evolvingweb

Decoupled Drupal: Are We There Yet?

Midcamp 2025

#

Simon MORVAN

Bonjour! 👋

Simon Morvan

Director of technology @ evolvingweb

https://www.drupal.org/u/garphy

We help our clients bring their digital experience to life

EvolveDrupal

Microsoft NERD Center
Boston, MA

June 6, 2025
EvolveDrupal.com

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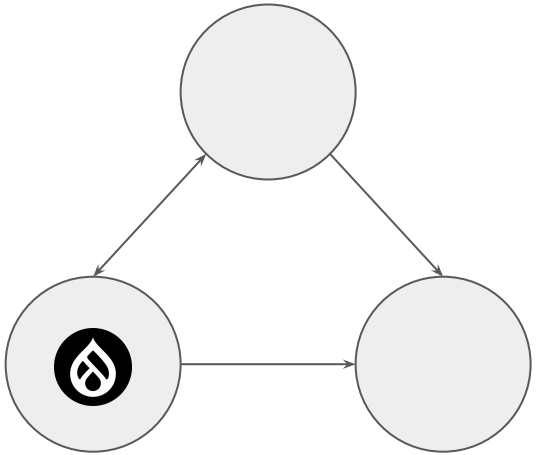
1-Day Digital Innovation Summit
Case Studies in Open-Source, AI & UX

~~decoupled~~
~~headless~~
~~decoupled~~
~~headless~~
The decoupled architecture landscape

What is decoupled ?

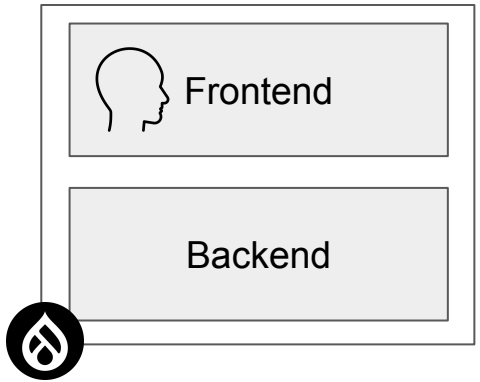
- Multiple components
- Distributed systems
- Service oriented architecture
- Microservices
- ...

Monolith

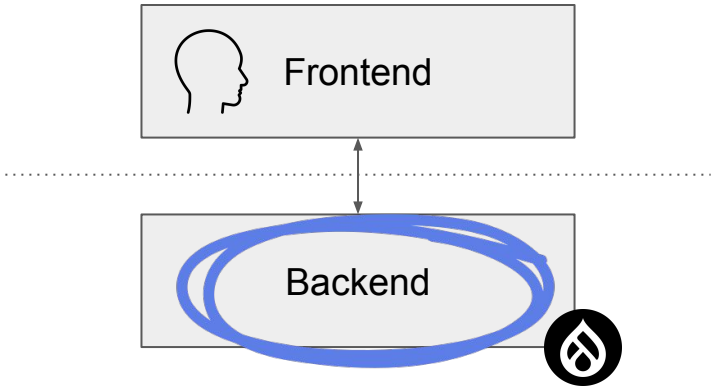


Decoupled

What is headless ?



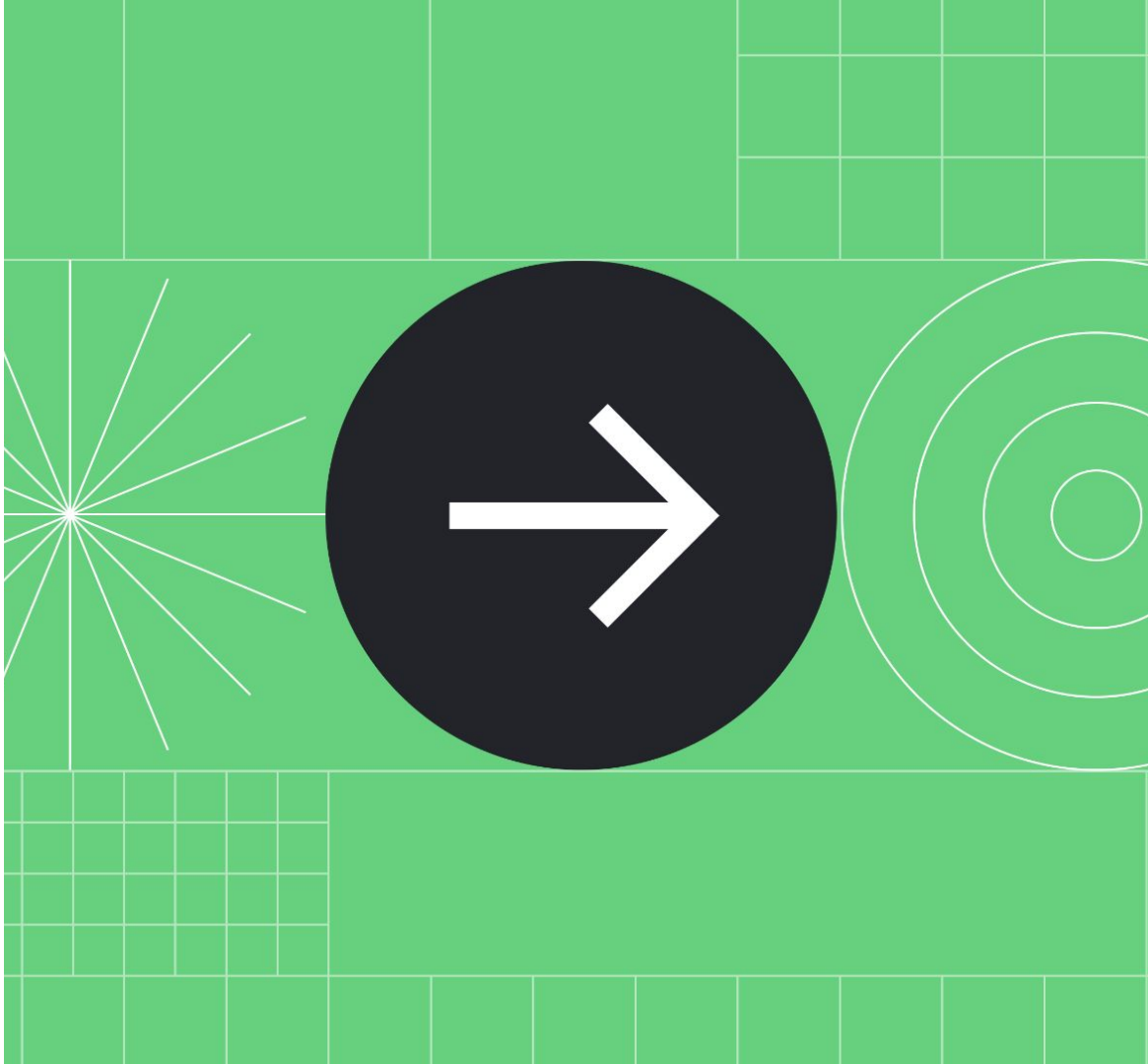
Monolith



Decoupled

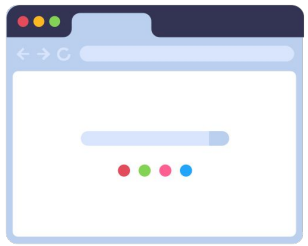
A decoupled solution with a headless CMS

How does it work ?

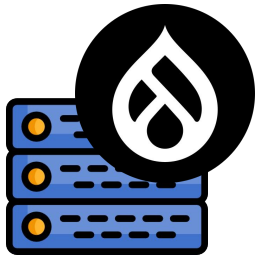


A typical website

How Drupal typically works



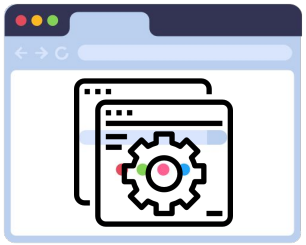
Browser
(displays a page)



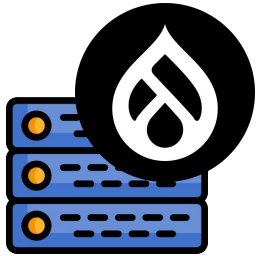
Server

An application model

How Decoupled Drupal works



Browser
(runs an app)



Server

What is ~~headless~~ decoupled Drupal

A ~~decoupled~~ headless backend to do backend stuff

- Content modeling
- CMS features
- Storage (data, media, ...)

A separate web stack to do frontend stuff

- Fetch the data
- Present the data
- Stateless

An API in between

Looks interesting but...
is it worth it ?

