COMPONENT BASED THEMING WITH UI PATTERNS

PRESENTED BY BRIAN PERRY

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BRIAN PERRY

Hi!

- Currently living in Chicago 'burbs

- Interactive Developer at HS2 Solutions

- Loves style guide driven development and all things Nintendo

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HS2 SOLUTIONS

Totally Unapproved Company Info Slide

Pros:

- Chicago area

- Smart Drupal folks

- Always looking for more smart Drupal Folks

- Sent me here

Cons:

- People in the Midwest say 'Pop' instead of 'Soda'
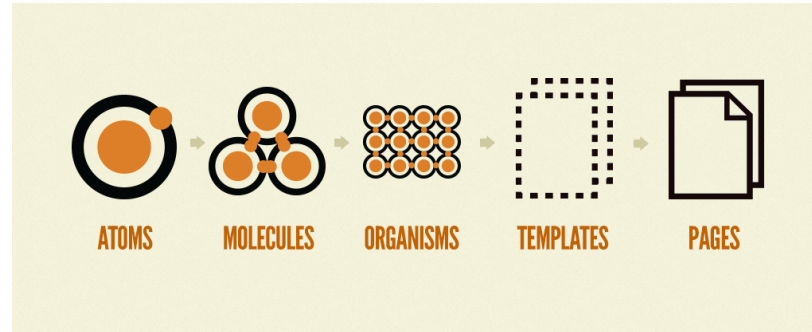
- Not HS1 Solutions

Component Based Theming With UI Patterns

COMPONENT BASED THEMING

WHAT IS IT?

- Creating modular and re-usable elements

- Building a design system, not a series of pages

- Can use a living style guide for documentation and prototyping

  - Tools like KSS and Pattern Lab

COMPONENT BASED THEMING

WHY TAKE A COMPONENT BASED APPROACH?

- Efficient re-use

  - Write once, use everywhere.

  - Within a single project and even across projects (beyond Drupal even)

- Well isolated chunks of code

- Decoupling front and back end development

  - Theming doesn't have to come last

- Living style guide

  - Simplifies coordination between designers and developers / developers and developers.

  - Rapid prototyping

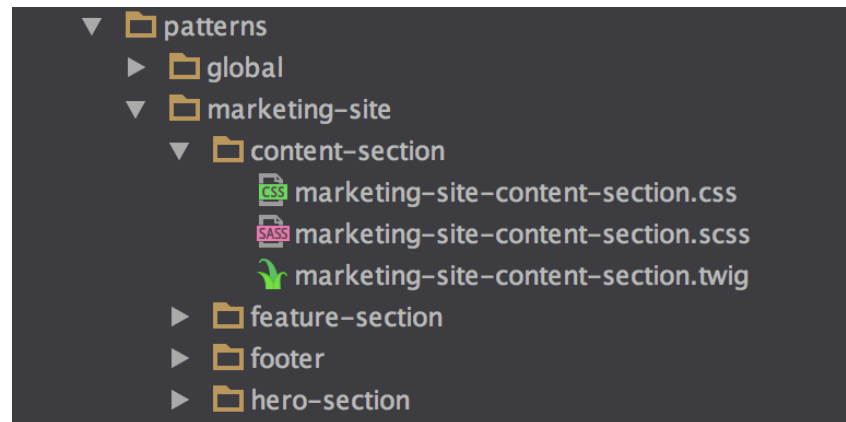# Component Based Theming ~~With~~ Without UI Patterns

