Building for the personalisation spectrum

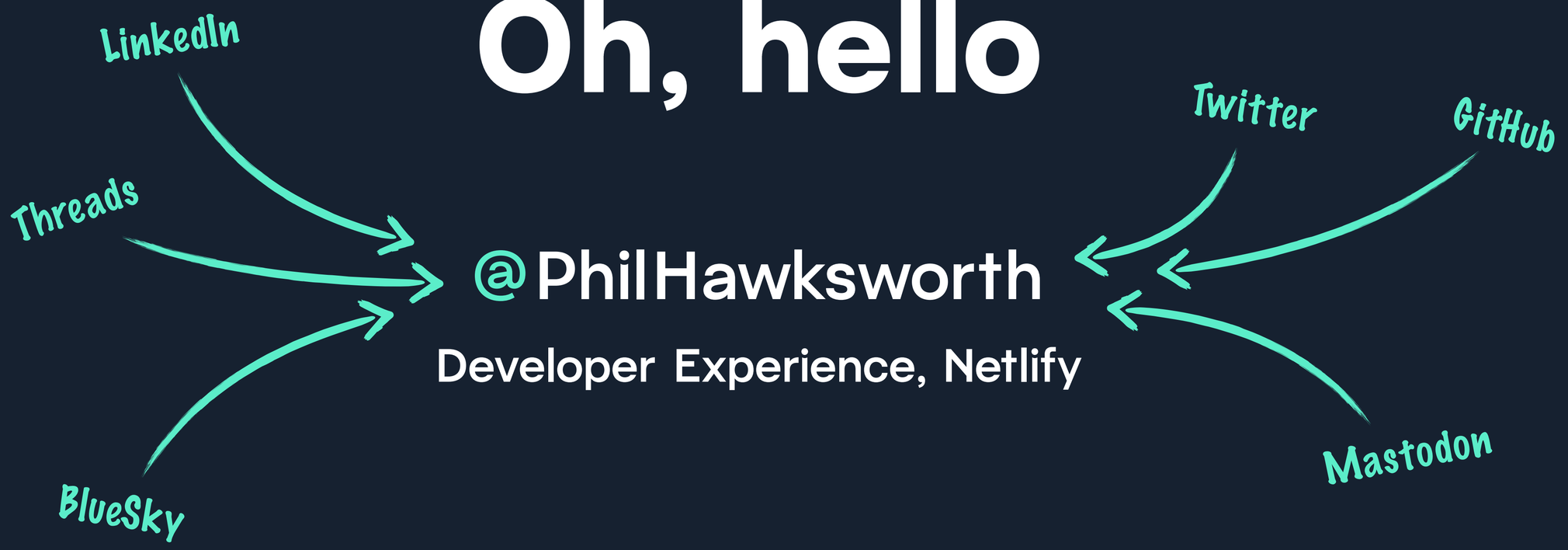
Phil Hawksworth, Netlify

Oh, hello

Phil Hawksworth

Developer Experience, Netlify

Oh, hello



@PhilHawksworth

Developer Experience, Netlify

Some terminology

(sorry)

TERM 1

Rendering

TERM 2

Personalisation spectrum

Rendering

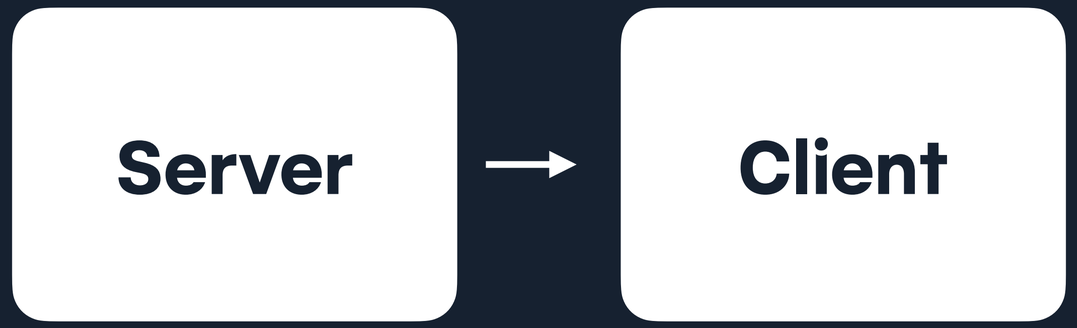
HTML / DOM

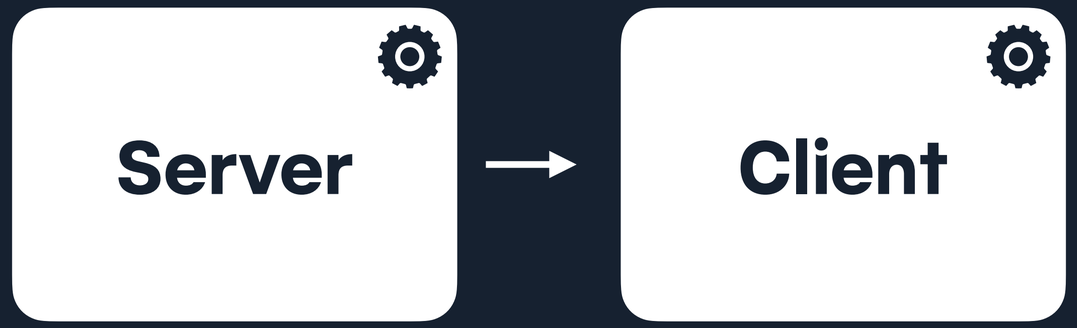
“...something something rendering on the server...”

— Phil Hawksworth, 2013

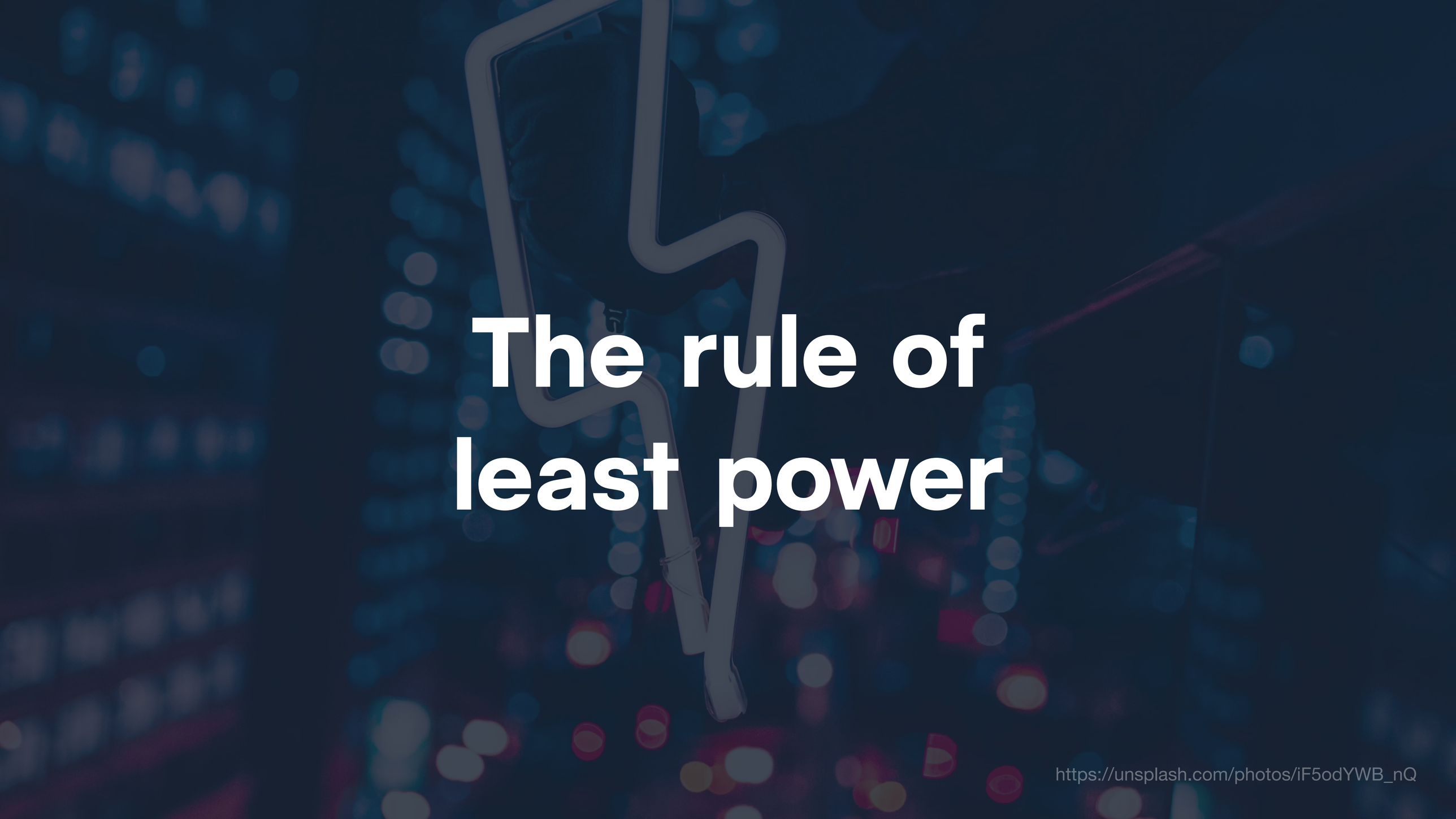
“...ha ha ha do you just mean serving HTML?”