A variety of Decoupled Drupal projects

Actual use cases

- Websites (that don’t reload)
- Productivity apps (M&A projects management, hospitality & business trip organizers, ...)
- Web learning platform, with e-commerce
- Content delivery Desktop app, with offline features
- Content production platform, with translation in 16 languages

Not just “Drupal websites made with React” 😀

Push the limits

- **Advanced UX**, interactions and animations
- Better **performance**, Increased **security**
- **Multiple channels**, sharing content
- Reinforce your **content governance**
- Leverage **existing teams, skillset and components**
- Long term backend **investment**

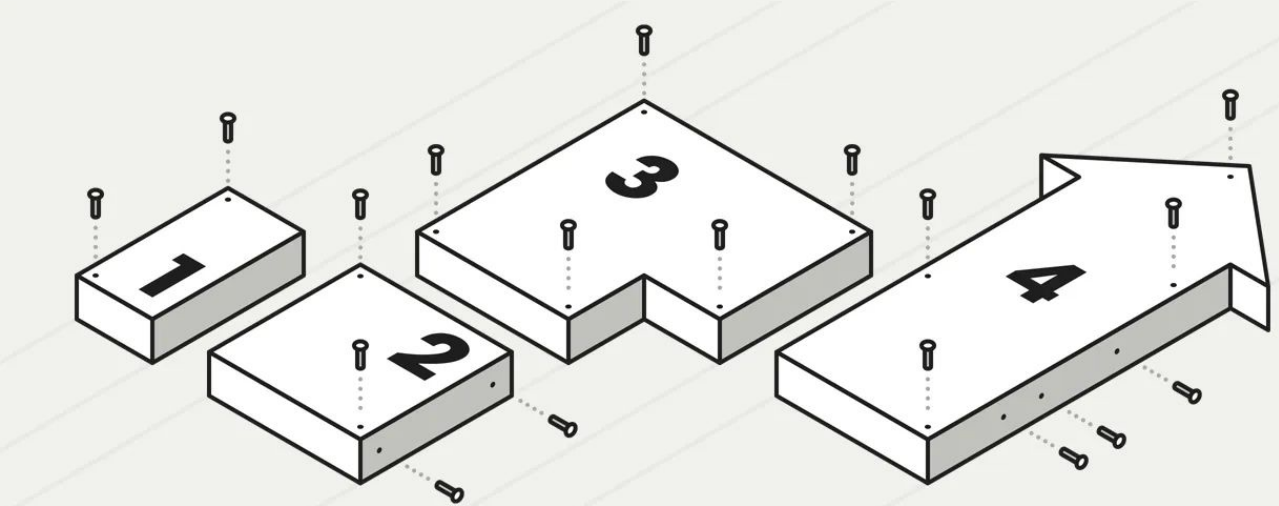
PWA

https://whatpwacando.today/

Assembling all the pieces

Architecture decisions

- Structure the content
- Connect backend and frontend
- Build the application
- Deploy!



Assembling all the pieces

Content architecture

- Think semantically, not visually
- No WYSIWYG in most cases

  but supports preview of draft revisions
- A Paragraphs-based structure is usually preferred
- Layout Builder is possible

Assembling all the pieces

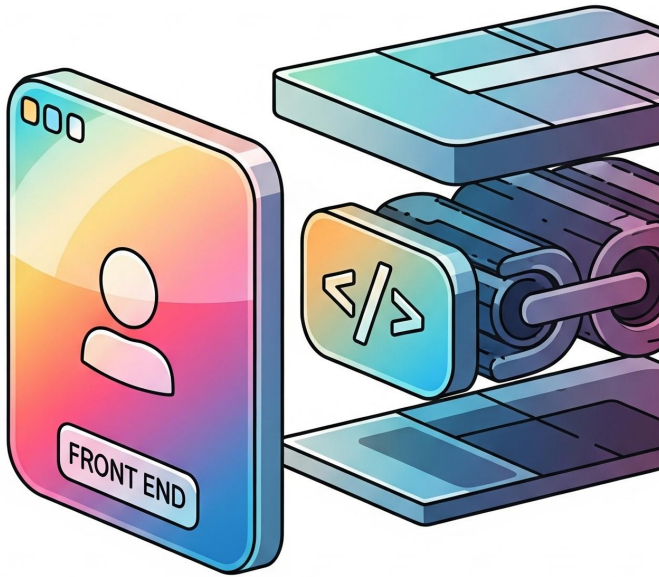
JSON:API vs GraphQL

Mostly equivalent in terms of features.

- Listing entities
- Fetching specific entities
- Retrieve complex content (multiple entities)
- Invoke business logic

Can be complementary.

JSON:API is part of Drupal Core since Drupal 8.



Deployment models

- **Single Page Application (SPA)**

  The “classic” dynamic deployment model of the code.
- **Static Site Generation (SSG)**

  Pre-render (extract) content from the CMS

  Code change and content change

Also: ISR, PPR, CSR, ...