OUR COMPONENT

Yeti Snowcone Agency

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aperiam omnis, maxime libero natus qui minus!
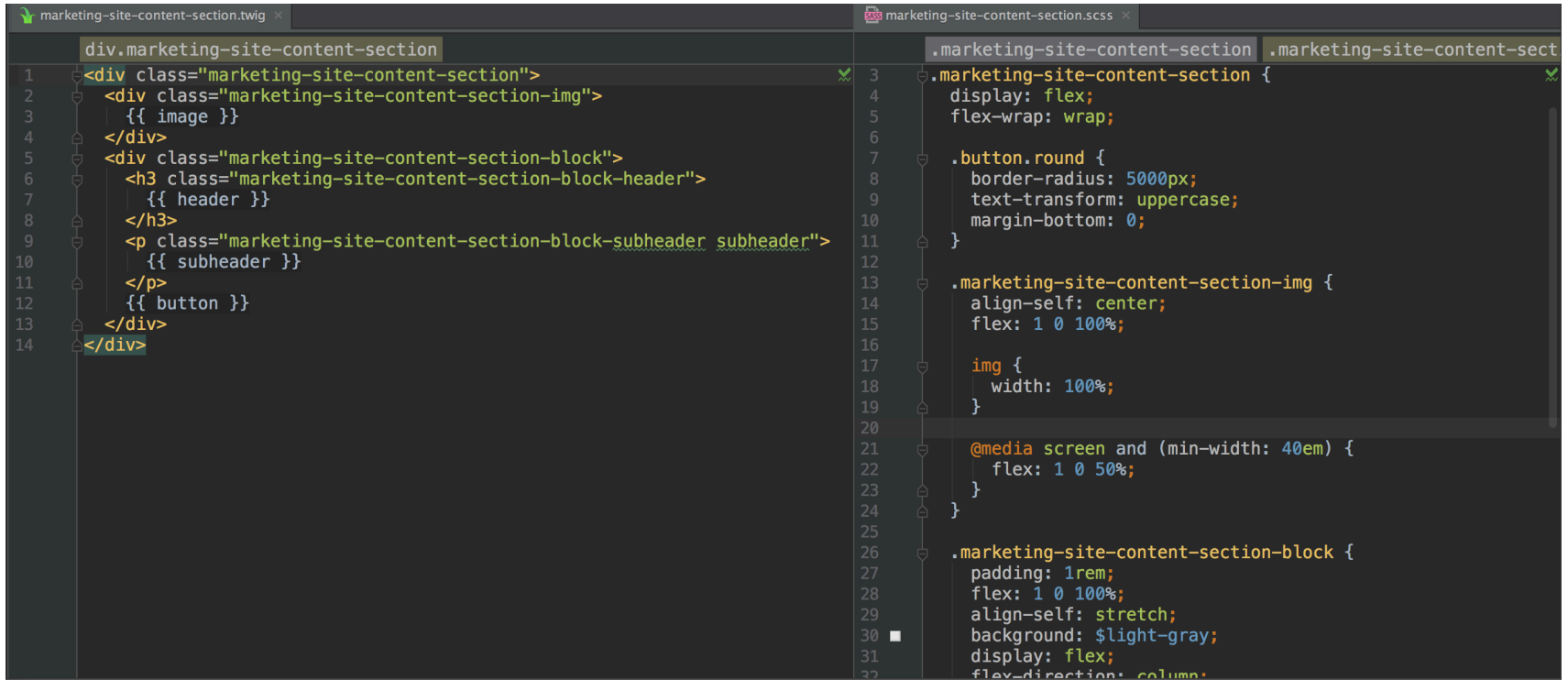
LEARN MORE

THE COMPONENT DIRECTORY

- Everything lives inside component directory in Pattern Library

  - SASS

  - Twig

  - JS

  - Other Assets

  - Pattern Data

MARKUP AND STYLES

marketing–site–content–section.twig ×

marketing–site–content–section.scss ×

div.marketing–site–content–section

.marketing–site–content–section .marketing–site–content–sect

```twig
1   <div class="marketing-site-content-section">
2       <div class="marketing-site-content-section-img">
3           {{ image }}
4       </div>
5       <div class="marketing-site-content-section-block">
6           <h3 class="marketing-site-content-section-block-header">
7               {{ header }}
8           </h3>
9           <p class="marketing-site-content-section-block-subheader subheader">
10              {{ subheader }}
11          </p>
12          {{ button }}
13      </div>
14  </div>
```

```scss
3   .marketing-site-content-section {
4       display: flex;
5       flex-wrap: wrap;
6
7       .button.round {
8           border-radius: 5000px;
9           text-transform: uppercase;
10          margin-bottom: 0;
11      }
12
13      .marketing-site-content-section-img {
14          align-self: center;
15          flex: 1 0 100%;
16
17          img {
18              width: 100%;
19          }
20
21          @media screen and (min-width: 40em) {
22              flex: 1 0 50%;
23          }
24      }
25
26      .marketing-site-content-section-block {
27          padding: 1rem;
28          flex: 1 0 100%;
29          align-self: stretch;
30          background: $light-gray;
31          display: flex;
32          flex-direction: column;
```