— The person listening to Phil Hawksworth, 2013

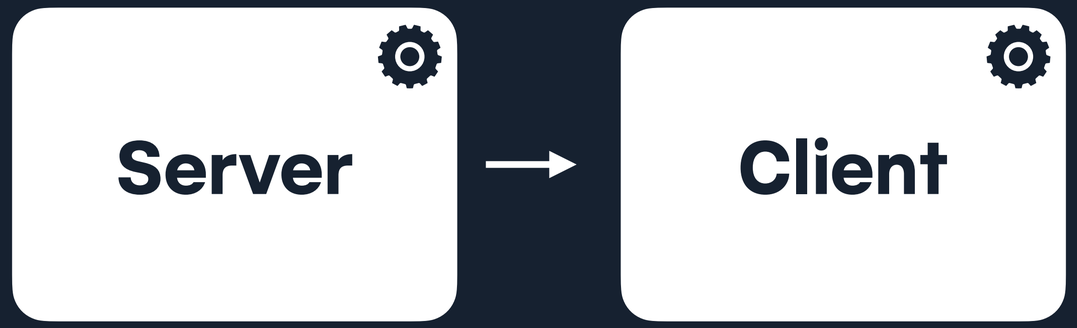

Server
Client

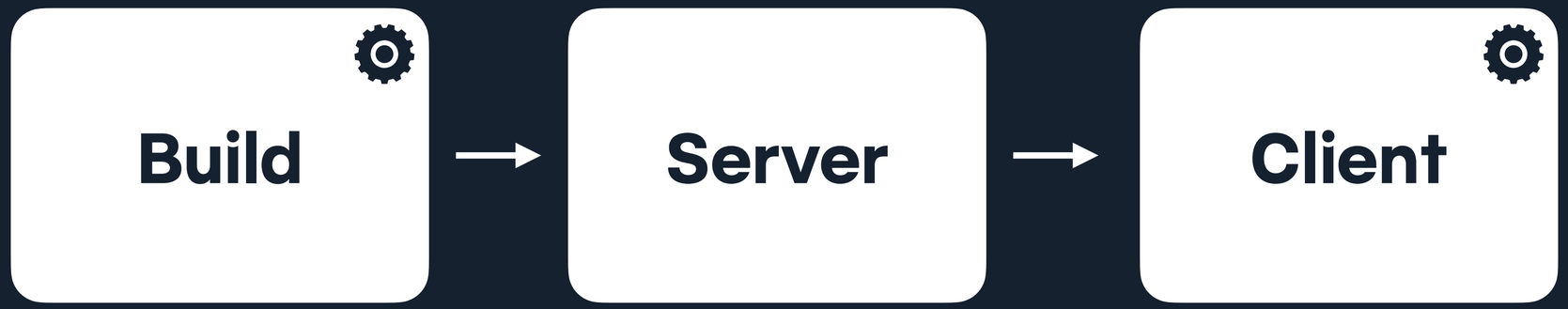

Server
Client

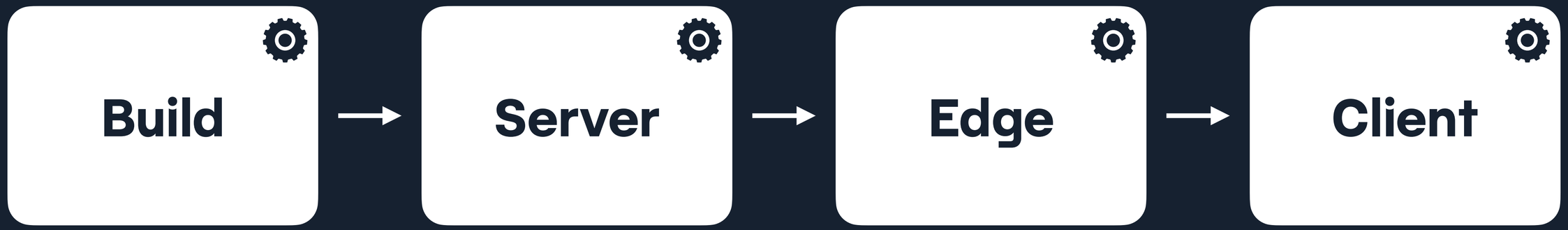
Robustness



https://unsplash.com/photos/iF5odYWB_nQ


Server
Client


Build
Server
Client


Build
Server
Edge
Client

On-demand Rendering

Decide what rendering strategy at the route level: SSR, SSG, CSR, ISR, ESR, SWR. Build any kind of website or web application with optimized performance in mind.

“by thunder, there are a lot of ways to approach rendering!”

— Phil Hawksworth, September 2023

The Personalisation Spectrum

We need the site to be personalised for the users

— A requirement often expressed by my enterprise clients

What will the personalised content be, and does it currently exist?

— A question I would always ask my enterprise clients

Technology

Does the platform provide personalisation?

Data

Do we know who the user is, and what to show to them?

Content

Do we have all the content and ways to manage it?

