



**DrupalCon**

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# Expanding On Site Building With Components To Truly Achieve No-code Drupal

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# Tag1 Consulting

The Team Global Leaders Trust to Ensure Their Success



**Peta Hoyes** @phoyes

Partner/COO

- Leads Operations, Delivery, Finance
- Mechanical Engineer With a Passion for Great Product Design and Art
- Created One of the First Hyper-Local Communities, New York Online In 1993



**Fabian Franz** @fabianfranz

VP, Software Engineering

- 1 of 3 Drupal (D7) Framework Managers
- Performance & Scalability Expert
- Architected Code Used by 2% of The Internet & 10% of Top 100k Sites







# About Tag1

The New York Times

THE  
LINUX  
FOUNDATION



Capgemini

FOREO

ACLU

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# #Tag1TeamTalks and Blogs

Dive Deeper Into Hot Topics in Drupal



**Web Components**  
[Tag1.com/Web-Components](https://tag1.com/Web-Components)



**Real-Time Collaboration**  
[Tag1.com/Yjs](https://tag1.com/Yjs)



**Performance & Scalability**  
[Tag1.com/Goose](https://tag1.com/Goose)





# What We'll Cover

- Why Low-Code, No-Code Technology
- Isn't Drupal There Already?
- Drupal's Low/No-Code Strengths and Weaknesses

## II. Closing the Gap Between Perception & Reality of No-Code Drupal:

- The Tailwind comes
- Drupal's Theme System: Challenges + Solutions
- DEMO!





# Why Low-Code, No-Code Technology

Using Visual Interfaces, Simple Logic, and Drag/Drop Instead of Extensive Coding

- Build Without Expert Engineering Skills
- Enable Business Users To Do Their Jobs Easier/Better
- Provides OOTB Functionality
- Ensure Cross-Platform Accessibility
- Application Lifecycle Management



# Isn't Drupal Low/No-Code Already?

Yes, and It Keeps Improving

## Site Building

- Content Types & Fields
- Custom lists with Views
- Access Control with Roles & Permissions
- site navigation with menus

No-Code Drupal

## Custom Layouts, Pages and Styles

- Layout Builder for Templated Content and Case-Based Overrides
- One-off Landing Pages Not Tied to a Content Type or Structured Content
- HTML / CSS in WYSIWYG Editors

Low-Code Drupal

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# Drupal's High, Low, No-Code Kung Fu

Awesome Power Requires Jedi Training (and Responsibility)



+ Extremely Powerful,  
Secure, & Customizable

+ The Ultimate  
Cross-functional  
Collaboration Tool

**But...**



— Comparatively Complex

— Sizeable Upfront Learning  
Curve (Theming!)

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# Self-Help Ends at The Theme Layer

Drupal's Theming Is Complicated

- Drupal's Base Themes Look Outdated
- Commercial Themes for Drupal Are Pretty Bad
- Custom Themes Are Expensive and Need Expertise



# **Closing the Gap Between Perception & Reality of No-Code Drupal**

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# The Tailwind Comes

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# We have 2021! A Whole New World!

Tailwind, Alpine, React, ...

- TailwindCSS Is a Game-Changer in the Industry
- AlpineJS Allows Interactivity Simpler Than JQuery
- Modern Browsers Make Styling Easier Than Ever



# Tail-What?

What is TailwindCSS?

- TailwindCSS is a "Styling Language" That Bridges the Gap Between Developer and Designer
- Everyone Can Learn It
- Backend Developers Can Finally Style Things
- Designers Can Finally Constraint Their Layouts



# How Do You Use It?

[Drupal.org/Project/TailwindCSS](https://drupal.org/project/tailwindcss)

- 1. Install The Theme
- 2. Tweak tailwind.config.js With Your "Design System" (Fonts, Colors, Spacing, ...)
- 3. Style Your Site





# How Do I Style My Site?


Example: [CelebrateDrupal.org](https://celebratedrupal.org)

- Completely Open Source Practical Tailwind Theme
- [https://github.com/drupal-celebrations/celebrate-drupal-9/blob/master/web/themes/custom/drupal\\_celebrations/](https://github.com/drupal-celebrations/celebrate-drupal-9/blob/master/web/themes/custom/drupal_celebrations/)
- Worth Checking Out To See Tailwind In Action



# How Do I Style My Site?

Example: [Rebuilding-Bartik.OliverDavies.uk](https://Rebuilding-Bartik.OliverDavies.uk)

 Rebuilding Bartik

[Home](#) [Drupal](#) [Vue.js](#) [Tailwind CSS](#) [View code on GitHub](#) [Read blog post](#)

✓ A Bartik clone, built with [Vue.js](#) and [Tailwind CSS](#).