MAPPING TO DRUPAL

paragraph--marketing-content-section.html.twig

```
1   {{ attach_library('foundation_patterns/marketing-site-content-section') }}
2
3   {% include "@marketing/content-section/marketing-site-content-section.twig"
4     with {
5       "image": content.field_fpc_image,
6       "header": content.field_fpc_header,
7       "subheader": content.field_fpc_subheader,
8       "button": content.field_fpc_link
9     }
10  %}
```

PAIN POINTS

IT WORKS, BUT…

- Requires quite a bit of debugging

- Difficult for those not familiar with Twig / Render Array Structure

- Easy to get carried away / break things Drupal depends on (Quickedit, Panels IPE)

- card.twig is a black box to Drupal

Component Based Theming With UI Patterns

UI PATTERNS MODULE

Define and manage components in a way that Drupal understands

- Define UI Patterns as Drupal Plugins

- Use defined patterns with component friendly modules

    - Views, field groups, panels, display suite, paragraphs (requires field layout or display suite)

- Configure data mappings in the UI

- Optional Pattern Library page exposed in Drupal

- Also allows Drupal to:

    - Preprocess patterns
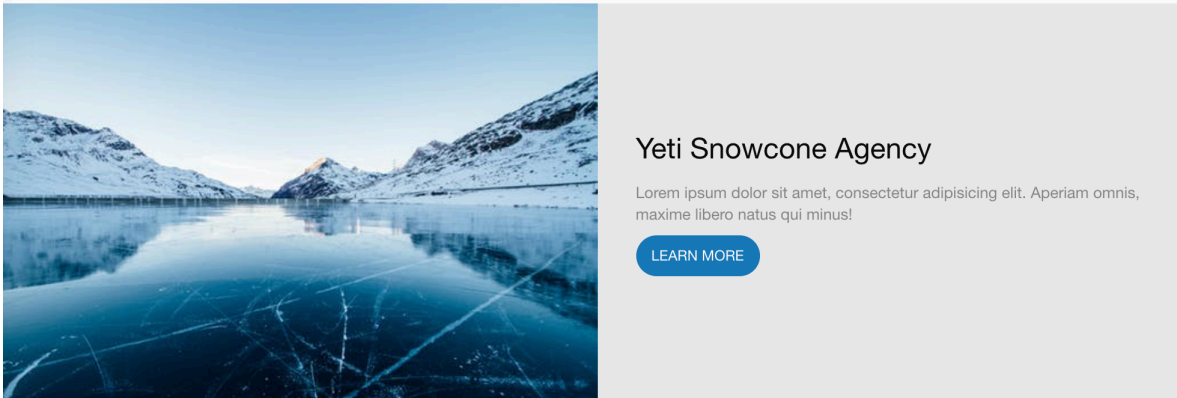
    - Render patterns programmatically

UI UI UI   UI UI UI   UI UI UI

YAML
(UI Patterns)