It’s not all or nothing

The Personalisation Spectrum

The Personalisation Spectrum

Global

Universal content, served to all

Localised

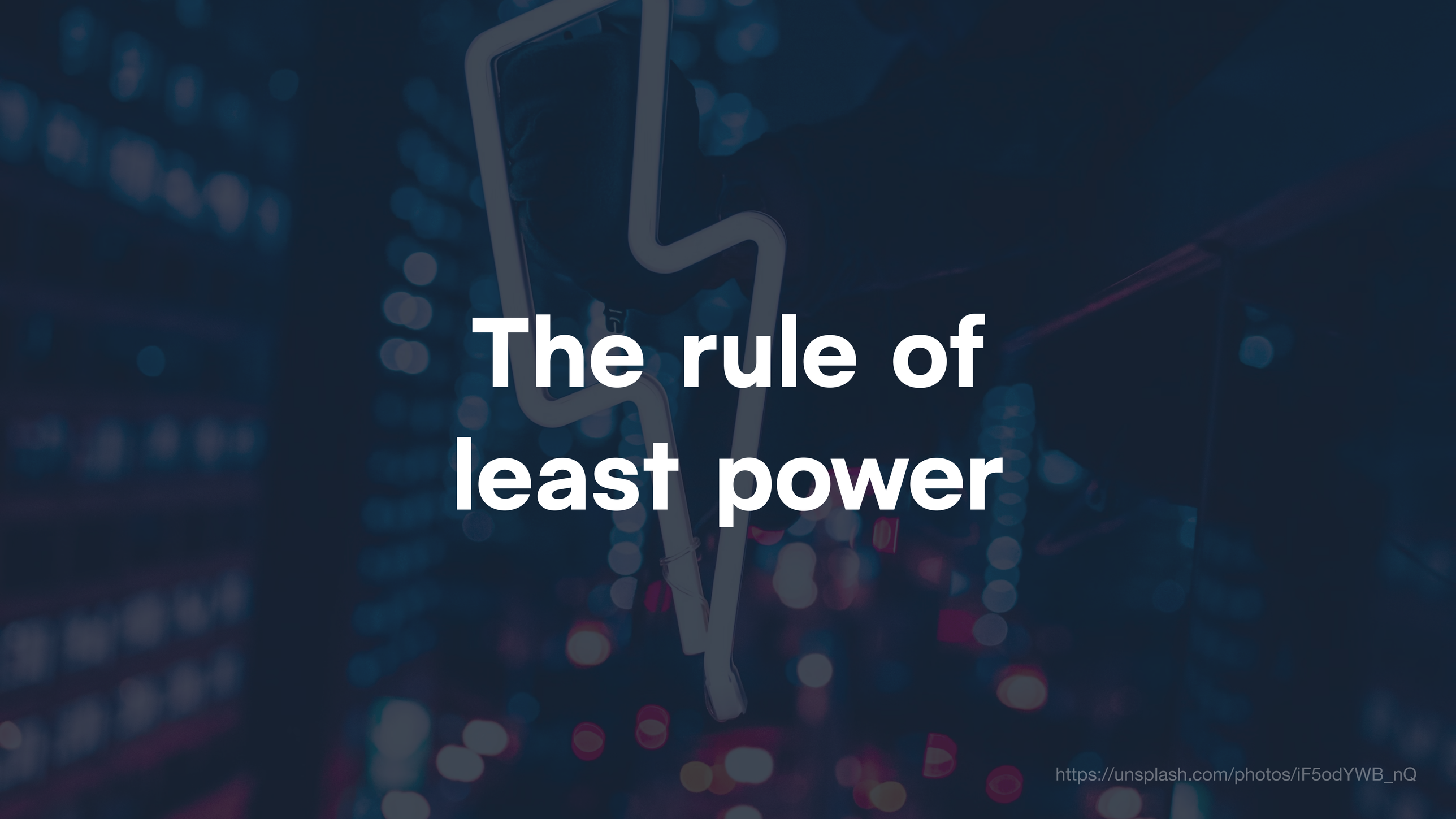
Different content served to visitors from specific locations or regions

Segmented

Batches of content served to identified cohorts of users

Personalised

Content intended for a specific individual, based on what we know about them



https://unsplash.com/photos/iF5odYWB_nQ

Let’s return to

Rendering

A place

for rendering

A time and a place

for rendering

What / Where / When / How / Why

What / Where / When / How / Why

NAMING IS HARD

More terminology

/ DSG / ISR / ODB / SPA / MPA

NAMING IS HARD

IPA / SSR / CSR / SSG / DPR /

/ ODB / SPA / MPA / SSR / CSR

/ CSR / SSG / DPR / DSG / ISR

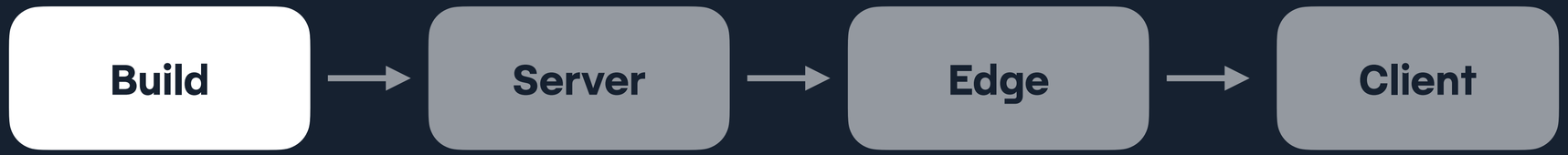
SR / SSR / CSR / SSG / DPR /

/ ISR / ODB / SPA / MPA / SSR

RENDERING

SSG

Static Site Generation



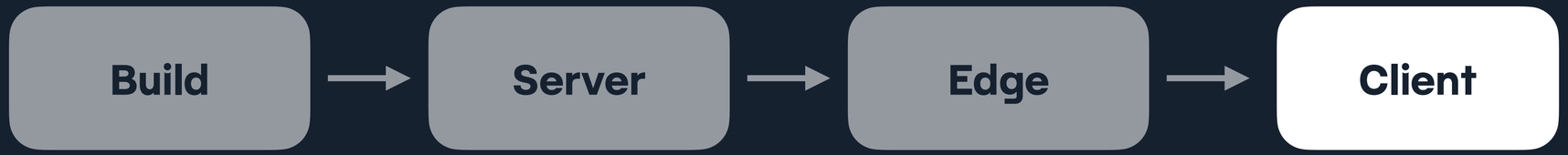
TRADITIONAL STACK

VARIOUS INCREASINGLY POPULAR PROVIDERS

RENDERING

CSR

Client side rendering



When...