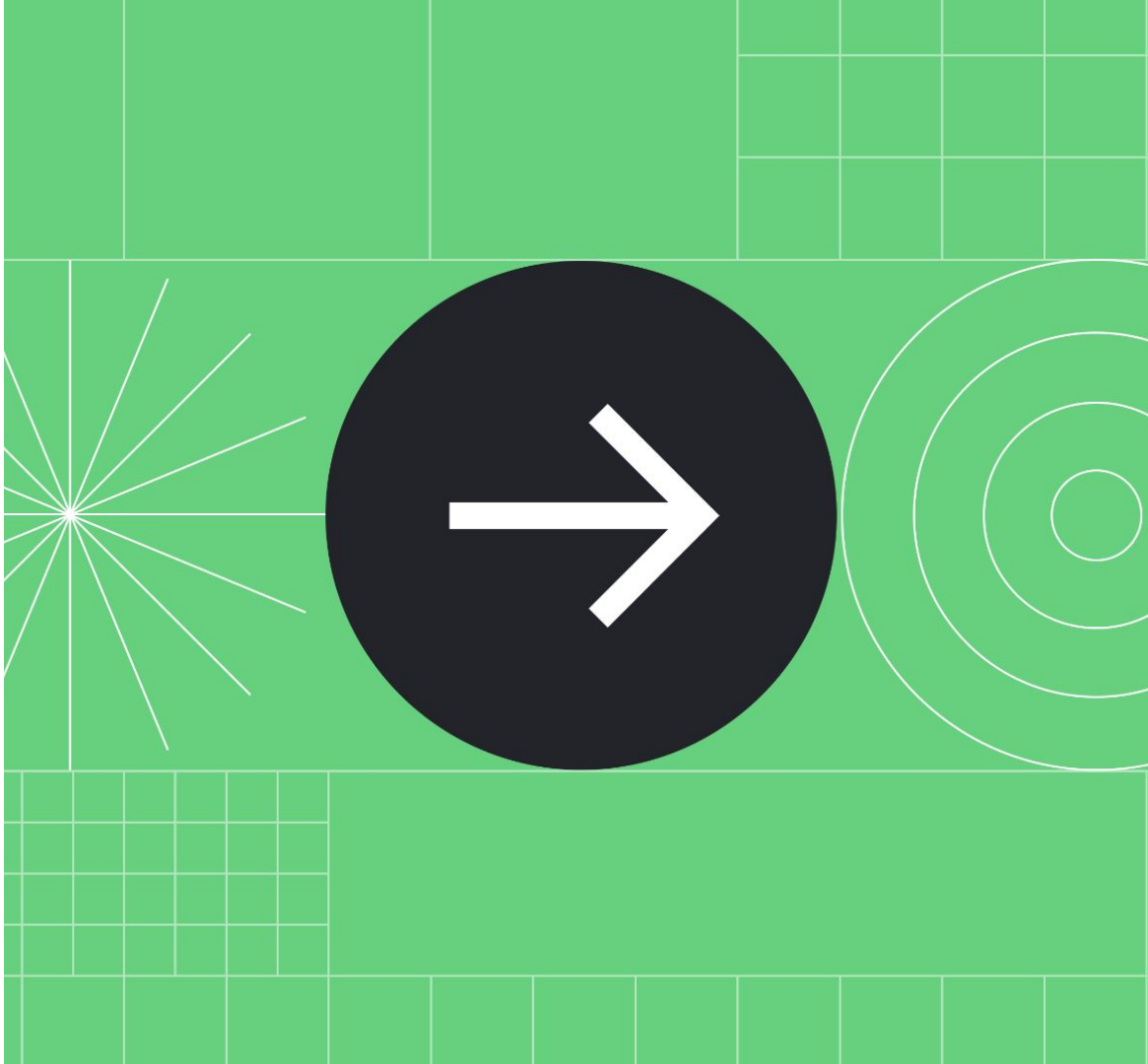
Pick a frontend stack

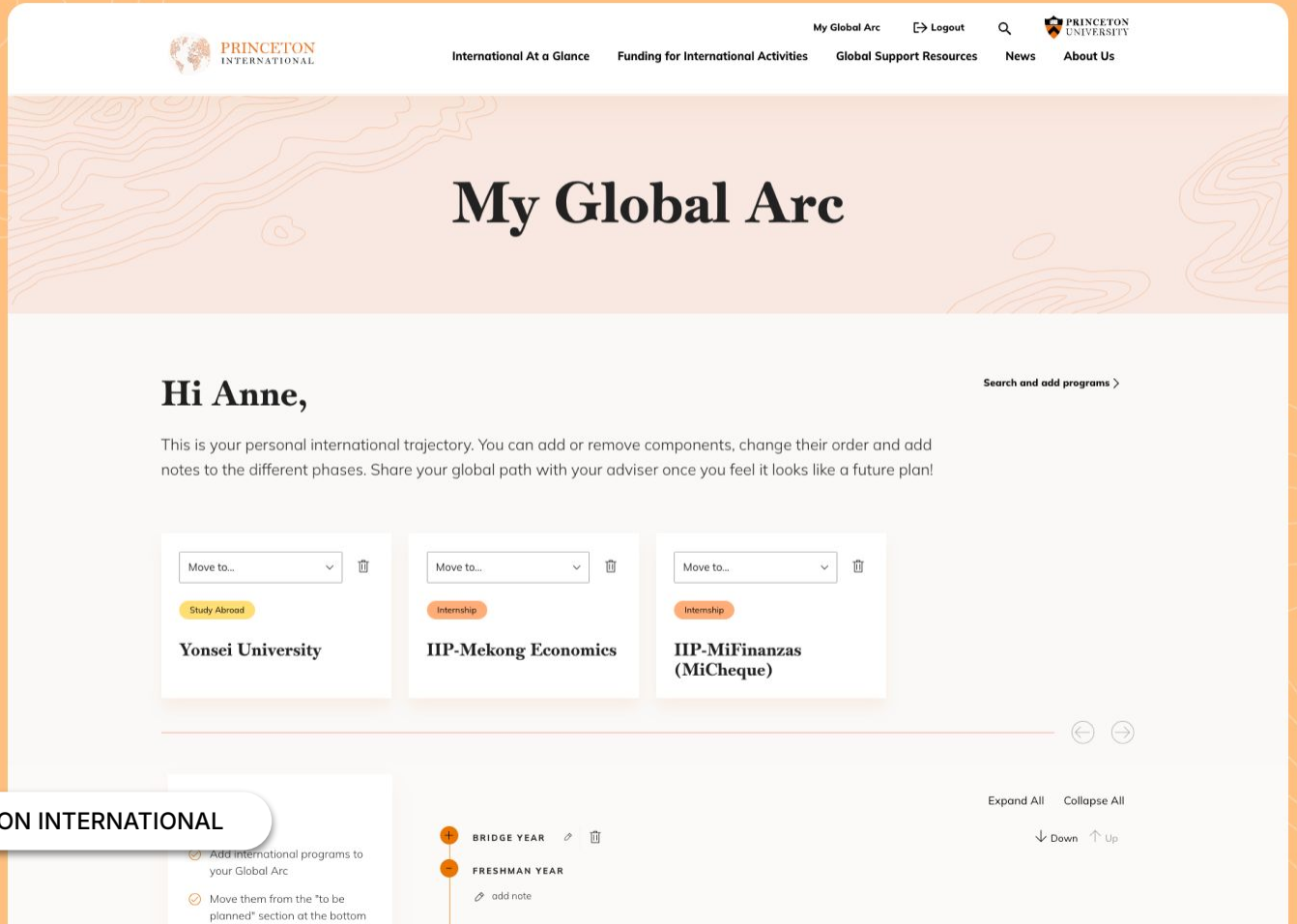
Selecting next.js ?

- Popularity of React
- plus a backend layer
- **Great integration support with Drupal**
- Supports Static site generation

https://next-drupal.org/learn/quick-start
https://www.drupal.org/project/next

Some examples





PRINCETON INTERNATIONAL

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Environmental Site Assessment

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Our full range of eco-products reflects our team's desire to transform the organic waste generated by our communities into compost as well as a variety of topsoils that use compost as a raw material.

An Eco-product - both ecofriendly and economical!
Compost adds nutrients to our soils and replaces some conventional fertilizers at a lower cost. It contains not only the nitrogen, phosphorus and potassium your plants need, but also other essential minerals like calcium, magnesium and copper.

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Site Remediation and Decommissioning

Contaminants and Waste Management

We're with you every step of the way.

Englobe's cutting-edge expertise in soils, materials and environmental engineering are at the very heart of our mission. In partnering with us, clients will see our passion for the environment, and our concern about building a sustainable legacy, come to life.

" The opportunity to work on projects like this, in amazing settings and with truly unique challenges, are why I joined Englobe. "

Brandon MacKay, Project Manager, Environment

More Insights

ARTICLE JUN 2021

Be part of a generation of restoration

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interdisciplinary, open-ended approach is distinctive. It begins with the operational reality of each client to generate real, concrete progress toward climate resilience and carbon neutrality.

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Moved by the sustainability

At Englobe, we understand both the local and the global implications of greenhouse gas emissions. We have the knowledge and tools to make projects resilient and include diverse organizations along for the transition to more sustainable development.

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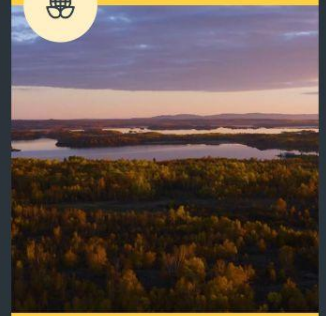
Climate Change



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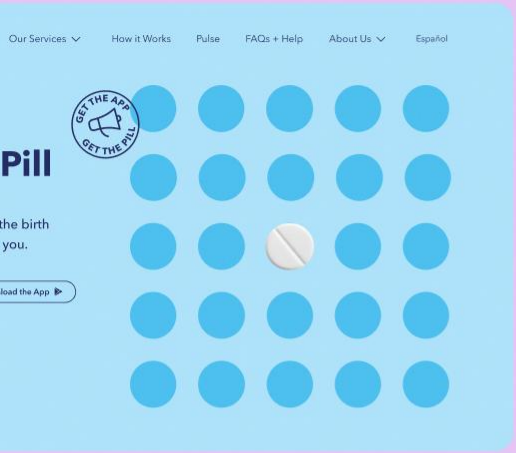
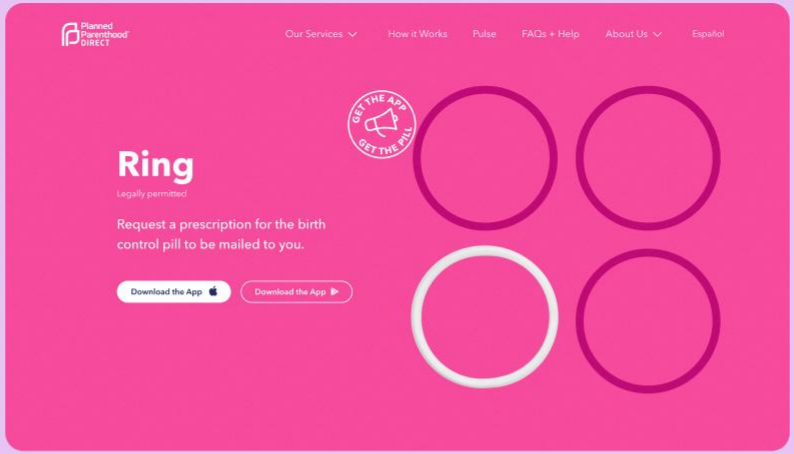
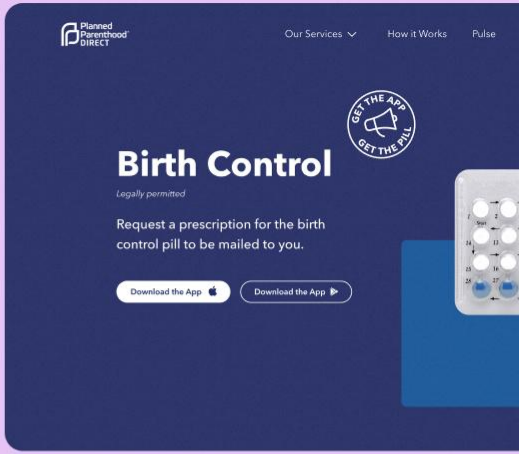
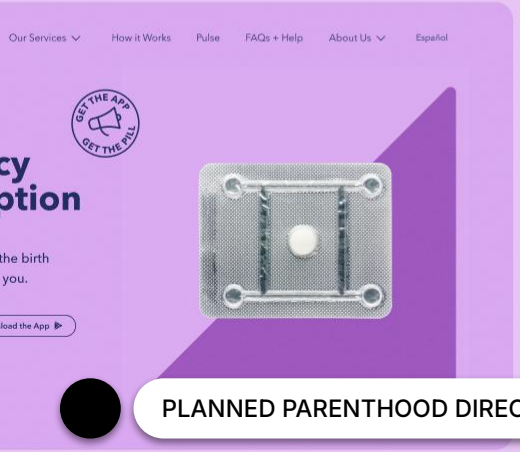
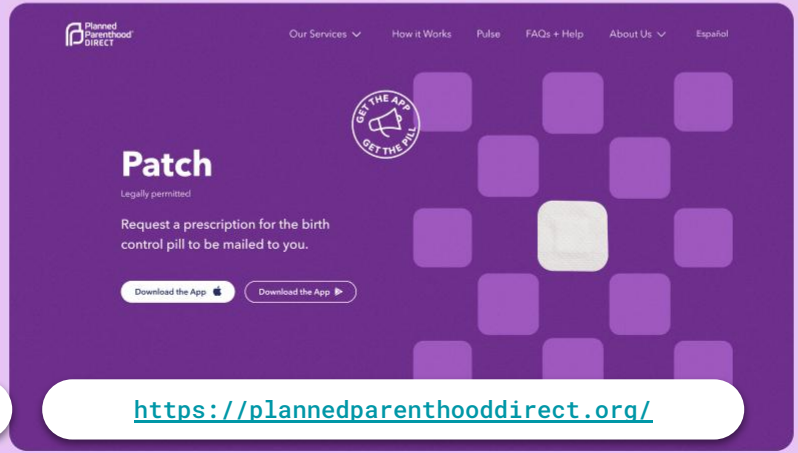
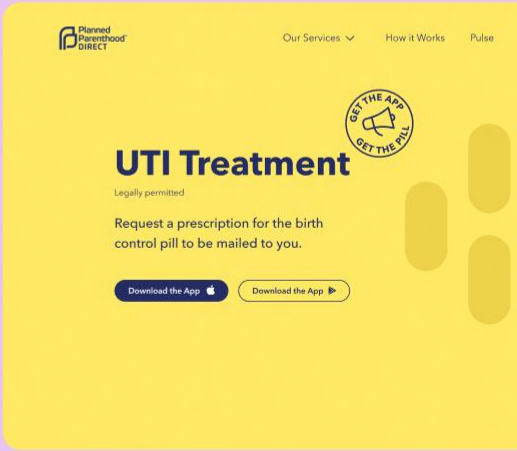