Fractal

PatternLab

UI Patterns

Views

UI UI

Display Suite

UI UI

Layouts

UI UI

Field Groups

UI UI

Drupal 8 Theme Layer
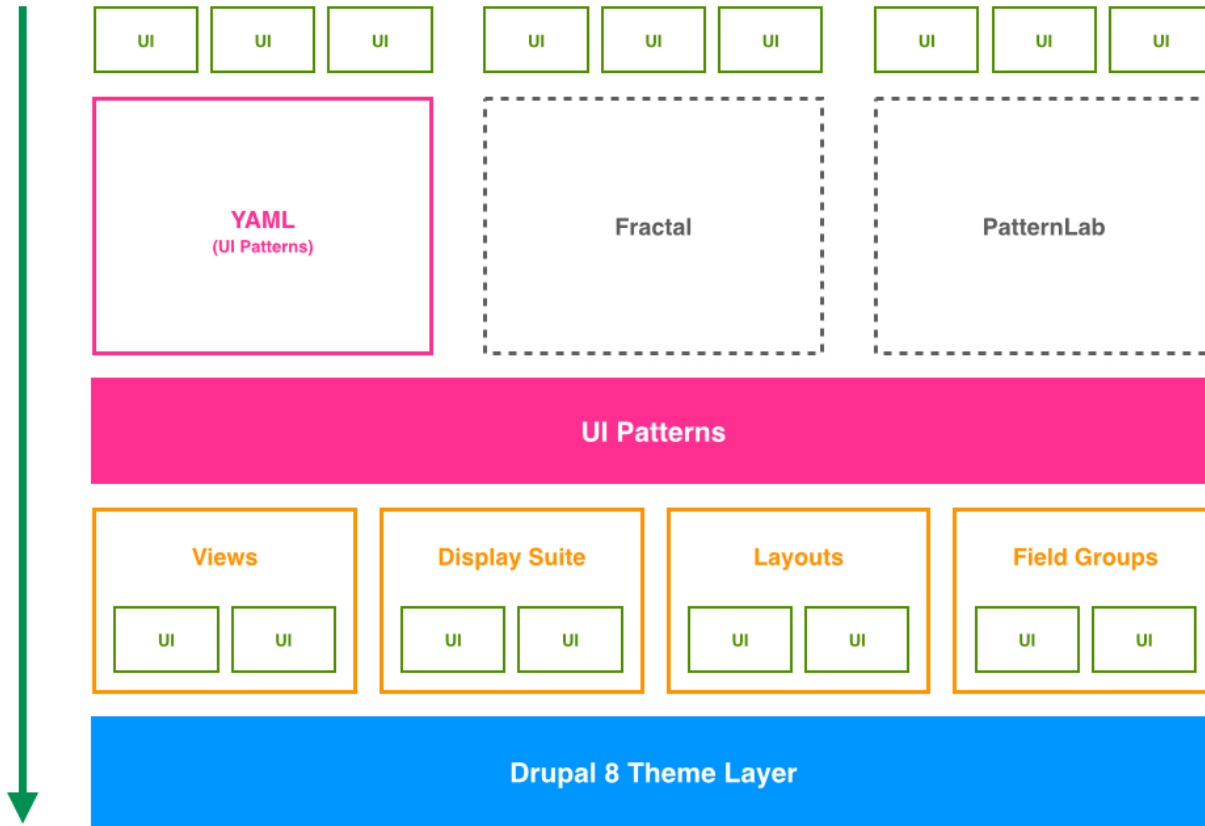
UI PATTERNS LIBRARY SUBMODULE

Marketing Site Content Section

A responsive content section that features equal height images and content containers. On mobile they collapse to a card like setup.

Field	Label	Type	Description
`image`	Image	`image`	Associated image.
`header`	Header	`text`	Header Text
`subheader`	Subheader Text	`text`	Subheader Text
`button`	More Button	`link`	Button leading to detail view.

Preview

Yeti Snowcone Agency

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aperiam omnis, maxime libero natus qui minus!