the assets
have arrived

the user
interacts

RENDERING

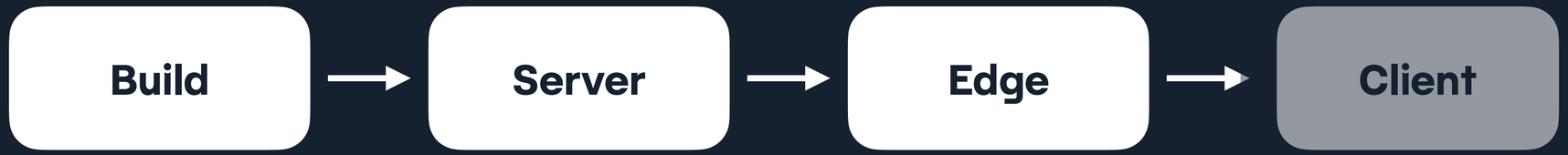
SSR

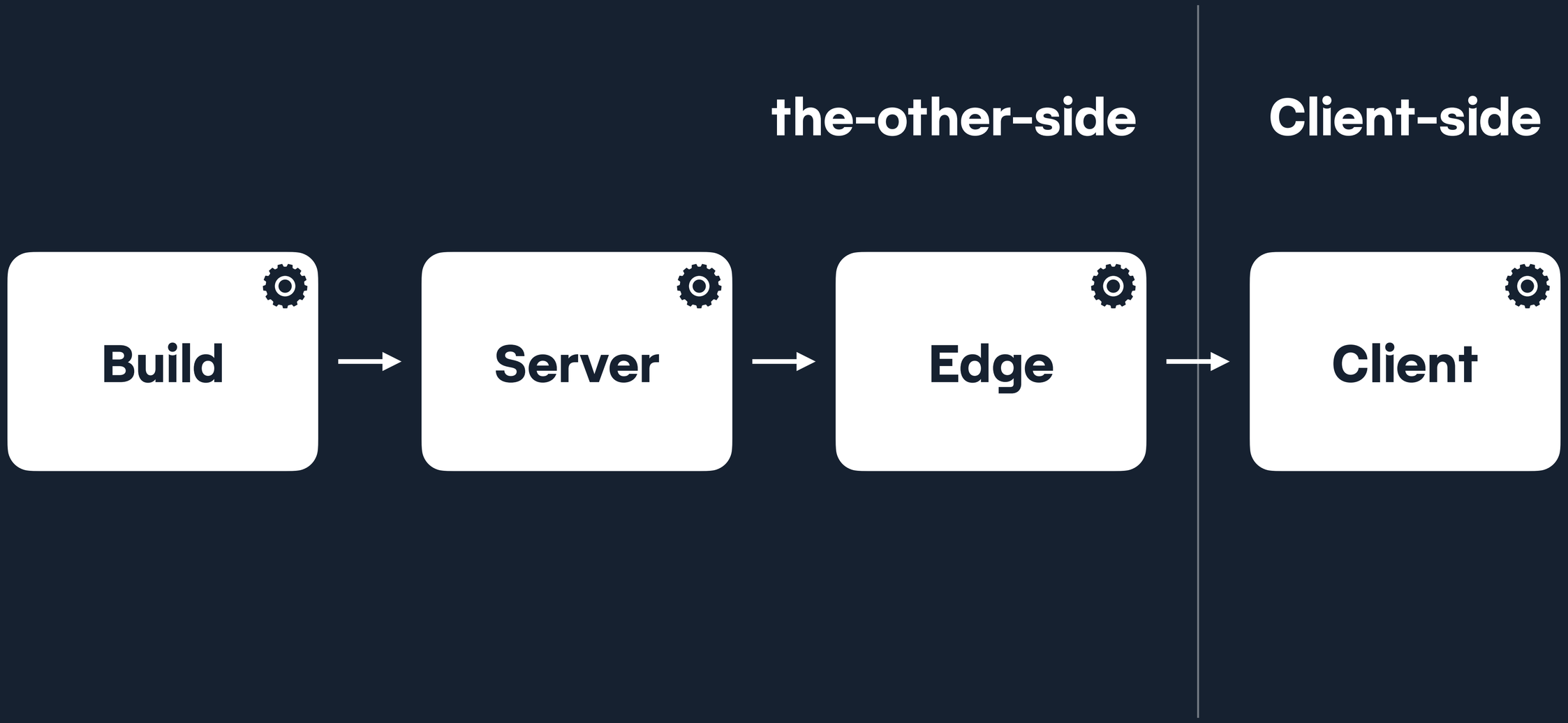
Server side rendering

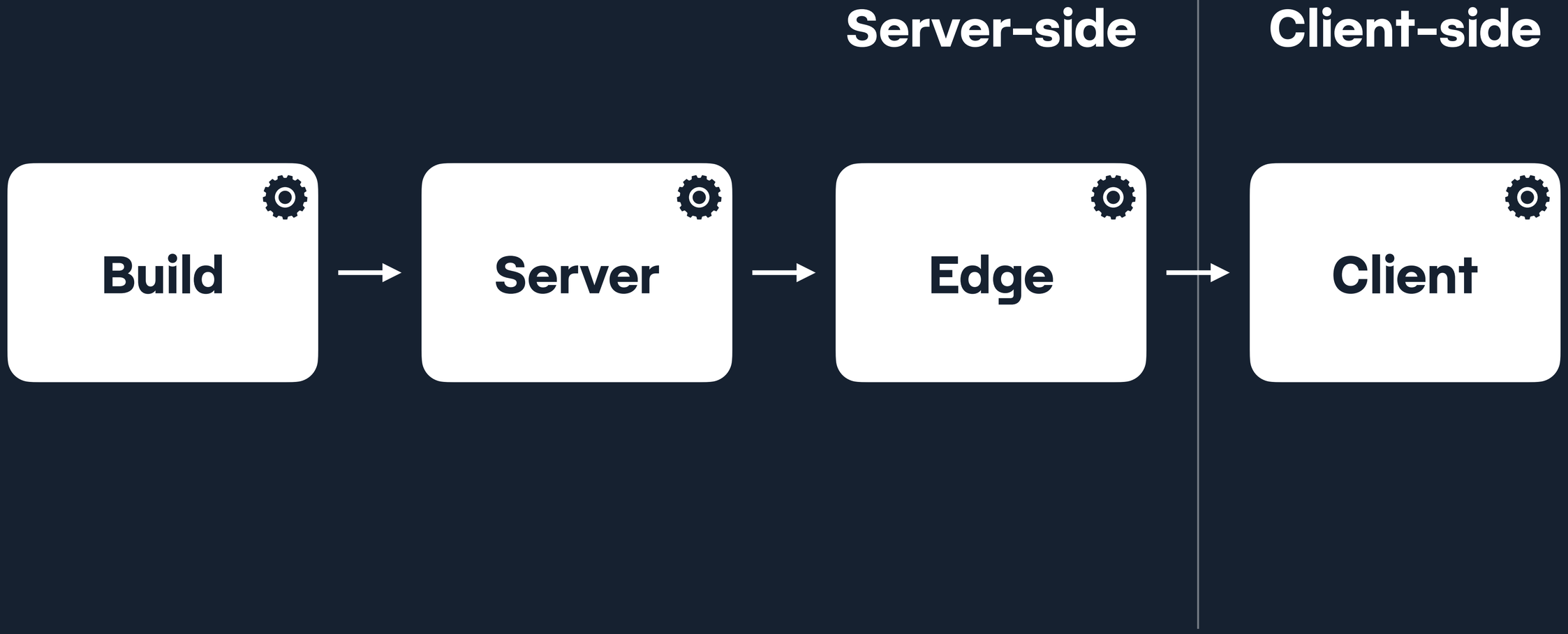
RENDERING

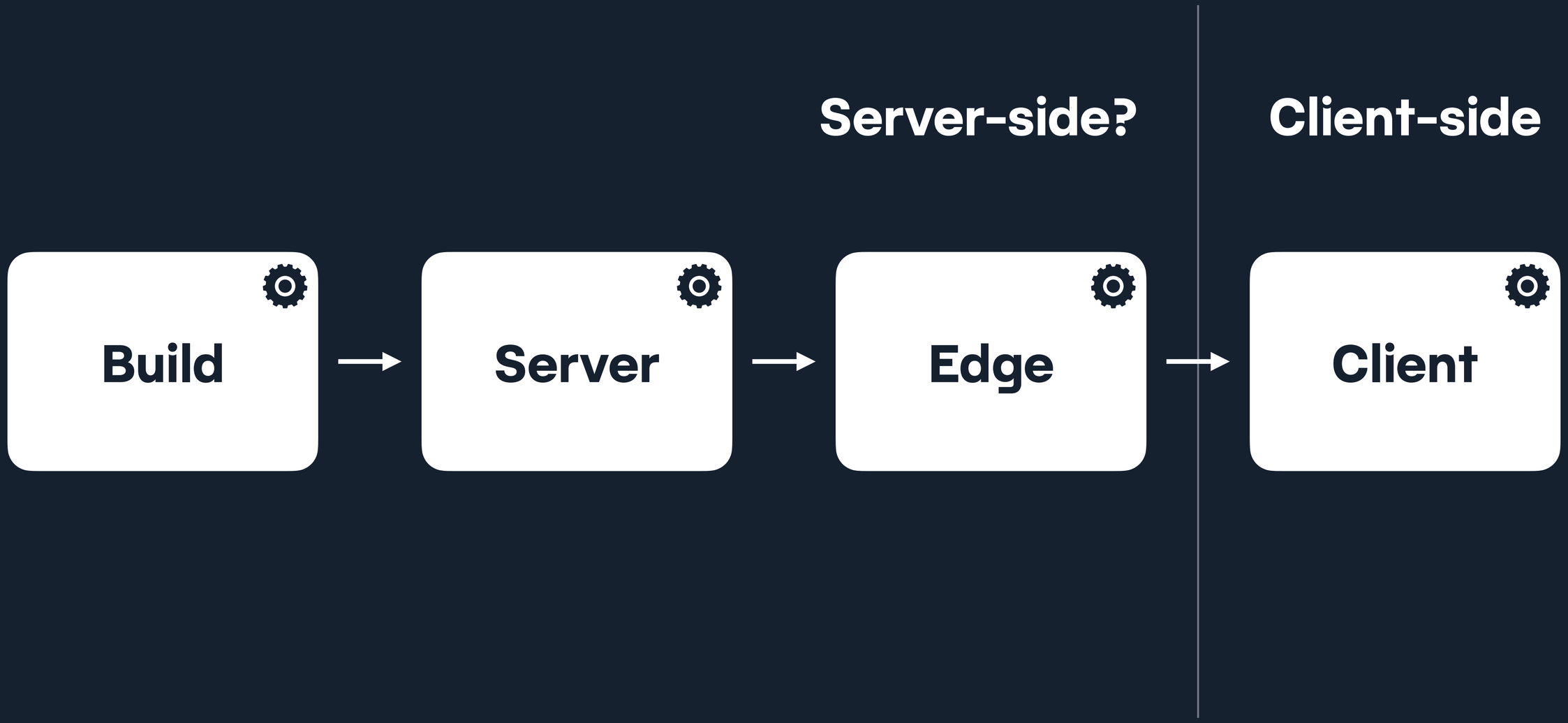
SSR

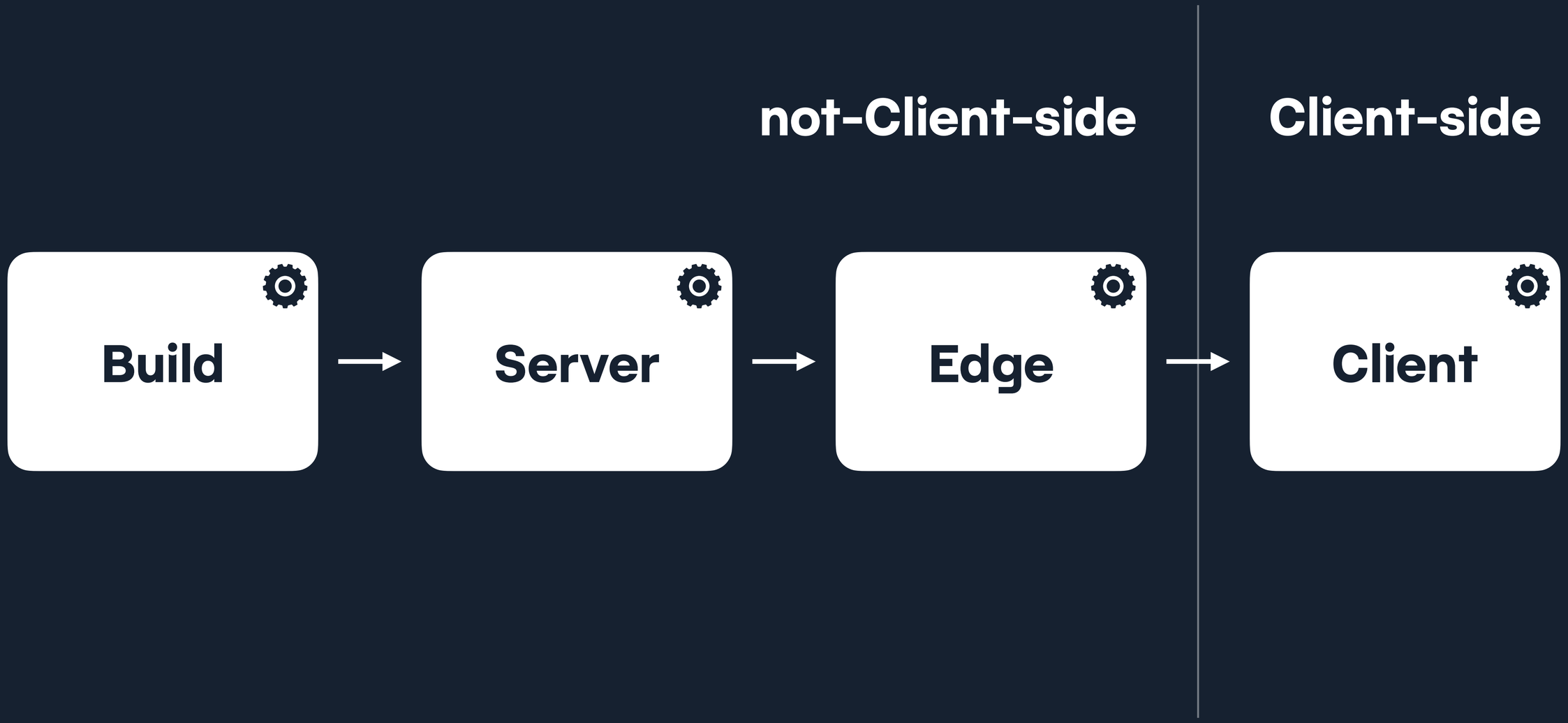
Server side rendering




the-other-side
Client-side
Build
Server
Edge
Client


Server-side
Client-side
Build
Server
Edge
Client

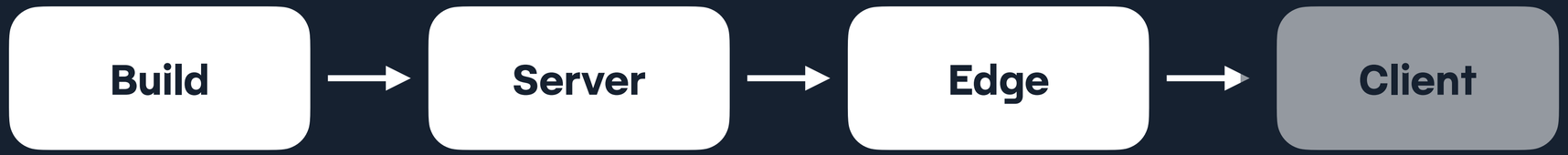

Server-side?
