Info	Notes

```html
<div class="setup-box">
    <div class="logo">
        <img class="customer-logo" src="https://grabaperch.com/assets/img/logo.png" alt="Site Name" width="180">
    </div>

    <div class="bd">
```

Don't stress about naming. It will become clearer as you build.

Don't be afraid to refactor, and choose a tool that enables this.

Reduced Test Case First development

Perch supports right back to IE9.

* supports doesn't mean 'looks the same'

I didn't worry about old browsers until after we had built the UI.

Flexbox & Grid are so different. If you build using old methods first you won't take advantage of their creative possibilities.

Start with solid markup.

Build your up to date experience using up to date methods.

Then look at the browsers that don't support these newer methods.

Time spent dealing with old browsers, back to IE9 for the Perch UI?

About a day.

When faced with a confusing broken mess, we strip it back to a reduced test case.

Components are already a reduced test case.

Work in the Pattern Library to test and fix each component in turn. Starting with the smallest version - in our case our 'atoms'.

By the time you get to the main layouts you may find it all just works.

If not, remember your layout is just another component, into which other things sit.

Working pattern library first is a very good way to start using new CSS.

Use Grid on a small element of your design.

A grid component

Creating a grid with as many columns as will fit. Items with a class of 'tall-panel' span two rows.

```css
.wrapper {
  display: grid;
  grid-gap: 10px;
  margin: 0 auto;
  grid-template-columns:
    repeat(auto-fill, minmax(200px, 1fr));
  grid-auto-rows:
    minmax(150px, auto);
}

.tall-panel {
  grid-row-end: span 2;
}
```

My header

Panel A

Panel B

Panel C

Panel D

Panel E

Panel F

Panel G
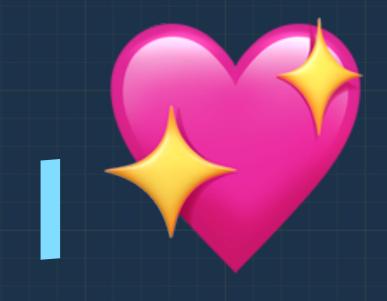
Panel H

Panel I

Panel J

My header

Panel A

Panel B

Panel C

Panel D

Panel E

Panel F

No Grid?

Use Flexbox as a fallback

```css
.wrapper {
  display: flex;
  flex-wrap: wrap;
}

.wrapper {
  display: grid;
  grid-gap: 10px;
  margin: 0 auto;
  grid-template-columns:
    repeat(auto-fill, minmax(200px, 1fr));
  grid-auto-rows:
    minmax(150px, auto);
}

.panel {
  margin-left: 5px;
  margin-right: 5px;
  flex: 1 1 200px;
}

.tall-panel {
  grid-row-end: span 2;
}

@supports (display: grid) {
  .wrapper > * {
    margin: 0;
  }
}
```

My header

Panel A

Panel B

Panel C

Panel D

Panel E

Panel F

Panel G

Panel H

Panel I

Panel J

My footer

Keep fallback code with the component in the pattern library.

I 💖 pattern libraries!

Designing a component seems less overwhelming than designing a whole site.

Developing CSS in the Pattern Library makes CSS more manageable.

Pattern library first keeps the build process and the runtime process separate.

Components are reduced test cases. Allowing you to more easily embrace new techniques and deal with old browsers.

Choose tools that allow you to refactor the pattern library as things change.

Make the pattern library the source of truth and it can't get out of date.

Links & Things

The Perch Pattern Library:
http://patterns.perchcms.com

Fractal:
http://fractal.build/

Atomic Design:
http://atomicdesign.bradfrost.com/

Patterns on Grid by Example:
https://gridbyexample.com/patterns/

Grid fallbacks and overrides cheatsheet:
https://rachelandrew.co.uk/css/cheatsheets/grid-fallbacks

@rachelandrew

Resources and slides: https://rachelandrew.co.uk/speaking/event/patterns-day

Thank you!