LEARN MORE

View Marketing Site Content Section as stand-alone

DEFINING A PATTERN

marketing-site-content-section.pattern.yml

```yaml
marketing_site_content_section:
  label: Marketing Site Content Section
  description: A responsive content section that features equal height images and content containers. On mobile
they collapse to a card like setup.
  fields:
    image:
      type: image
      label: Image
      description: Associated image.
      preview: >
        <img src="https://images.pexels.com/photos/300857/pexels-photo-300857
.jpeg?h=350&auto=compress&cs=tinysrgb" alt="" />
    header:
      type: text
      label: Header
      description: Header Text
      preview: Yeti Snowcone Agency
    subheader:
      type: text
      label: Subheader Text
      description: Subheader Text
      preview: Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aperiam omnis, maxime libero natus qui
minus!
    button:
      type: link
      label: More Button
      description: Button leading to detail view.
      preview: >
        <a href="#" class="round button small">learn more</a>
  use: "@marketing/content-section/marketing-site-content-section.twig"
  libraries:
    - pattern:
        css:
          component:
            marketing-site-content-section.css: {}
```

```yaml
marketing_site_content_section:
  label: Marketing Site Content Section
  description: A responsive content section that features equal height images and content containers. On mobile
```

```yaml
    preview: >
      <img src="https://images.pexels.com/photos/300857/pexels-photo-300857
.jpeg?h=350&auto=compress&cs=tinysrgb" alt="" />
  header:
    type: text
    label: Header
    description: Header Text
    preview: Yeti Snowcone Agency
  subheader:
    type: text
    label: Subheader Text
    description: Subheader Text
    preview: Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aperiam omnis, maxime libero natus qui
minus!
  button:
    type: link
    label: More Button
    description: Button leading to detail view.
    preview: >
      <a href="#" class="round button small">learn more</a>
  use: "@marketing/content-section/marketing-site-content-section.twig"
  libraries:
    - pattern:
```
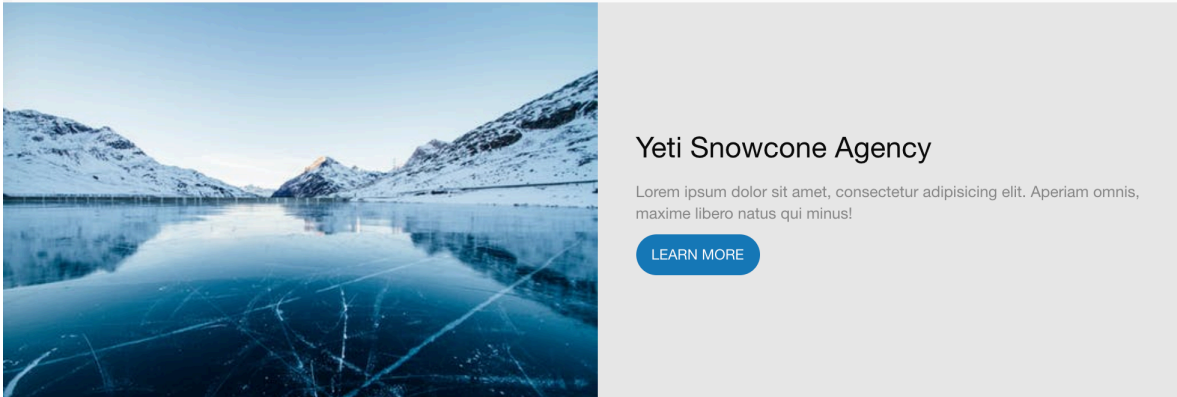
```yaml
marketing_site_content_section:
  label: Marketing Site Content Section
  description: A responsive content section that features equal height images and content containers. On mobile
    they collapse to a card like setup.
  fields:
  fields:
    image:
      type: image
      label: Image
      description: Associated image.
      preview: >
        <img src="https://images.pexels.com/photos/300857/pexels-photo-300857.
    header:
      type: text
      label: Header
      description: Header Text
      preview: Yeti Snowcone Agency
    subheader:
      type: text
      label: Subheader Text
        <a href="#" class="round button small">learn more</a>
  use: "@marketing/content-section/marketing-site-content-section.twig"
  libraries:
    - pattern:
```

```yaml
marketing_site_content_section:
  label: Marketing Site Content Section
  description: A responsive content section that features equal height images and content containers. On mobile
    they collapse to a card like setup.
  fields:
    image:
      type: image
      label: Image
      description: Associated image.
      preview: >
        <img src="https://images.pexels.com/photos/300857/pexels-photo-300857
.jpeg?h=350&auto=compress&cs=tinysrgb" alt="" />
    header:
      type: text
      label: Header
      description: Header Text
      preview: Yeti Snowcone Agency
    subheader:
      type: text
```

```yaml
use: "@marketing/content-section/marketing-site-content-section.twig"
libraries:
  - pattern:
      css:
        component:
          marketing-site-content-section.css: {}
```
```
use:  @marketing/content-section/marketing-site-content-section.twig
libraries:
  - pattern:
```

CAN I GET A SUGGESTION?

pattern-marketing-site-content-section.html.twig

- If 'use:' doesn't make sense for you, default template suggestions exist.
  - Could add your twig markup here
  - Can even include/extend/embed and map data.
- Can preprocess to add additional suggestions.
  - See hook_theme_suggestions_alter()

DRUPAL PATTERN LIBRARY

Marketing Site Content Section

A responsive content section that features equal height images and content containers. On mobile they collapse to a card like setup.