Search

Welcome to Rebuilding Bartik

Elements Console Sources Network Performance Memory Application Security Lighthouse

<button type="button" class="w-full block p-3 bg-blue-100 text-sm text-grey-600 text-left focus:outline-none sm:hidden">...</button>

<div class="mx-auto px-4 sm:block xl:max-w-6xl hidden">

<div class="mt-2 sm:mt-0">

<nav class="flex flex-wrap pb-2 -mt-1 -mx-3 sm:-mx-0 md:p-0">

<div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3 sm:pl-0 md:w-auto"> == \$0

<a href="#0" class="block px-3 py-2 rounded-lg text-sm text-black no-underline sm:text-center md:rounded-none md:rounded-t-lg bg-white">

Home

</a>

</div>

<div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3 sm:pl-0 md:w-auto">...</div>

<div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3 sm:pl-0 md:w-auto">...</div>

<div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3 sm:pl-0 md:w-auto">...</div>

<div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3 sm:pl-0 md:w-auto">...</div>

<div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3 sm:pl-0 md:w-auto">...</div>

</nav>

</div>

<tag¹>



# How Do I Style My Site?

Example: [Rebuilding-Bartik.OliverDavies.uk](https://Rebuilding-Bartik.OliverDavies.uk)

```
<nav class="flex flex-wrap pb-2 -mt-1 -mx-3 sm:-mx-0 md:p-0">
```

```
  <div class="w-full inline-block px-1 mt-1 md:mb-0 sm:w-1/3  
sm:pl-0 md:w-auto">
```

```
    <a class="block px-3 py-2 rounded-lg text-sm text-black  
no-underline sm:text-center md:rounded-none md:rounded-t-lg  
bg-white">
```

Home

```
</a>
```

<tag<sup>1</sup>>





# Confused?

[TailwindCSS.com](https://tailwindcss.com)

- In the Long Term This Is Much Simpler Than Learning All the CSS "Tricks"
- CSS + Markup Really Go Together, This Removes the Artificial Separation
- Gain All the Best-Practices Automatically



# Overwhelmed?

[TailwindCSS.com](https://tailwindcss.com)

- It's a New Language, Give It Time. You Learned Site-Building, You Can Learn This!
- Live Preview (Wysiwyg) Really Helps, Can Tweak It Till It Works
- 1000s of Snippets on the Internet + Commercial Offering As a Great Learning Resource

<tag<sup>1</sup>>



# Underwhelmed? Prefer CSS?

[TailwindCSS.com](https://tailwindcss.com)

- It's a New Language, Give It Time and Try It Out
- Live Preview (WYSIWYG) Really Helps, Can Tweak It Till It Works
- Localized Changes Make Maintenance Much Easier

(No Team I Know Was Disciplined Enough to Do Pure BEM)

<tag<sup>1</sup>>





# Too Simple For An Expert?

Experts Build a Site, The Client Maintains It

- Code Review Is Simple [Even Possible Finally]
- Constraints on What Is Used: Every Design Change Is Easily Visible (as It Changes `Tailwind.config.js`)  
=> You Don't End up With 10 Different Font Sizes, 30 Colors, ...
- Components Are Great Building Blocks!



# Conclusion

Never Write CSS Again

- Can Style a Complete Site Without Writing a Single Line of CSS
- Combining Utility Classes => Most Complex Layout
- Tailwind Really Wants You to Create HTML With Classes



# **Drupal's Theme System**

## Challenges + Solutions

⟨tag<sup>1</sup>⟩



# Decoupled Is a Great Fit!

TailwindCSS + React = <3

- Decoupled Has Full Control About Markup => Not Low-Code
- React Is Nicely Split In Components
- But: React Is Not No-Code => Not for Us, Not Here Today.  
(However: Really Simple React Without Tooling, Try: **Preact** + **Htm** -- Closest to Low-Code React You Can Get)





# Drupal's Theme System Challenges

Drupal Is Backend-First :(

→ Morten DK Since 2011 (And Longer):

**I Want To Control All The Markup!!!** [And Want No <divs>  
Everywhere]

→ Drupal: **Nope :D**

<tag<sup>1</sup>>



# Drupal's Theme System Challenges

Render-Tree / Theme System Is Contrib Friendly

- Very Hard to Control the Markup in a Logical Way
- Theme Suggestions -> Markup Is Split Across Many Templates  
All Over the Place
- Site Builder (Yes You!) Can Add New Things Arbitrarily

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# Drupal's Theme System Challenges

Render-Tree / Theme System Is Contrib Friendly

→ Decoupled: Frontend First

→ Drupal: Backend First

=> Let's Make Drupal Frontend First!



# Drupal's Theme System Challenges

Let's Make Drupal Frontend First

- Components Everywhere - Add Data() Method to All Objects and Create Data That Is Passed to the Theme System  
[Amsterdam, 2019] => Has Not Happened, Yet
- UI Patterns - [https://drupal.org/project/ui\\_patterns](https://drupal.org/project/ui_patterns)  
(Very Patternlab Heavy, Not so Drupally, More for Larger Teams)
- => Need to Create Yml Files for Every "Theme Hook"





# Drupal's Theme System Challenges

Small Steps!

- First Attempt (TernBicycles.com - Session From Monday):
- Add Tailwind + Alpine
- Add Classes Directly to Views, Field Group, Field Formatters, Etc.

<tag<sup>1</sup>>



# Integration With LayoutBuilder

Three ways!