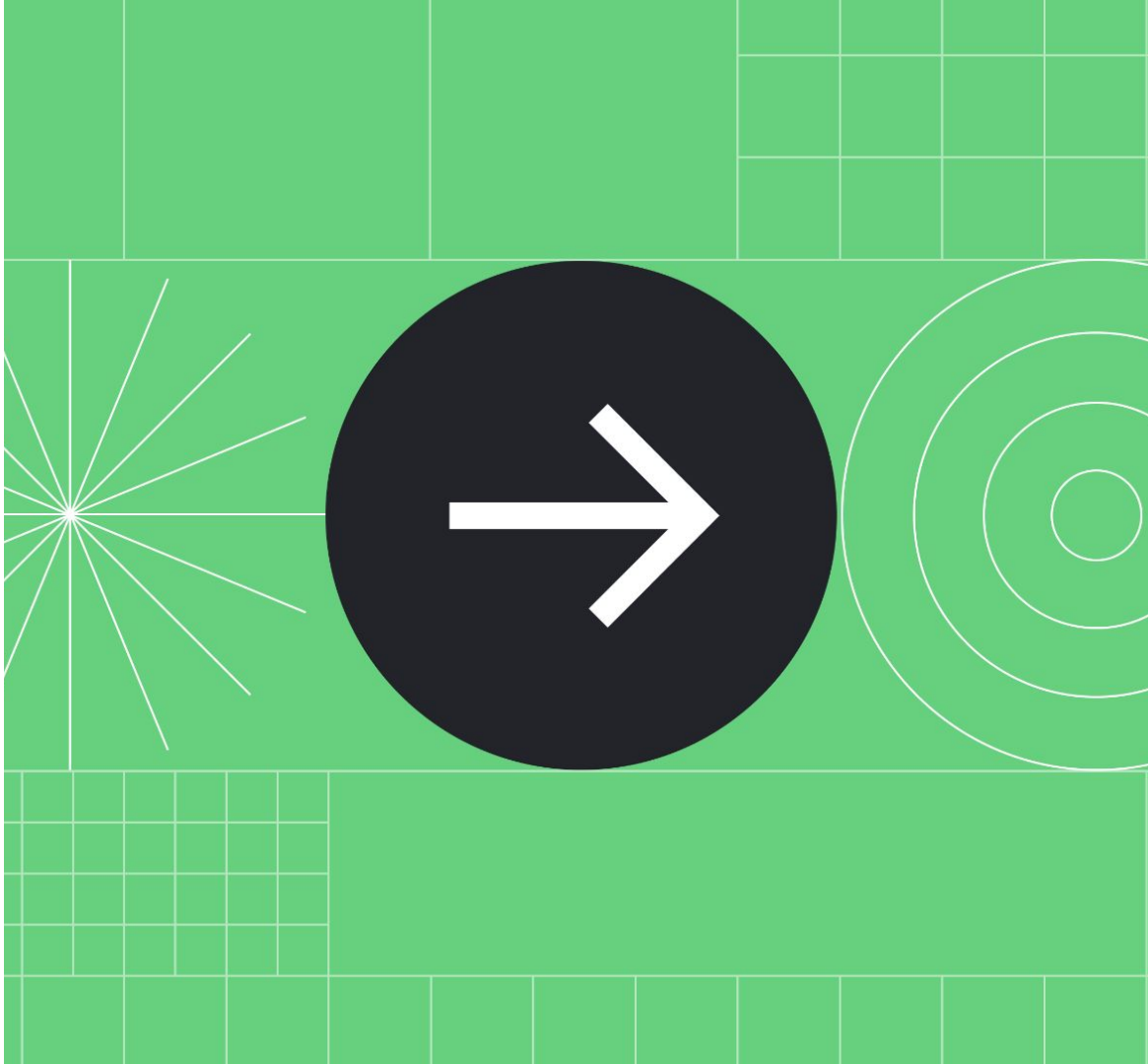




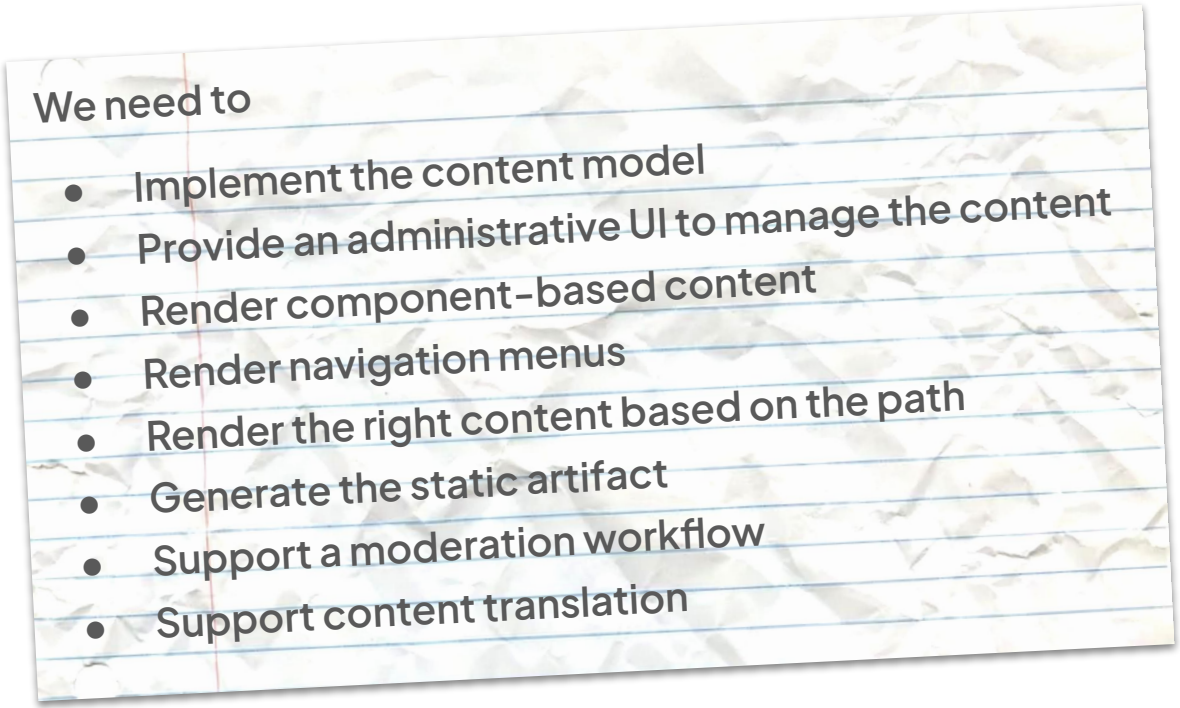
PLANNED PARENTHOOD DIRECT

https://plannedparenthooddirect.org/

Implementation details



Decoupled architecture grocery list



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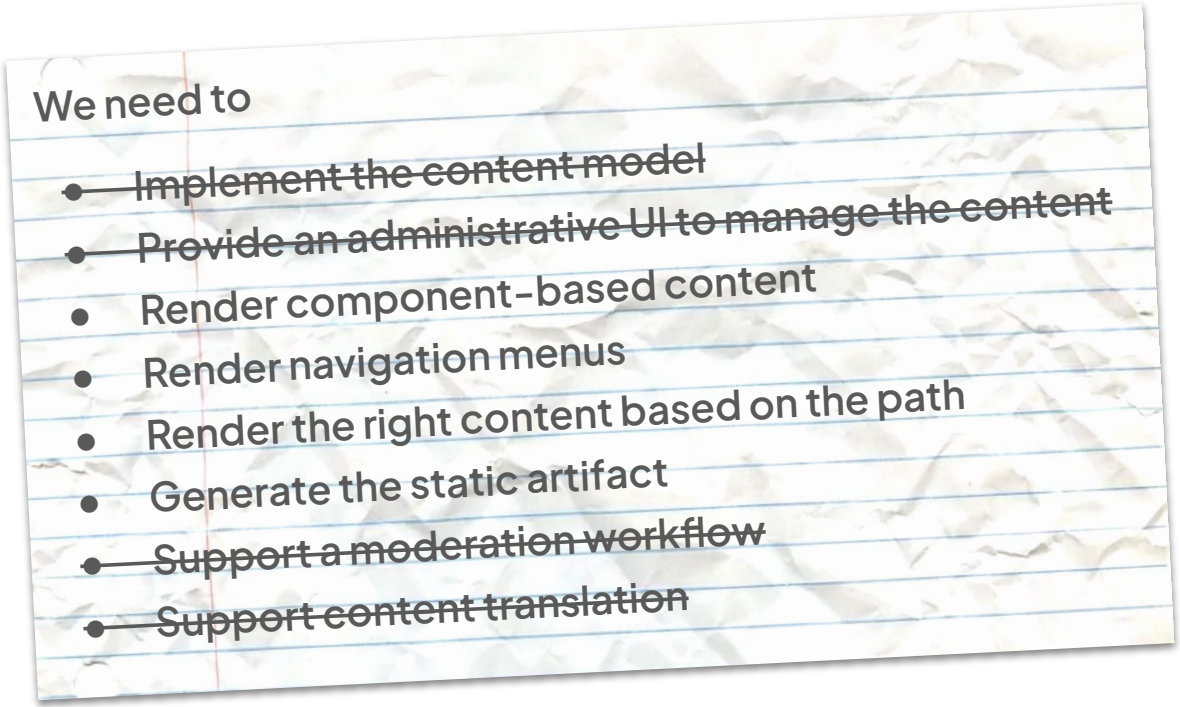
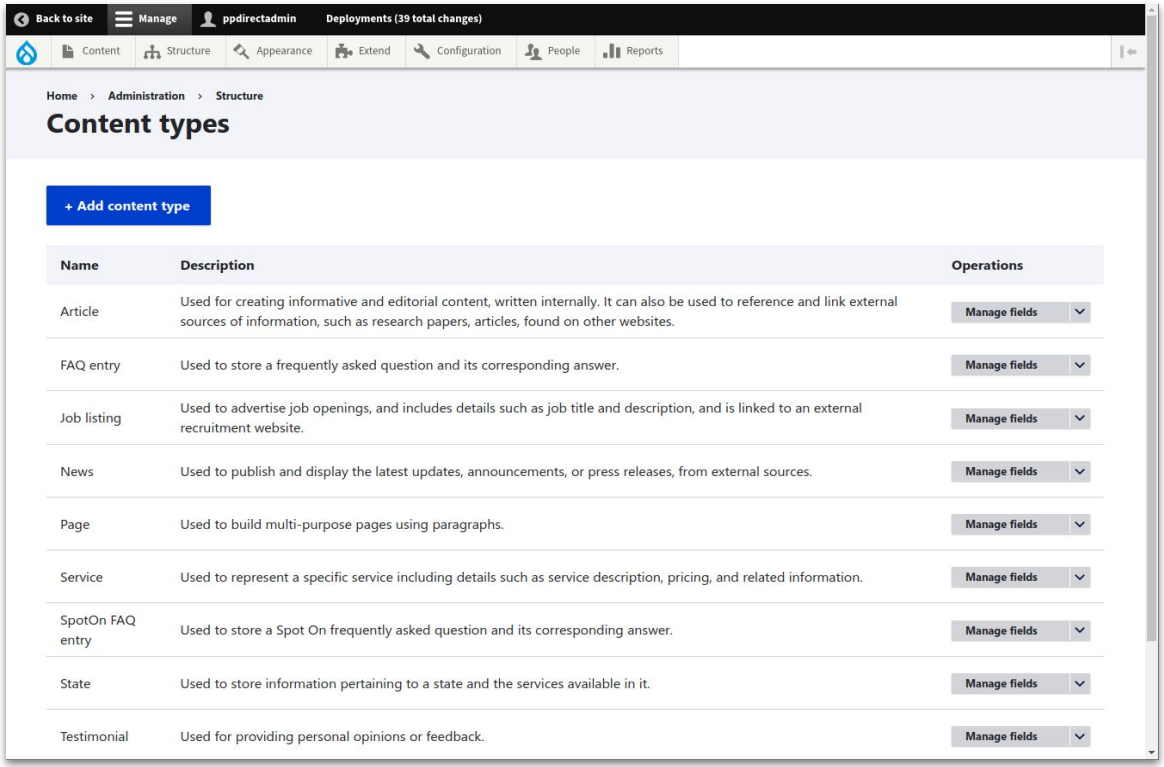