Field	Label	Type	Description
`image`	Image	`image`	Associated image.
`header`	Header	`text`	Header Text
`subheader`	Subheader Text	`text`	Subheader Text
`button`	More Button	`link`	Button leading to detail view.

Preview

Yeti Snowcone Agency

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aperiam omnis, maxime libero natus qui minus!

LEARN MORE

View Marketing Site Content Section as stand-alone

And now for the part that everyone gets tripped up on…

EXPOSING YOUR PATTERN IN DRUPAL

INTEGRATION MODULES

- **UI Patterns Layouts** – makes patterns available via Layout Discovery

- **UI Patterns Views** – makes patterns available as views row style

- **UI Patterns Display Suite** – makes patterns available as display suite field templates

- **UI Patterns Field Group** – makes patterns available to field groups

LOOKING FOR A PLACE TO START?

- In 8.3 and above:
  - Enable Field Layout
  - Enable UI Patterns Layouts
  - Begin enjoying your patterns anywhere layouts are available.

Paragraphs are common component friendly option.

CREATE PARAGRAPH TYPE

Manage fields ☆

| Edit | Manage fields | Manage form display | Manage display |

Home » Administration » Structure » Paragraphs types » Fpc marketing content section

+ Add field

LABEL	MACHINE NAME	FIELD TYPE	OPERATIONS
Header	field_fpc_header	Text (plain)	Edit ▾
Image	field_fpc_image	Image	Edit ▾
Link	field_fpc_link	Link	Edit ▾
Subheader	field_fpc_subheader	Text (plain, long)	Edit ▾

MANAGE DISPLAY: LAYOUT SETTINGS

Select your pattern from the list.

MAP PARAGRAPH FIELDS TO PATTERN FIELDS

Edit	Manage fields	Manage form display	**Manage display**	

Home » Administration » Structure » Paragraphs types » Fpc marketing content section

Show row weights

FIELD	LABEL	FORMAT		
Image				
⊕ Image	– Hidden – ▾	Image ▾	Original image	⚙
Header				
⊕ Header	– Hidden – ▾	Plain text ▾		⚙
Subheader Text				
⊕ Subheader	– Hidden – ▾	Plain text ▾		
More Button				
⊕ Link	– Hidden – ▾	Link ▾	Link text trimmed to 80 characters	⚙
Disabled				

Beyond the Basics

TESTIMONIAL BLOCK PATTERN

Testimonial Block Vertical

A testimonial block to tell your site visitors how awesome you are.

Field	Label	Type	Description
`testimonial_avatar`	Testimonial Avatar	`image`	Associated image.
`testimonial_quote`	Testimonial Quote Copy	`text`	Testimonial quote copy
`testimonial_person`	Testimonial Name	`text`	Name attributed to Testimonial
`testimonial_title`	Testimonial Title	`text`	Title of person attributed to Testimonial
`testimonial_company`	Testimonial Company	`text`	Company of person attributed to Testimonial

Preview

Lorem ipsum dolor sit amet, consectetur adipiscing elit. In ultrices, elit sed faucibus pharetra, diam mauris bibendum orci, sit amet ullamcorper purus dui sit amet augue. Donec aliquet diam ut neque mattis, eu tristique sem rutrum.

JOHN DOE
IMPORTANT PERSON, SOME COMPANY

View Testimonial Block Vertical as stand-alone

UI PATTERNS VIEWS

Page: Row style options

☐ Provide default field wrapper elements
   If not checked, fields that are not configured to customize th
   You can use this to quickly reduce the amount of markup th

☐ Hide empty fields
   Do not display fields, labels or markup for fields that are em

Pattern *
[Testimonial Block Vertical   ▾]

Page: How should each row in this view be styled   ✕

○ Content
○ Fields
● Pattern
○ Search results

You may also adjust the settings for the currently selected row style.

