



Decoupled Days 2020

On our way to headless

A transition in progress



Photo by Dimitry Anikin on Unsplash

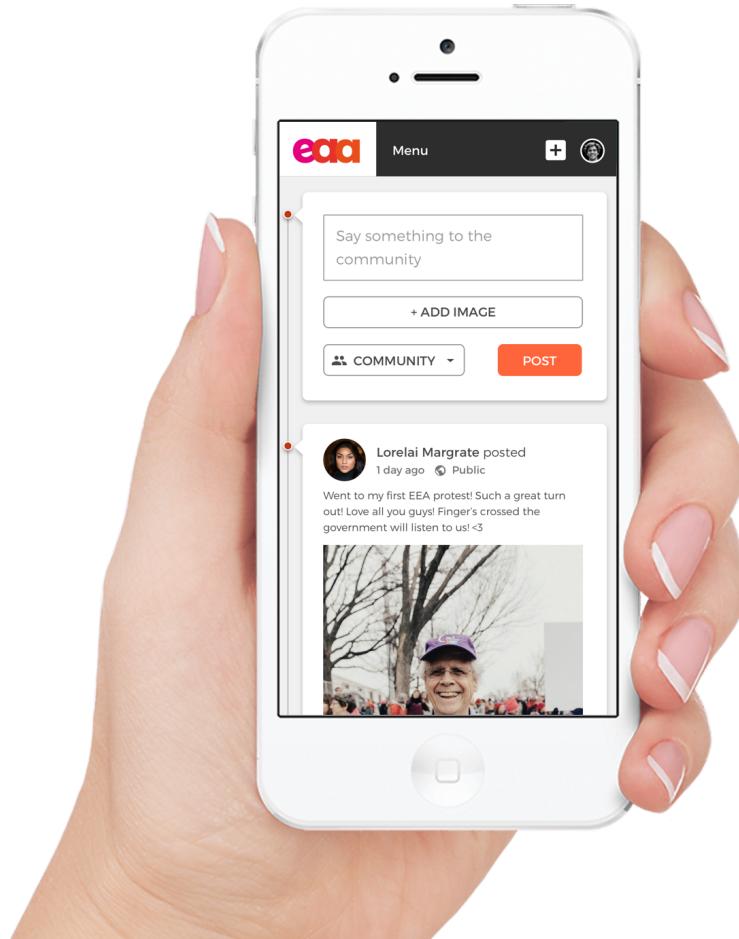
This talk

- What is needed to move to decoupled
 - Not all the answers
 - (Hopefully) most of the questions
-
- High-speed walkthrough of the aspects we're considering.
 - Slides will be published on my website.



Open Social

- Online Community Software
- Built on top of Drupal
- Customers a.o.
 - Greenpeace
 - United Nations
 - Development Program
 - Victim Support Netherlands



€1.25 million investment

- Peak Capital & Nimbus Ventures
- Expand our team
 - Front-end/Back-end development
 - Design
 - Sales
- Innovate (Decoupled, Infrastructure, Drupal 9)
- getopensocial.com/jobs





Why decouple Open Social?

Built on Drupal

- Existing skills (previously a Drupal agency)
- Great for Content Management! (CMS/CMF)
- Focused around **pages**



Welcoming committee | Adela's X +

https://adelahub.getopensocial.com/group/2/stream

Home Timeline How-to About Explore Sign up Log in

Welcoming committee

Public group 1 member

Global

Join

Stream About Events Topics Members

Adela Kalkantova from Open Social posted in Welcoming committee
4 months ago Public

hi

0 likes

Adela Kalkantova from Open Social created an event in Welcoming committee
5 months ago

How-to set up your community

23 Jan '20 15:00 - 16:00
Open Social

Upcoming events in the group

No upcoming events in this group

All Upcoming events

Newest topics in the group

No topics in this group

All topics



Page based navigation

- Can be very disruptive
- Users expect smoother experiences
 - Conditioned by Facebook, Twitter, etc.
- Something like refreshless helps,
but only gets us so far.



Live Video

KEYNOTE

Driesnote: State of Drupal 9

 Dries Buytaert 19 April 2020 · Community

14 July 2020 09:00 - 10:00
Livestream

YOU HAVE ENROLLED

Live chat with 523 enrollees



1258 comments 356 likes 402 followers Share this event 

Transcript Details Organizers Enrollments

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Share your thoughts

Transcript with Discussion

Shirline Dungey 14 July, 10:30

Donec sed odio dui. Cras mattis consectetur purus sit amet fermentum. Maecenas sed diam eget risus varius blandit sit amet non magna. Donec sed odio dui. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nulla vitae elit libero, a pharetra augue. Praesent commodo cursus magna, vel scelerisque nisl consectetur et.