Content types modeling

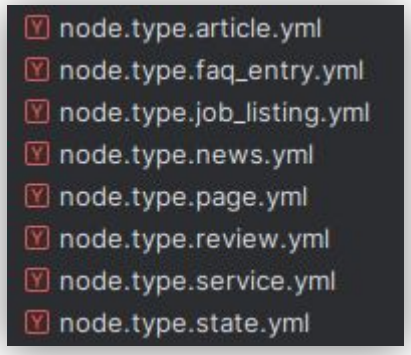
Drupal standard approach.



Content types modeling

Drupal standard approach + React standard approach.

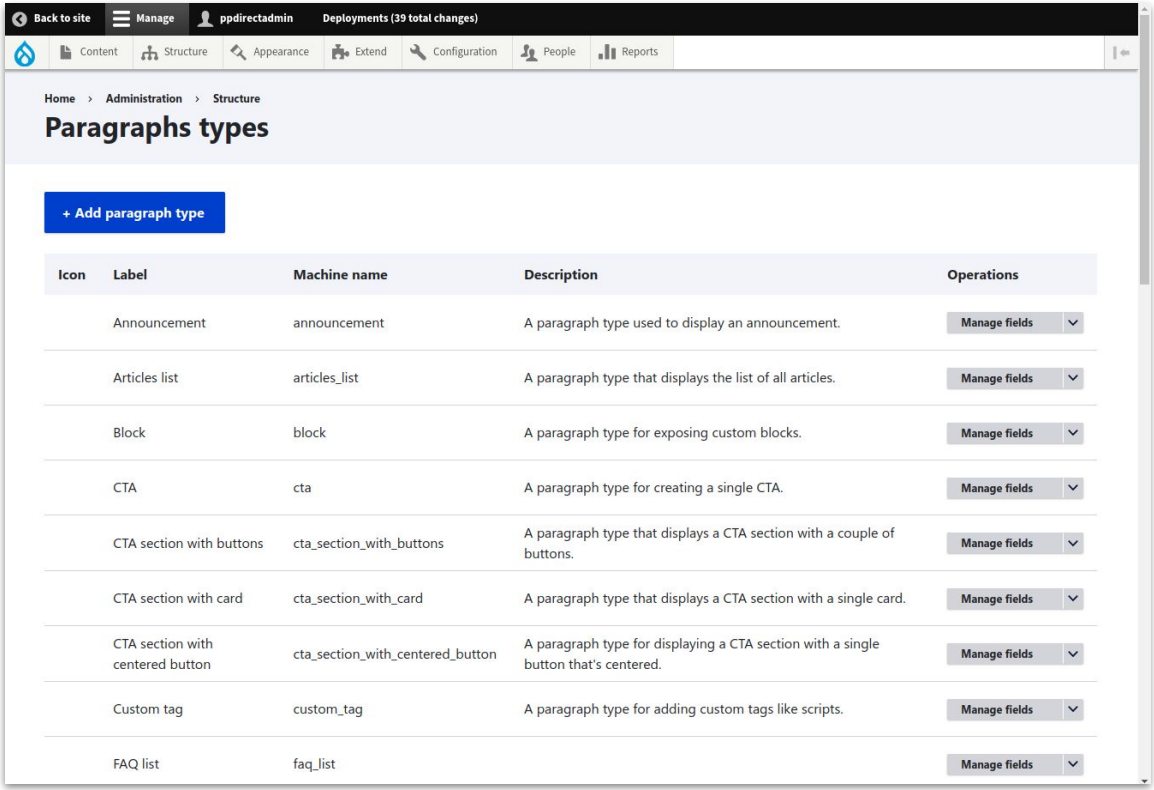
Drupal config



React components

Paragraph based page building

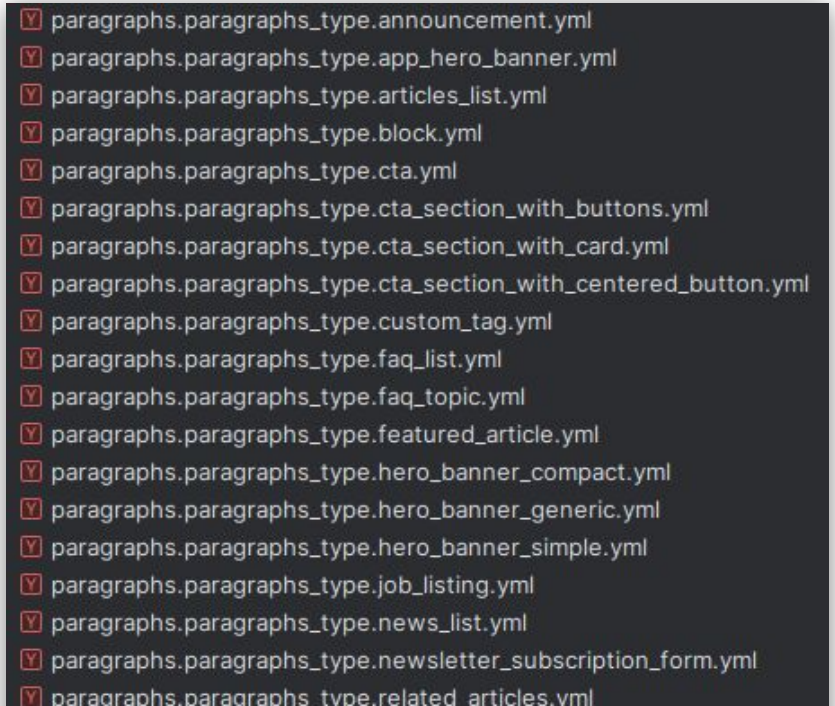
Drupal standard approach.