[Apply]   (Cancel)

Show row weights

SOURCE	PLUGIN	DESTINATION
⊕ Content: Quote	Views row	Testimonial Quote Copy ▾
⊕ Content: Avatar	Views row	Testimonial Avatar ▾
⊕ Content: Person Name	Views row	Testimonial Name ▾
⊕ Content: Person Title	Views row	Testimonial Title ▾
⊕ Content: Person Company	Views row	Testimonial Company ▾

[Apply]   (Cancel)

Quotes

Another quote in a list? Amazing.

SETH
VIP OF ENGINEERING , HS2 SOLUTIONS

Lorem ipsum dolor sit amet, consectetur adipiscing elit. In ultrices, elit sed faucibus pharetra, diam mauris bibendum orci, sit amet ullamcorper purus dui sit amet augue. Donec aliquet diam ut neque mattis, eu tristique sem rutrum.

JOHN DOE
IMPORTANT PERSON , SOME COMPANY

UI PATTERNS FIELD GROUP

+ Add group

Show row weights

FIELD	LABEL	FORMAT		
✛ **Quote**		Pattern ▾	Pattern: Testimonial Block Vertical	delete ⚙
✛ Quote	– Hidden – ▾	Plain text ▾		
✛ Avatar	– Hidden – ▾	Image ▾	Original image	⚙
✛ Person Name	– Hidden – ▾	Plain text ▾		⚙
✛ Person Title	– Hidden – ▾	Plain text ▾		⚙
✛ Person Company	– Hidden – ▾	Plain text ▾		⚙

UI PATTERNS FIELD GROUP

FIELD	LABEL	FORMAT
		Field group format: pattern_formatter

Field group label

Quote

Pattern *

Testimonial Block Vertical ▼

SOURCE	PLUGIN	DESTINATION
⊕ Quote	Fields	Testimonial Quote Copy ▼
⊕ Avatar	Fields	Testimonial Avatar ▼
⊕ Person Name	Fields	Testimonial Name ▼
⊕ Person Title	Fields	Testimonial Title ▼
⊕ Person Company	Fields	Testimonial Company ▼

⊕ **Quote**

Update   Cancel

UI PATTERNS DISPLAY SUITE

RENDER USING TWIG FUNCTION

```twig
{# With static content #}

{{ pattern('testimonial_block_vertical',
  {
    testimonial_quote: 'Pretty cool how we can use patterns all of these
    testimonial_avatar: '<img src="https://placehold.it/60" alt="" />',
    testimonial_person: 'Pattern Man',
    testimonial_title: 'Same Pattern',
    testimonial_company: 'Different Context'
  }
) }}

{# With dynamic content #}

{{ pattern('testimonial_block_vertical',
  {
    testimonial_quote: content.field_quote,
    testimonial_avatar: content.field_avatar,
    testimonial_person: content.field_person_name,
    testimonial_title: content.field_person_title,
    testimonial_company: content.field_person_company
  }
) }}
```

Pretty cool how we can use patterns all of these different ways. And you can quote me on that.

PATTERN MAN
SAME PATTERN, DIFFERENT CONTEXT

RENDER PATTERN PROGRAMMATICALLY

```php
<?php
$elements['quote'] = [
  '#type' => 'pattern',
  '#id' => 'testimonial_block_vertical',
  '#fields' => [
    'testimonial_quote' => 'You must do the things you think you cannot do,
    'testimonial_avatar' => '<img src="https://placehold.it/60" alt="" />',
    'testimonial_person' => 'Master of teh Codez',
    'testimonial_title' => 'Lead Lead Developer',
    'testimonial_company' => 'Reports to No One'
  ]
];

\Drupal::service('renderer')->render($elements);
```

You must do the things you think you cannot do, like rendering a pattern programmatically.

MASTER OF TEH CODEZ
LEAD LEAD DEVELOPER, REPORTS TO NO ONE

SUB-PATTERNS

Not yet formally supported, but…

Yeti Approved Features

Lorem ipsum dolor sit amet, consectetur adipisicing elit quaerat eos words and phrases.