Client-side
Build
Server
Edge
Client


not-Client-side
Client-side
Build
Server
Edge
Client

RENDERING

SSR

Server side rendering



RENDERING

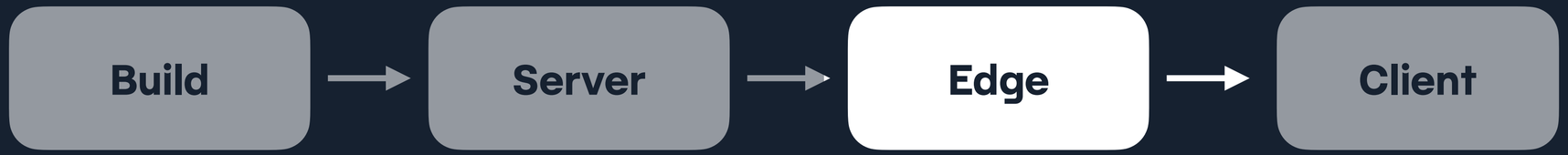
SSR

Server side rendering

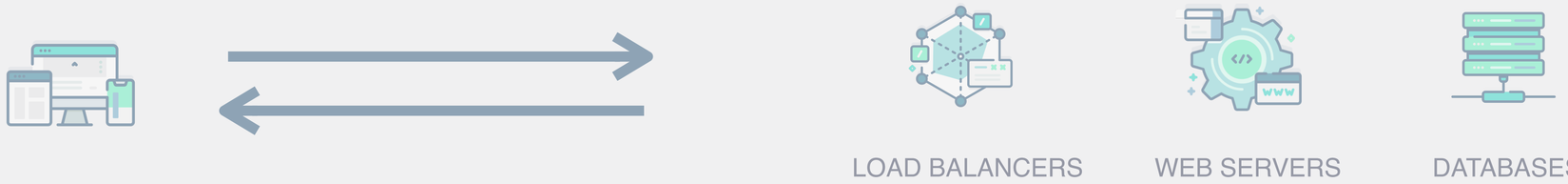
RENDERING

ESR

Edge side rendering



TRADITIONAL STACK



VARIOUS INCREASINGLY POPULAR PROVIDERS

“so which one is best, Phil?”

— Some of you, possibly, September 2023

“It depends”

— Phil Hawksworth, September 2023

“Yeah. Great. Thanks.”