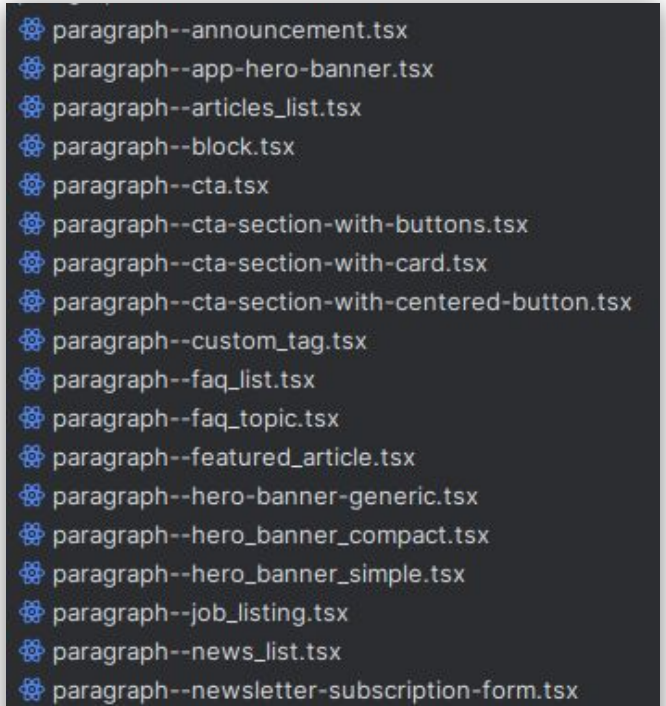
Paragraph based page building

Drupal standard approach. React standard approach.

Drupal config



React components



Resolving the target path

🌐 `https://www.plannedparenthooddirect.org/pulse`

⚙️ `/node/43`

`GET /jsonapi/node/page/a4579fef-0df0-4205-89a1-daa4e5bfefc8`


```
{
  "jsonapi": {
    "version": "1.0",
    "meta": {
      "links": {
        "self": {
          "href": "http://jsonapi.org/format/1.0/"
        }
      }
    }
  },
  "data": {
    "type": "node--page",
    "id": "a4579fef-0df0-4205-89a1-daa4e5bfefc8",
    "links": {
      "self": {
        "href": "https://backend.plannedparenthooddirect.org/jsonapi/node/page/a4579fef-0df0-4205-89a1-daa4e5bfefc8?resourceVersion=id%3A1546"
      },
      "working-copy": {
        "href": "https://backend.plannedparenthooddirect.org/jsonapi/node/page/a4579fef-0df0-4205-89a1-daa4e5bfefc8?resourceVersion=rel%3Aworking-copy"
      }
    },
    "attributes": {
      "drupal_internal__nid": 43,
      "drupal_internal__vid": 1546,
      "langcode": "en",
      "revision_timestamp": "2023-09-18T14:43:41+00:00",
      "status": true,
      "title": "Pulse",
      "created": "2023-08-31T06:16:35+00:00",
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        },
        {
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          "attributes": {
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            "content": "Birth control now from your phone! Download the Planned Parenthood Direct app and get birth control, UTI treatment and ella (emergency contraception) on the go."
          }
        },
        {
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          "attributes": {
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            "href": "/sites/default/files/2023-09/hero_rms_4.png"
```
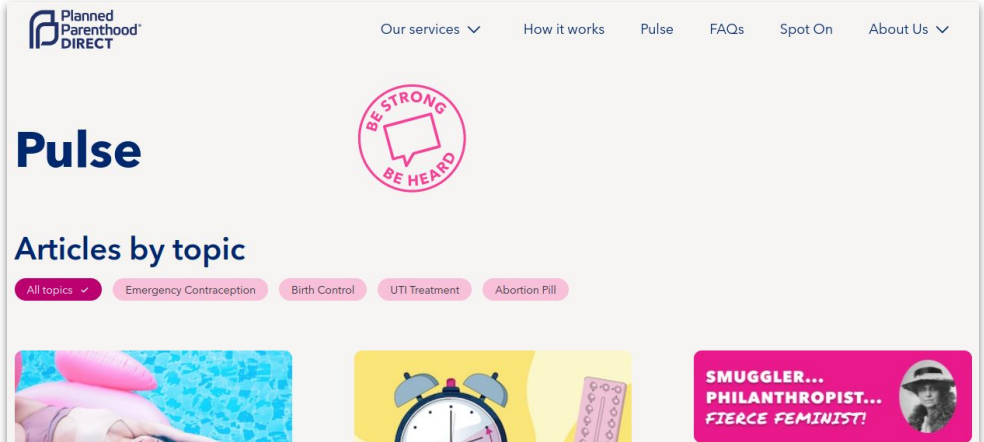




Resolving the target path

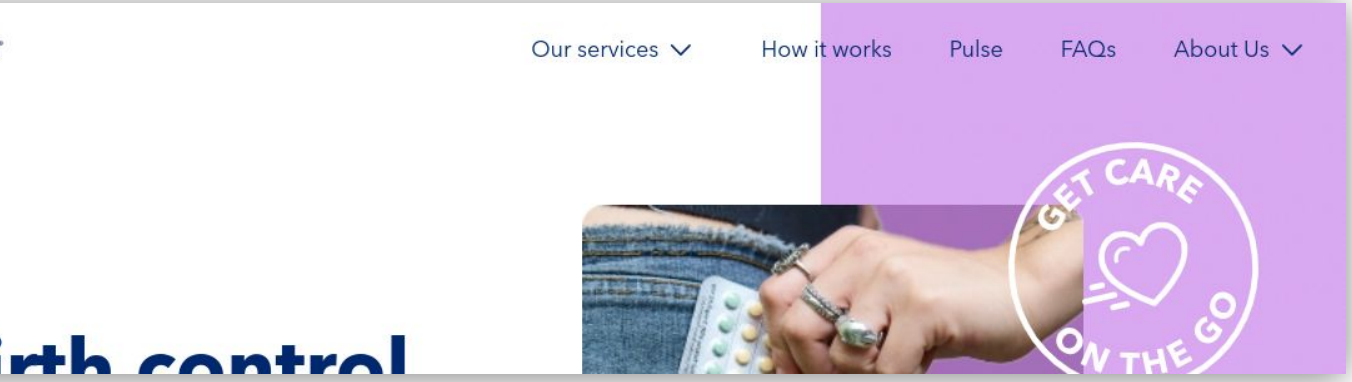
`/router/translate-path?path=/pulse`

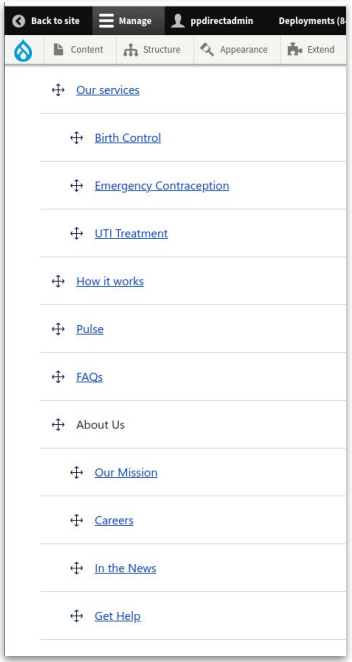
`drupal/decoupled_router` contrib module
https://www.drupal.org/project/decoupled_router


```
{
    "resolved": "https:\/\/live-ppd-api.pantheonsite.io\/pulse",
    "isHomePath": false,
    "entity": {
        "canonical": "https:\/\/live-ppd-api.pantheonsite.io\/pulse",
        "type": "node",
        "bundle": "page",
        "id": "43",
        "uuid": "a4579fef-0df0-4205-89a1-daa4e5bfefc8",
        "langcode": "en",
        "path": "\/pulse"
    },
    "label": "Pulse",
    "jsonapi": {
        "individual": "https:\/\/live-ppd-api.pantheonsite.io\/jsonapi\/node\/page\/a4579fef-0df0-4205-89a
        "resourceName": "node--page",
        "pathPrefix": "jsonapi",
        "basePath": "\/jsonapi",
        "entryPoint": "https:\/\/live-ppd-api.pantheonsite.io\/jsonapi"
    },
    "meta": {
        "deprecated": {
            "jsonapi.pathPrefix": "This property has been deprecated and will be removed in the next versi
        }
    }
}
```