Special Snowflake

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Friendly Forms

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Special Snowflake

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lithium Ion

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Preview

Special Snowflake

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

View Marketing Site Feature as stand-alone

SUB-PATTERNS

Can use nested paragraphs for same end result

CAN RENDER PATTERNS IN YOUR PATTERN PREVIEW

```yaml
features:
  type: pattern
  label: Features
  description: One or more features patterns to be included in grid.
  preview:
    - type: pattern
      id: marketing_site_feature
      fields:
        icon_class: fa-snowflake-o
        title: Special Snowflake
        description: Lorem ipsum dolor sit amet, consectetur adipisicing elit.
    - type: pattern
      id: marketing_site_feature
      fields:
        icon_class: fa-angellist
        title: Friendly Forms
        description: Lorem ipsum dolor sit amet, consectetur adipisicing elit.
```

VARIANTS

On roadmap, but twig variables may be enough in some cases

```
<div class="small-12 medium-3 columns">
  <i class="fa {{ icon_class }}" aria-hidden="true"></i>
  <h4 class="marketing-site-features-title">{{ title }}</h4>
  <p class="marketing-site-features-desc">{{ description }}</p>
</div>
```

Workflow

UI PATTERNS WITH AN EXTERNAL PATTERN LIBRARY

- Components begin life in Pattern Lab

  - Developing components that don't yet exist

  - Smaller sub-components

  - Larger scale prototyping

- Components 'graduate' to a UI Pattern in Drupal

  - Documented both in code and in pattern library

  - Predictable re-use anywhere a UI Pattern can be rendered

INTEGRATING WITH UI PATTERNS

- Many possible options:

  - The UI / various integration modules.

  - Programmatically

  - Twig functions

- **Pick an approach, stick to it. Document it.**

UI Patterns in a Contributed Theme

FOUNDATION PATTERNS THEME

Exposes foundation building blocks – not opinionated about how they are used

Foundation Patterns

View   Version control

Posted by brianperry on *2 April 2017*, updated *30 September 2017*

This project is not covered by Drupal's security advisory policy.

The Foundation Patterns theme is a subtheme of Zurb Foundation intended to implement Foundation components using UI Patterns. The primary purpose of this theme is to provide a way to quickly build sites using common building blocks from the Foundation framework, starting with the marketing building block kit. Secondarily, it is also intended to provide examples of how to take advantage of patterns defined by the UI Patterns module in a Drupal theme. Support for Pattern Libraries including Pattern Lab will also be provided.

Dependencies

- Zurb Foundation
- UI Patterns currently developing based on 8.x-1.x-dev
- Component Libraries

Installation
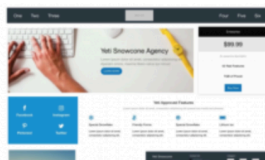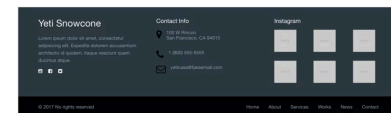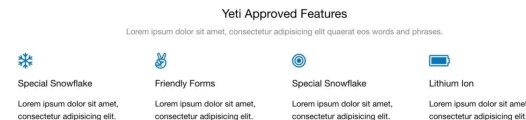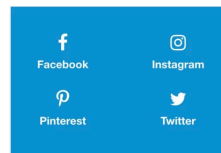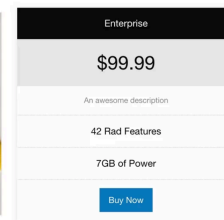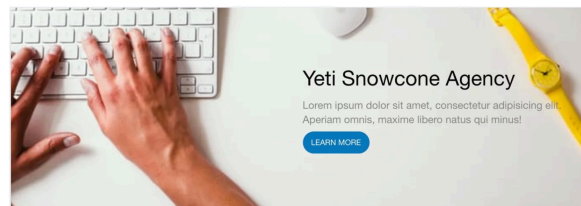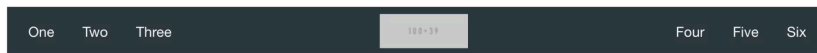
FOUNDATION PATTERNS CONFIGURATION MODULE

Pre-packaged paragraph types to jump start the use of the theme

Resources

RESOURCES

- https://www.drupal.org/project/ui_patterns

  - Links to documentation and github repo / issue queue.

- #ui_patterns on DrupalTwig Slack

- UI Patterns Talk at DrupalCon Vienna

- https://www.drupal.org/project/foundation_patterns

  - Github repo / developer sandbox

Questions?

brian.perry@hs2solutions.com