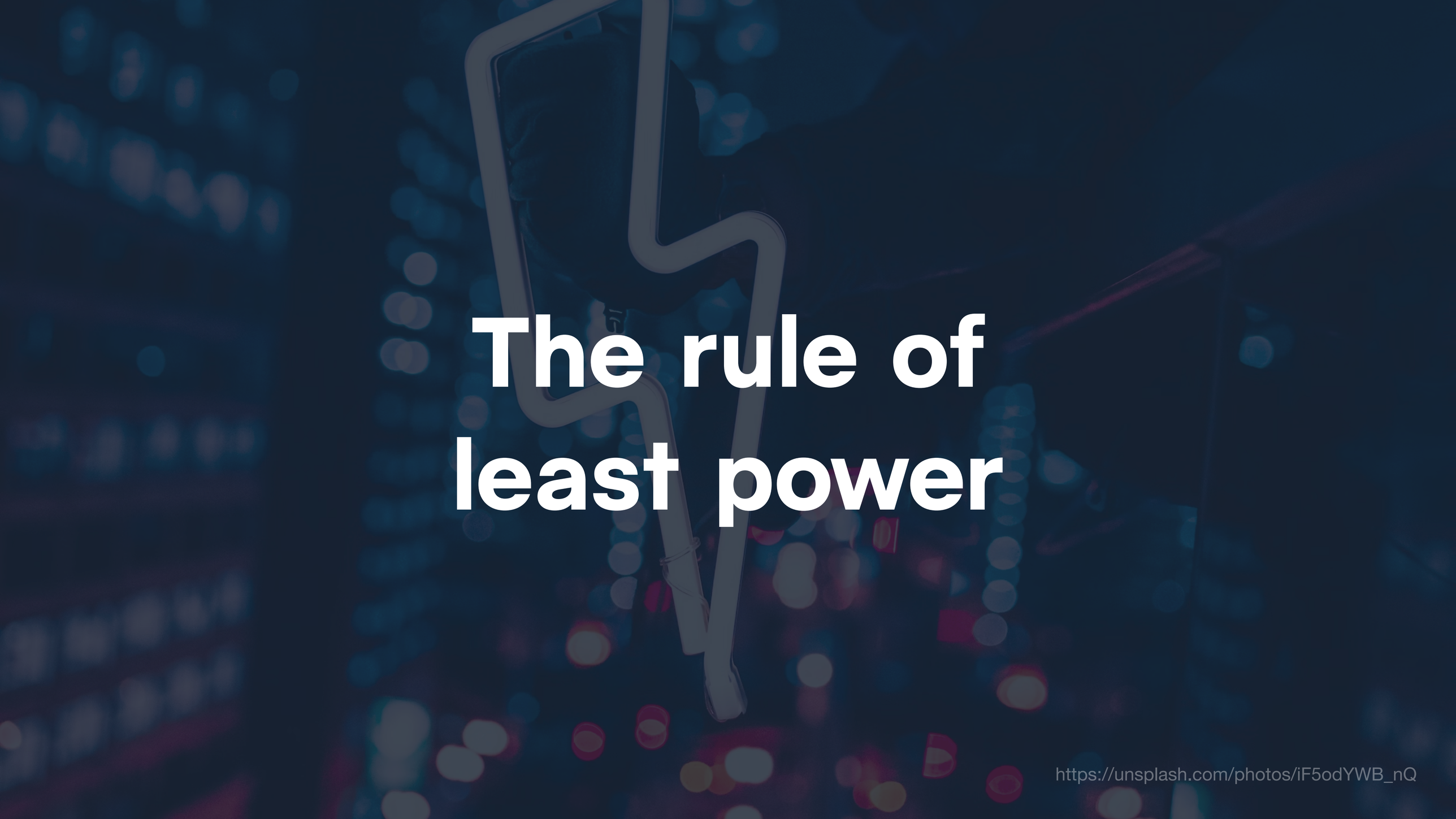
— Some of you, possibly, September 2023

“It depends on what?”

— Some of you, hopefully, September 2023

“I’m glad you ask”

— Me again, September 2023



https://unsplash.com/photos/iF5odYWB_nQ

https://unsplash.com/photos/qG6QtyOaOGQ

Serverside, doesn't have
to mean **Serverful**.

If I can do things in advance, I will.
If I can't, but can do things serverless, I will.
If I can't, but can add a server, I will.

Increments

DPR / ODB / DSG / ISR / FFS

Increments

DPR / ODB / DSG / ISR

I made us a new logo. Where do I send the invoice?

natsflibby.png

From a thread in # internal-watercooler | 13 Feb | View reply

NAMING IS HARD

Increments

DPR / ODB / DSG / ISR

RENDERING

DPR

Distributed Persistent Rendering

RENDERING

ODB

On-demand Builders

RENDERING

DSG

Deferred Static Generation

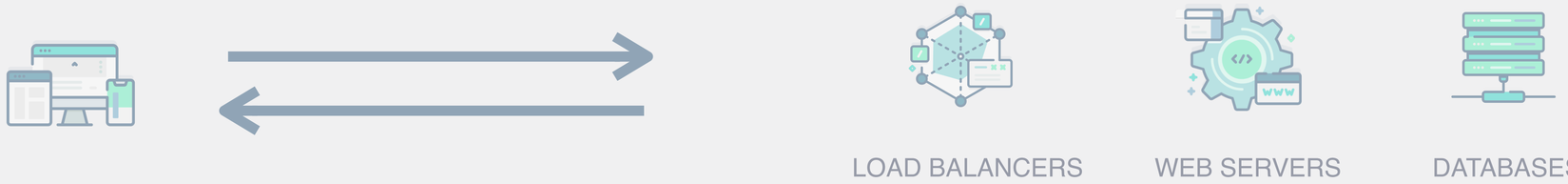
DGIITBWUTFTIRTGIAATWWBE

NAMING IS HARD

Don’t generate it in the build.

Wait until the first time it’s requested, then generate it and add it to what was built earlier.