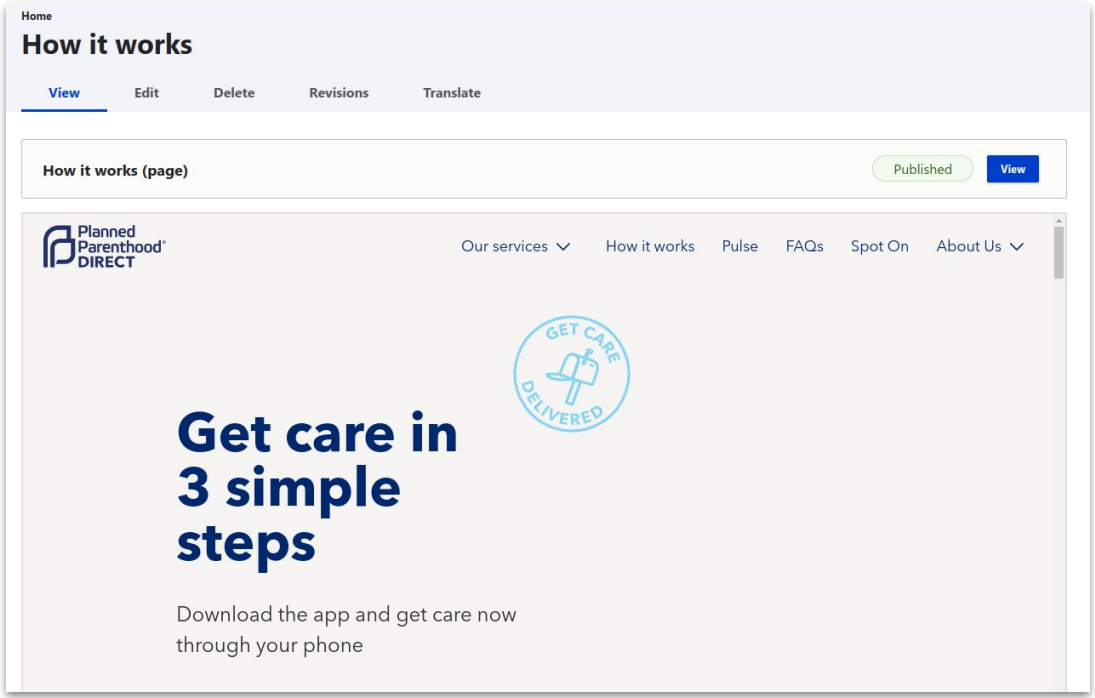
Retrieving menus

- Menus are managed in the CMS
- `drupal/jsonapi_menu_items` contrib module
- https://www.drupal.org/project/jsonapi_menu_items





Previewing from the Drupal UI

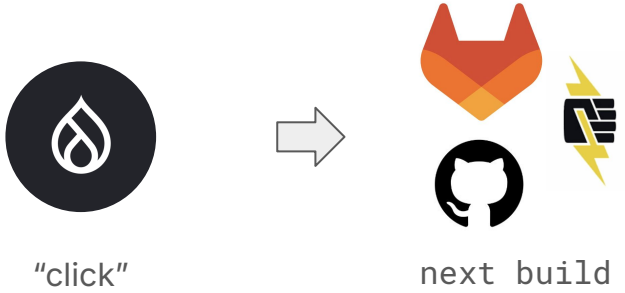


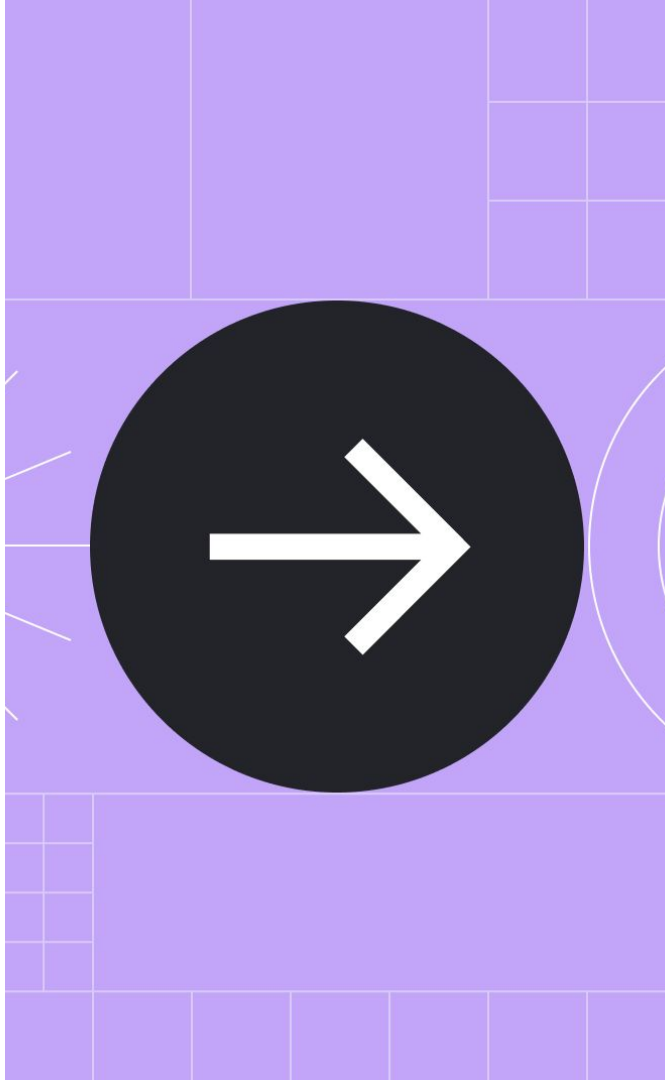
Implementation

Building for production

We have the content (Drupal backend) and the frontend code base

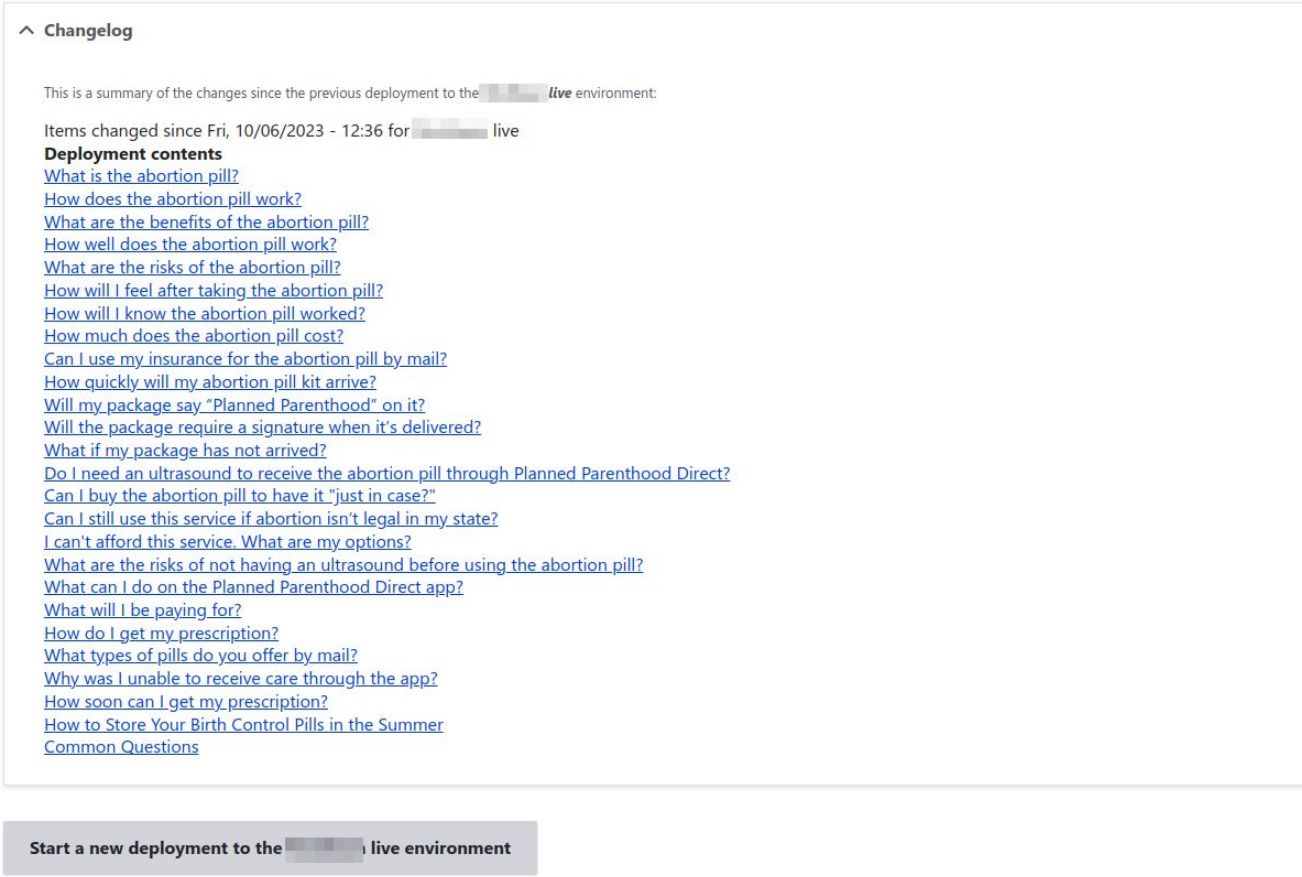
- Next.js build chain : `next build`
- CI/CD environment :
  Gitlab, Github, an hosting provider integration, ...
- A way to trigger it : `drupal/deploy_hooks`





Content changelog

`deploy_hooks` displays the list updated contents since the last deploy.