The screenshot displays the Tern website administration interface. A 'Configure block' dialog is open, showing the 'Component' section with 'TernTagline' selected. Below this, the 'Classes' section shows 'text-center md:text-left' selected. A callout box highlights the text: 'Site Builders Can Now Control Styles Including for Mobile Devices Through Configuration, Not Code' and 'This Module Will Be Open Sourced Soon!'. The background shows the Tern website layout with a navigation bar and a content area.

Configure block

Component

TernTagline

Component for styling the element

Classes

text-center md:text-left

Classes for styling the element

**STYLE**

Black Background

**Site Builders Can Now Control Styles**  
Including for Mobile Devices Through  
**Configuration, Not Code**

This Module Will Be Open Sourced Soon!



# Integration With LayoutBuilder

layout\_builder\_classes

- Amazing Flexibility
- Decouple Inner Content From Outer Presentation [Suitable for Translation]
- Drawback: Lot's Of Repetitions



# Integration With LayoutBuilder

layout\_builder\_styles

- Maps Styles to Classes
- Decouple Inner Content From Outer Presentation [Suitable for Translation]
- Drawback: All Styles Are Global (Lot's of Checkboxes!)





# Integration With LayoutBuilder

layout\_builder\_components

- Wraps Blocks With Components, Free Text Field
- Decouple Inner Content From Outer Presentation [Suitable for Translation]
- Drawback: Not No-Code [See Next Slides]



# Drupal's Theme System Challenges

Small Steps!

- Dream: Create a Complex Page Completely via Components
- Just Create a Full Page Completely Outside of Drupal
- Pure PHP, Platform Agnostic (Decoupled!)



# Small Steps

Dream: Create a Complex Site Completely via Components

→ React like:

```
function component__TernTagline($props) {  
  $title = $props['children'];  
  return <<<EOF  
    <span class="text-center font-thin text-gray-700">  
      {$title}  
    </span>  
  EOF;  
}
```

<tag<sup>1</sup>>



# Small Steps

Dream: Create a Complex Site Completely via Components

→ React like:

```
function component__TernAccessoryPage($props) {  
  $tagline = component('TernTagline', ['children' => 'Tagline']);  
  return <<<EOF  
    <div class="flex">  
      {$tagline}  
    </span>  
  EOF;  
}
```

<tag<sup>1</sup>>





# Automatic Reloading

Dream: Create a Complex Site Completely via Components

- Browser-Proxy Is Setup to Automatically Reload the Page When A Component Changes
- As It's Pure PHP, The Performance Is Great
- Custom Menu Callback



# Small Steps

Dream: Create a Complex Site Completely via Components

- It Worked - but Is Not Really No-Code
- Integration Then With Layoutbuilder Content Blocks + Sections  
(New Module!)
- [https://github.com/LionsAd/layout\\_builder\\_components](https://github.com/LionsAd/layout_builder_components) - DEV  
Release, Not For Production (out tomorrow)



# Integration With LayoutBuilder

## Summary

- Component => Free Text Field To Call Any component\_function
- [https://drupal.org/project/layout\\_builder\\_styles](https://drupal.org/project/layout_builder_styles) => Define a Style Mapping to Some Classes (Global)
- [https://github.com/LionsAd/layout\\_builder\\_classes](https://github.com/LionsAd/layout_builder_classes) => Arbitrarily Define Classes on the Blocks (out tomorrow)  
[Could Be Merged Into layout\_builder\_styles]

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# Drupal's Theme System Challenges

Another Dream!

→ Dream 2:

- > You See a Menu
- > You Enable the Contextual Link
- > You Click "Edit Component"
- > You Change Some Classes and Preview Your Changes
- > You Save + It's Done! => Wow, Change Implemented.

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# THE Site-Building Approach to Theming

## The Dream

- All Changes Are Stored As Configuration and Then Override the Theme Registry Templates
- You Can Also Override Theme Suggestions
- You Can Easily Map More Complex Entity Fields to the "Component Fields"



# THE Site-Building Approach to Theming

So Close: [GitHub.com/LionsAd/Component\\_Library](https://github.com/LionsAd/Component_Library)

→ component\_library (Out Now!) Allows Programmatic Creation of Twig via UI Including Live Preview and Syntax Highlighting ([https://www.drupal.org/project/component\\_library](https://www.drupal.org/project/component_library))

**Thx Ivan (@Chi) and Lucas (@heddn) and @tag1consulting!**

→ It Is Integrated With ui\_patterns for Easy Mapping

→ It's Still Wip and Likely Some Things Will Change

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# THE Site-Building Approach to Theming

So Close!

- We Don't Yet Have the Contextual Links => Magic Naming
- Many Templates Are Still Scattered and Would Profit From Being Routed to Larger Components With Much Data()
- It's a Great Start Though!



# THE Site-Building Approach to Theming

So Close!

→ DEMO TIME:

→ Style Things With Tailwind

→ Make Them Interactive With Alpine





# QUESTIONS?

⟨tag<sup>1</sup>⟩



# Tag1 Consulting: Follow Us!

Thank You!



**Peta Hoyes** @phoyes

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