[See all 23 comments](#)

Ren Delan 14 July, 10:30

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[See all 12 comments](#)

Akamaipl Azuchi 15 July, 10:30

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[See all 89 comments](#)

Tiffany Carol 15 July, 10:30

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[See all 113 comments](#)

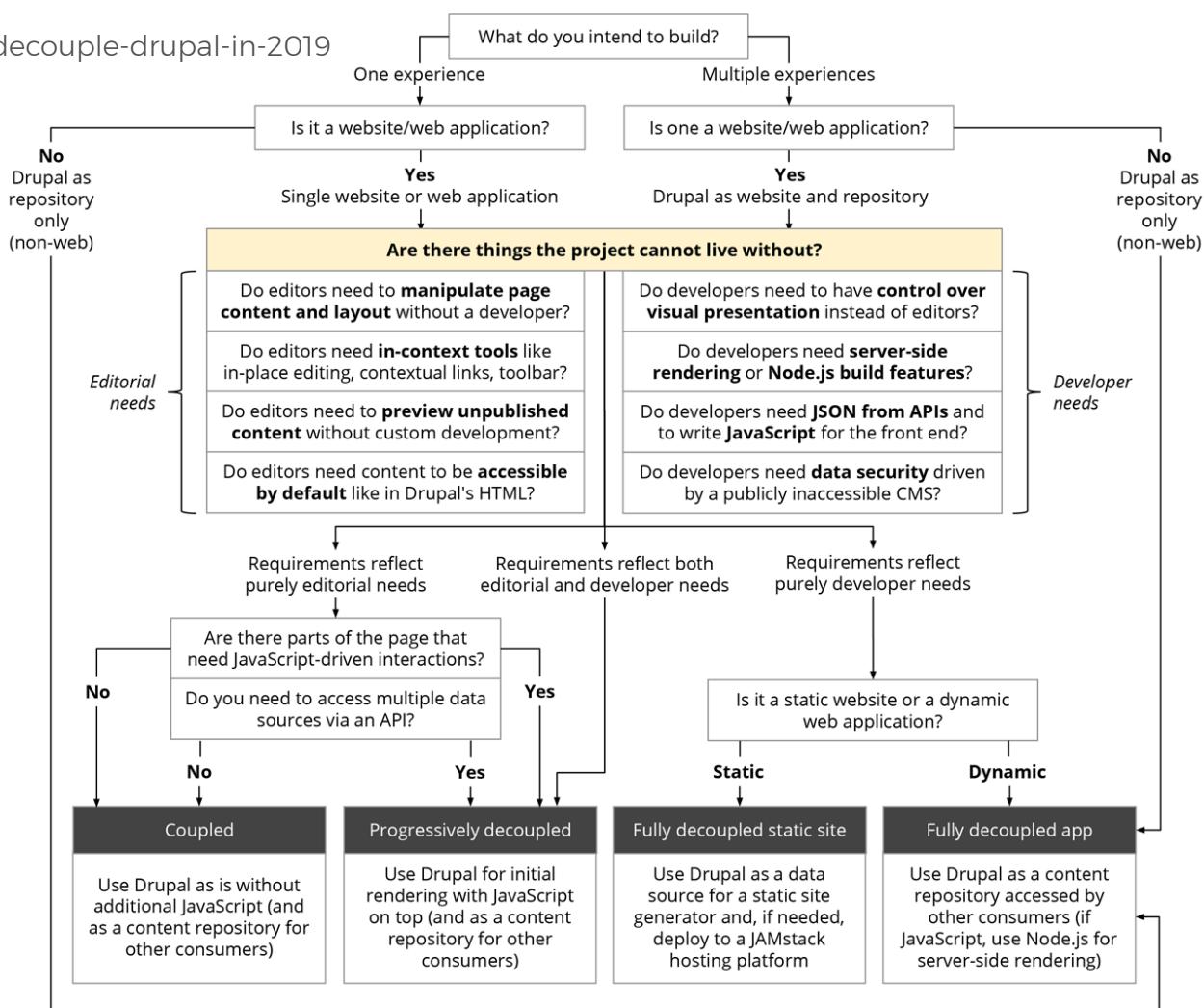
1 2 3 ... 9 10

Real-Time Chat

Refreshless Navigation



How to decouple?



A completely new front-end

- Re-evaluate current front-end choices:
- What browsers do we support?
- What tools will we use?
- How do we deal with dynamic content?
- How do we exchange data?



Photo by Matthew T Rader on Unsplash



Browser Support and JavaScript

Drop Internet Explorer 11

- IE11 support
 - missing modern features
 - required engineering time vs usage
- Microsoft recommends it
 - Use Edge
 - Compatibility mode for legacy applications
- Check out <https://www.swyx.io/writing/ie11-eol/>



Clients demand IE 11?