In a nutshell

Headless Drupal requirements

Dependency on Drupal contribs

Major contribs used to build the Drupal backend

- drupal/build_hooks
- drupal/consumer_image_styles
- drupal/decoupled_router
- drupal/jsonapi_extras
- drupal/jsonapi_menu_items
- drupal/next

Drupal custom code (modules)

None.

To learn more

https://next-drupal.org/learn/quick-start

https://www.drupal.org/project/next

A secret...

the headless equation:

1 project = 2 projects

Another secret...

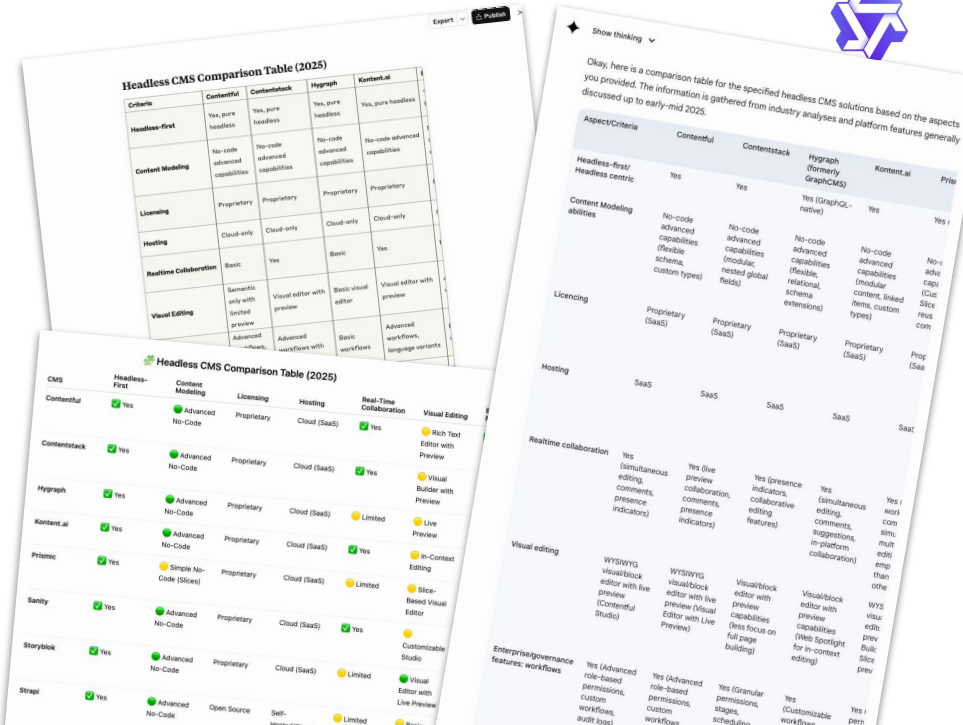
No need for custom modules

Drupal = No-code headless CMS!

What are the top 10 recommended headless CMS in 2025?

- Contentful
- Contentstack
- Hygraph
- Kontent.ai
- Prismic
- Sanity
- Storyblok
- Strapi

Where is Drupal ?



Headless CMS landscape comparison

Key aspects

- Headless-first ←
- Content Modeling
- Content Governance
- Integrations
- Licensing ←
- Hosting
- Visual editing
- Provided API(s)
- Developer friendliness ←
- AI capabilities

So what's next.js ?

Make it easier !

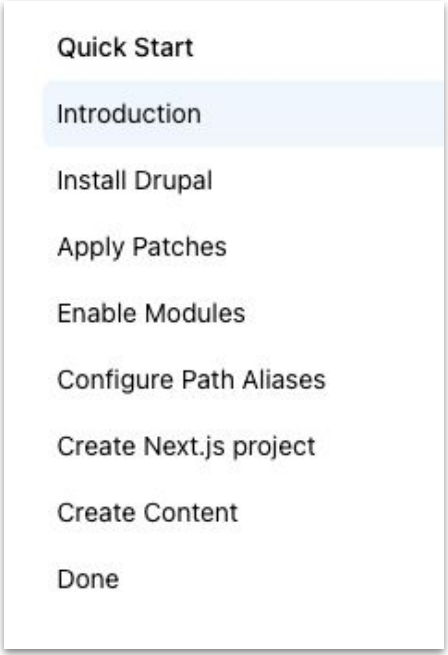
We have a no-code headless CMS...

...only after quite a lot of `composer` and `drush` black magic.

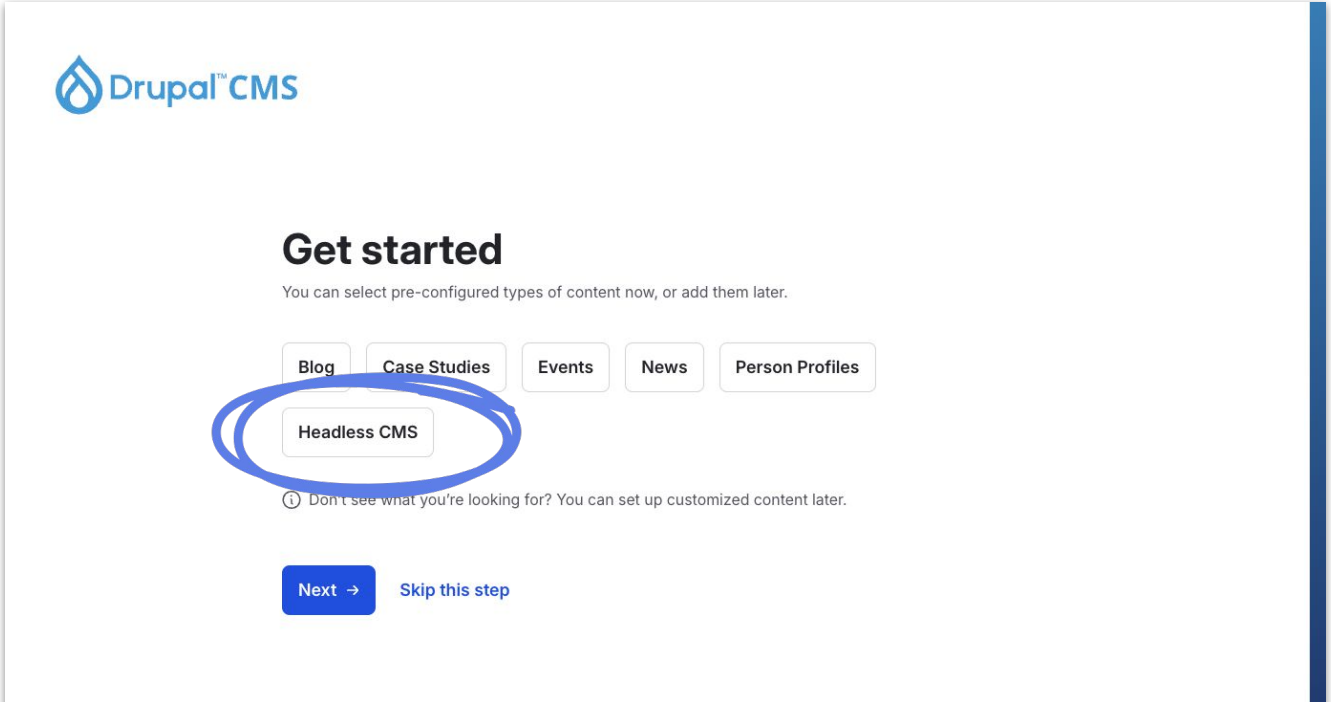
No-code for the Drupal coders

Our Headless Drupal needs to be :

- easier to discover on the headless CMS market
- easier to quick start



Let’s discuss!



Thank you

Let’s React !

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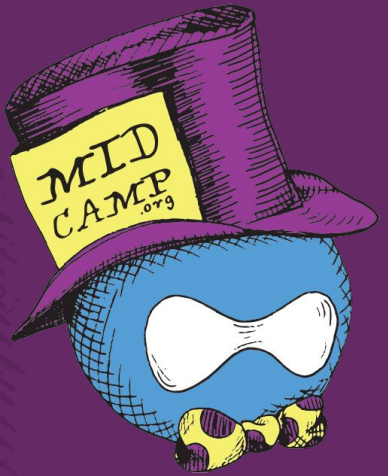

CONTRIBUTION DAY

Thursday 10:00am to 4:00pm

You don't have to know code to give back!

New Contributor training 9:00am to 10:00am

EvolveDrupal

Microsoft NERD Center
Boston, MA

June 6, 2025
EvolveDrupal.com

Connect Learn Inspire

1-Day Digital Innovation Summit
Case Studies in Open-Source, AI & UX