TRADITIONAL STACK



VARIOUS INCREASINGLY POPULAR PROVIDERS

Increments

DPR / ODB / DSG / ISR

RENDERING

ISR

Incremental Static Regeneration

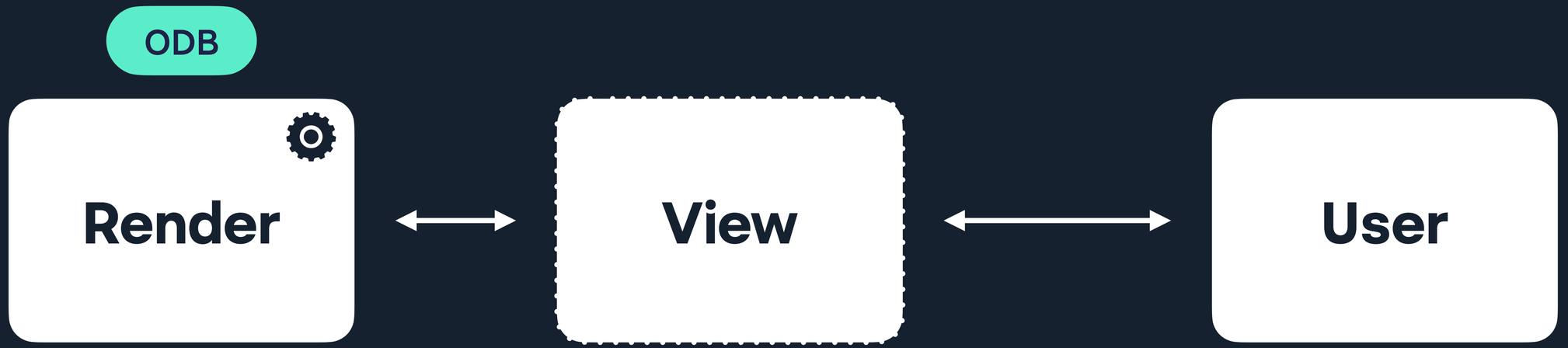
RENDERING

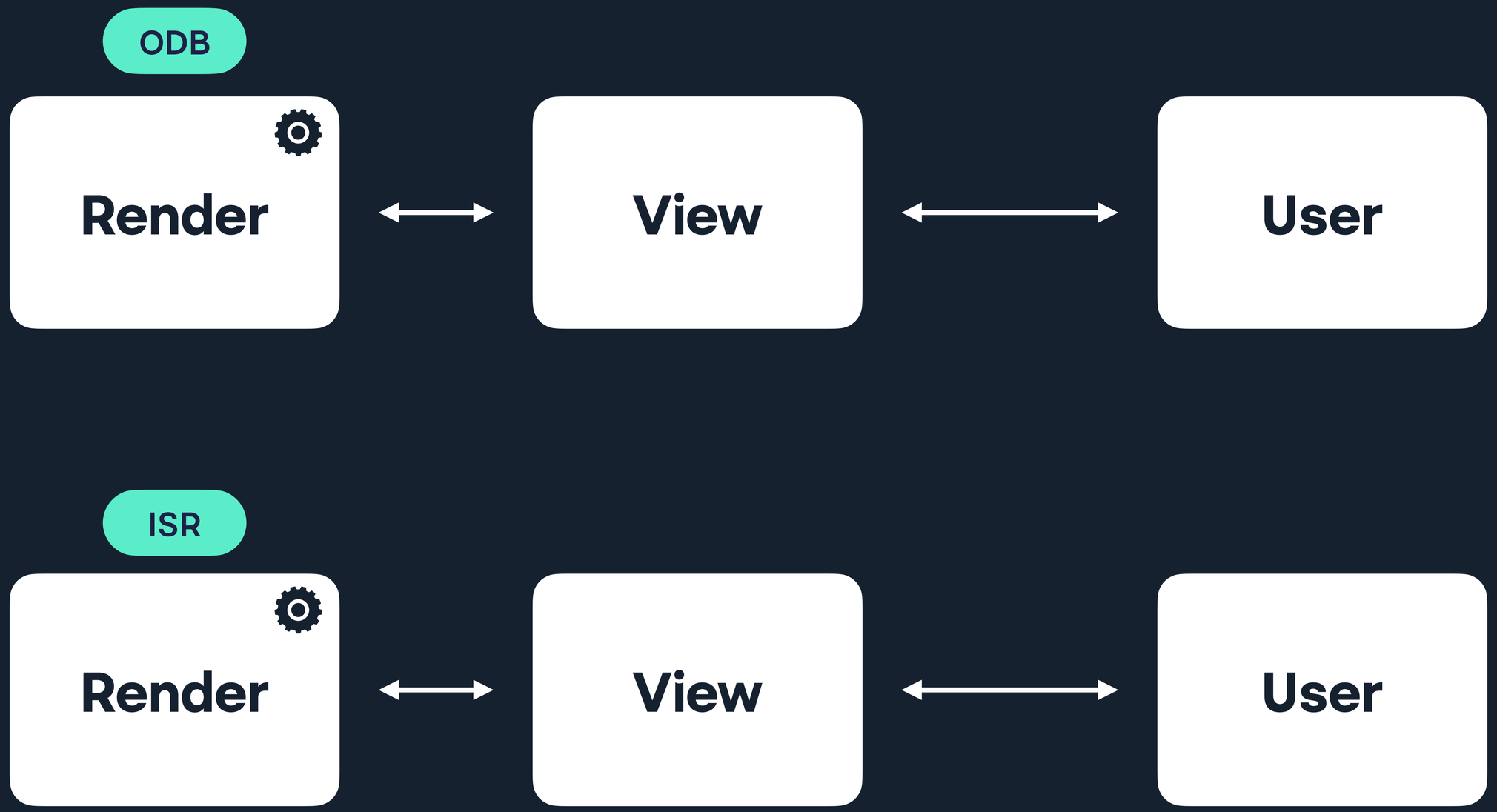
ISR

Incremental Static Regeneration

SWR

Stale While Revalidate


ODB
Render
View
User


ODB
Render
View
User
ISR
Render
View
User

“Which is better, ISR or DPR”?

— Some of you, possibly, September 2023

“It depends”

Deciding demands questions

What are the requirements?

EXAMPLE

Social posts stash

Applying different rendering techniques

Some requirements

A URL for each of the 24,000 tweets

Index pages listing each tweet with its URL

Ability to search the tweets

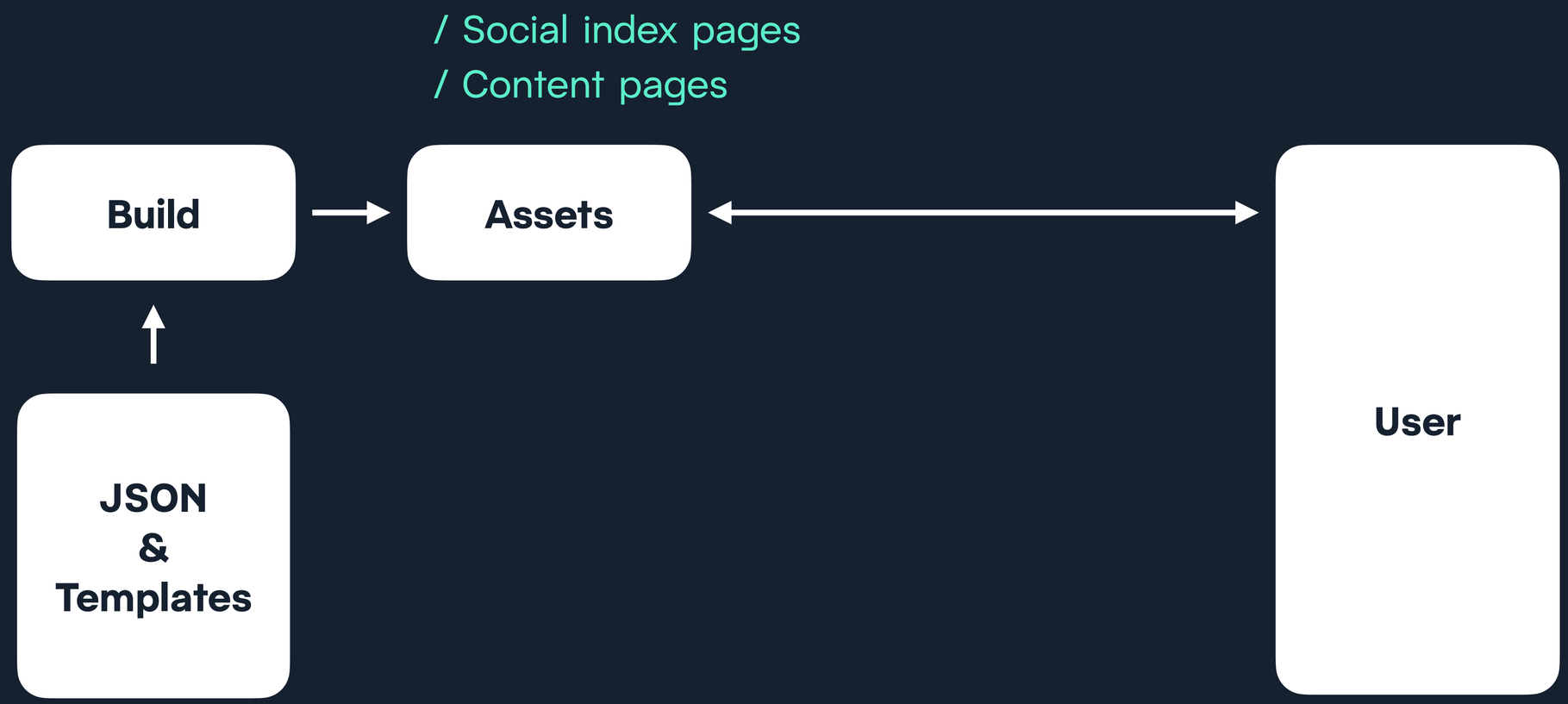
Retain a reasonable build time

Avoid client-side rendering if possible

A logical model that fits in my head

SSG DPR ESR

JSON


/ Social index pages
/ Content pages
Build
Assets
User
JSON
&
Templates

https://www.hawksworx.com

hawksworx blog speaking about search

HAWKSWORX

/hɔːkswəːks/

The blog, playground, and generally a home on the web for Phil Hawksworth, a web nerd, amateur comedian, and cat botherer.

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www.hawksworx.com

You can usually find me on Mastodon (I've stopped posting on Twitter now, but you can find an archive of my tweets on this site).

You can also sometimes find me at web development conferences, where I might be talking about development techniques. I blog here less frequently than I'd like, but manage it a little more often on the Netlify blog.

Wherever you find me, online or in the real world, please do come and say a friendly hello.