- Treat as Enterprise project (to offset \$)
- Use an existing Drupal theme

- Understand why clients want it
- Try to convince them otherwise



JavaScript (anonymous users)

- All content should be reachable without JavaScript
- Be friendly to automated tools
 - Search Engines
 - Sharing on external sources
- Anonymous content can be statically pre-generated



JavaScript (authenticated)

- Content based on complex access rules
- Push personalisation to the browser
- Accept reduced experience for minority with JavaScript disabled
- No compromise on accessibility
 - e.g. focus handling and keyboard support





Front-end library

We chose React

- Components + Composition fits our current design process
- Data in + declarative output is easy to reason about
- Familiar with the ecosystem
- Shouldn't cause more difficulty in hiring
- Knowledge can transfer to mobile in the future

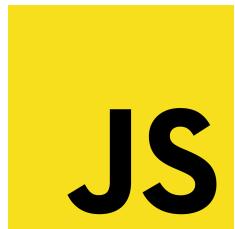
- Something else (Vue, Svelte, etc.) would probably get you there too. React works for us.



Front-end language options

It's all JavaScript

- JavaScript
- Flow
- TypeScript
- ReasonML



TypeScript



We chose ReasonML

- Doesn't try to improve JavaScript, but replaces it
- Avoids shortcuts possible on TypeScript and Flow
- React is a first-class citizen

- Full comparison: <https://www.alexandervarwijk.com/blog/2020-01-13-a-comparison-of-javascript-typesystems/>





Back-end for the front-end

DIY can be tempting

- The basics are not that difficult
- Optimisations become difficult
- Tooling needs to be built too
- Don't ignore years of work by larger teams



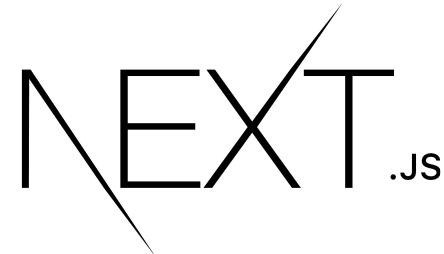
GatsbyJS

- Pages generated at build time
- Great for static websites
- Scales well on a CDN
- Runs my personal website



Next.JS

- Flexibility to decide static vs dynamic
- Recently introduced run-time regeneration
- Seems to be de-facto standard for anything slightly dynamic





Exposing data to the front-end

GraphQL vs JSON:API

- Either can work
 - Drupal (core) chose JSON:API
 - Drupal (contrib) for GraphQL is very active
- We've chosen GraphQL
 - Front-end innovation and development leans that way
 - Integrates nicely with React
 - Many tools available
 - Moves the development burden to the back-end



Know how(?)

Your A-Team

- Use of different technologies
 - JavaScript + Vue/React
 - vs PHP + Drupal + Twig
 - Clearly designed APIs
- Assess available knowledge
 - Re-train existing team-members
 - Hire new team-members
 - Find consultants to help fill gaps
- Assess time available



Photo by Matteo Vistocco on Unsplash



Rolling out the new front-end

Build it all then ship

- Avoids the need for intermediate solutions
- Reaching feature parity will take long
- Prevents utilising decoupled techniques for new features



Decouple in steps

- Build shared components first
(e.g. header/footer)
- Replace features by url/path
- Use Weighted Shortest Job First (WSJF),
score based on (estimated)
 - user benefit, technical necessity, cost to build, cost of delay
- Requires fallback for unconverted pages
- Still has minimum requirements (e.g. theming, i18n, etc.)





“Open” in Open Social

Open Source

- Open Social
- Open Source core
- Grown thanks to the community
- We wish to stay faithful to
the Open Source community



Drupal's model

- Built around modules
- Pay for external services
- Premium modules are uncommon but not unprecedented
 - (e.g. previously Drupal Gardens)
- In case of Open Social SaaS
 - Pay for our expertise on customisation, hosting and updates
 - Pay to get access to extensions not available for free

JavaScript's model

- End-product usually closed source
 - (e.g. no ready to go distribution like in Drupal)
- Libraries and tools made open source
 - e.g. React and Next.js
- Revenue generated from end-product or hosting
 - e.g. Netlify, Gatsby cloud, Vercel (previously Zeit)

Open Social's (possible) model

- Disclaimer: still under debate, open to feedback
- Core Drupal modules and distribution remains open source
 - Move to API first
 - Bring themes to separate project
- Open source front-end components and design system
- Proprietary front-end application but contributing to tools used

Keep the community updated

- Drupal Slack #opensocial
- Drupal issue queue
drupal.org/project/issues/social
- Read our blog getopensocial.com





Thanks!

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