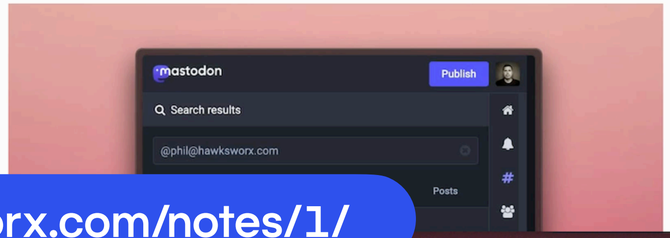
Recently on the blog

December 12th 2022

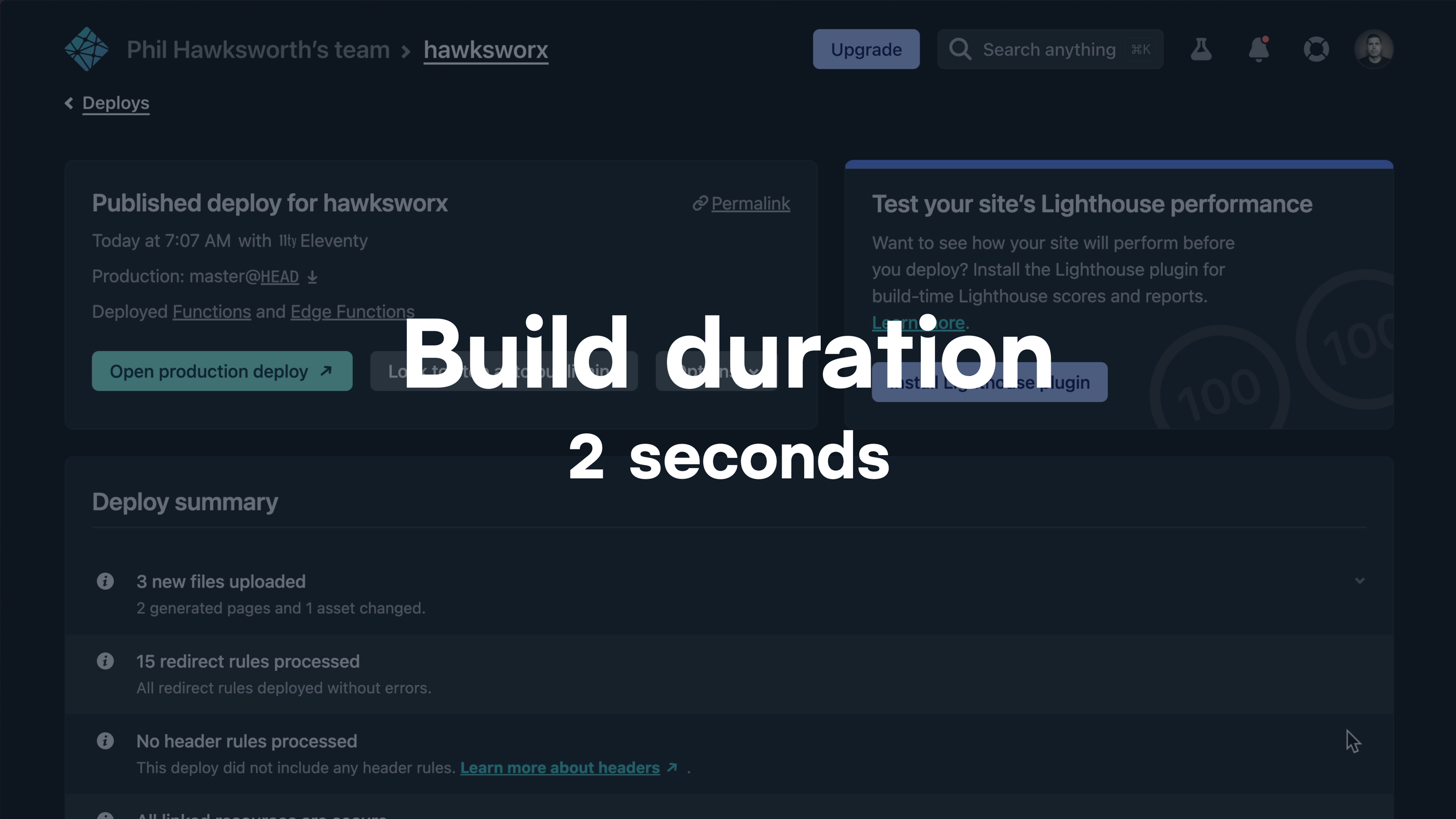
Alias your mastodon account to your own domain with Netlify redirect

#Mastodon , #Fediverse , #Netlify , #Indieweb

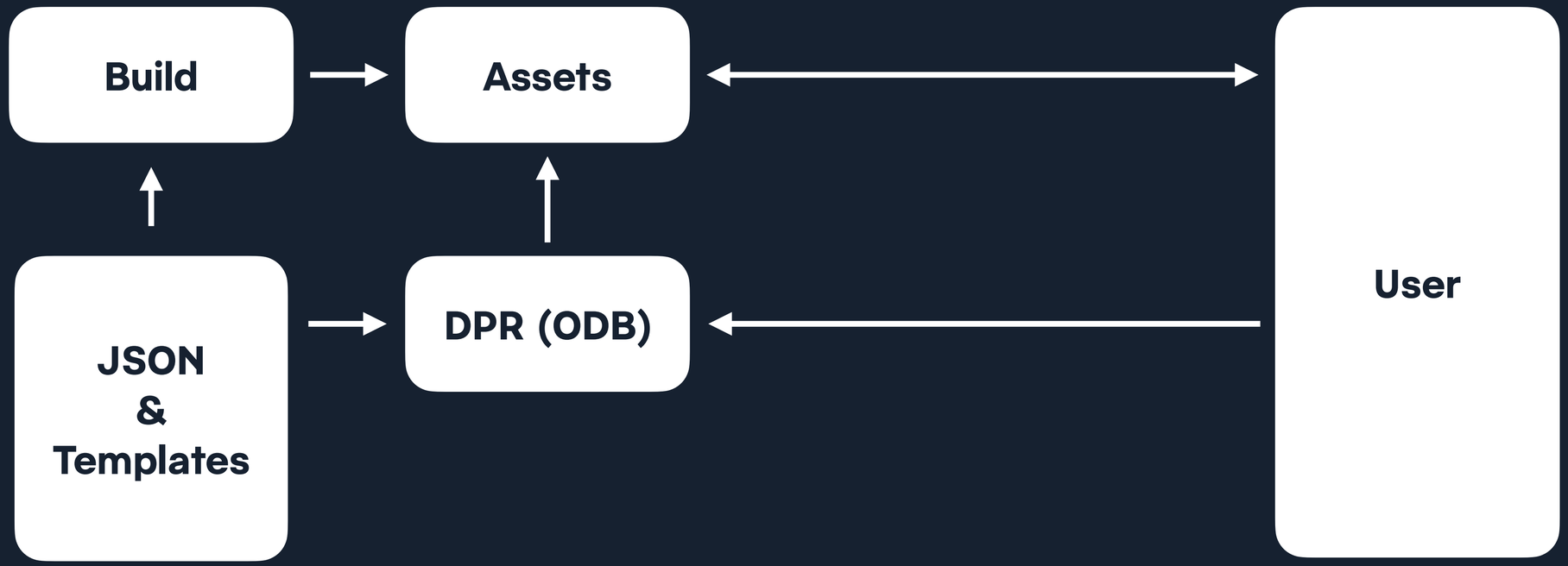
Did you know you could use your own domain for your mastodon username without hosting your own instance? It can be done with a single Netlify redirect rule.



www.hawksworx.com/notes/1/


Phil Hawksworth's team › hawksworx
Upgrade
Search anything ⌘K
Deploys
Published deploy for hawksworx
Permalink
Today at 7:07 AM with Eleventy
Production: master@HEAD
Deployed Functions and Edge Functions
Open production deploy
Test your site's Lighthouse performance
Want to see how your site will perform before you deploy? Install the Lighthouse plugin for build-time Lighthouse scores and reports.
Learn more.
Install Lighthouse plugin
Build duration
2 seconds
Deploy summary
3 new files uploaded
2 generated pages and 1 asset changed.
15 redirect rules processed
All redirect rules deployed without errors.
No header rules processed
This deploy did not include any header rules. Learn more about headers .

/ Post page view
/ Social index pages
/ Content pages



https://www.hawksworx.com/notes/955/

hawksworx blog speaking about search

NOTES - PAGE 955

Newest | Previous | Next | Oldest

Search the notes

The archive of what I posted on Twitter, which I now self host due to a lack of trust in Twitter and some other reasons.

I'll soon begin refelcting all my Mastodon posts here too. I'm happier self-hosting or maintaining an archive of my content on URLs that I can own.

There are tools to help you do this too. Such as this one from the makers of Eleventy.

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Phil Hawksworth @philhawksworth • July 23rd 2007

Hacking a rails application - prototypetastic

Permalink | Twitter

Phil Hawksworth @philhawksworth • July 23rd 2007

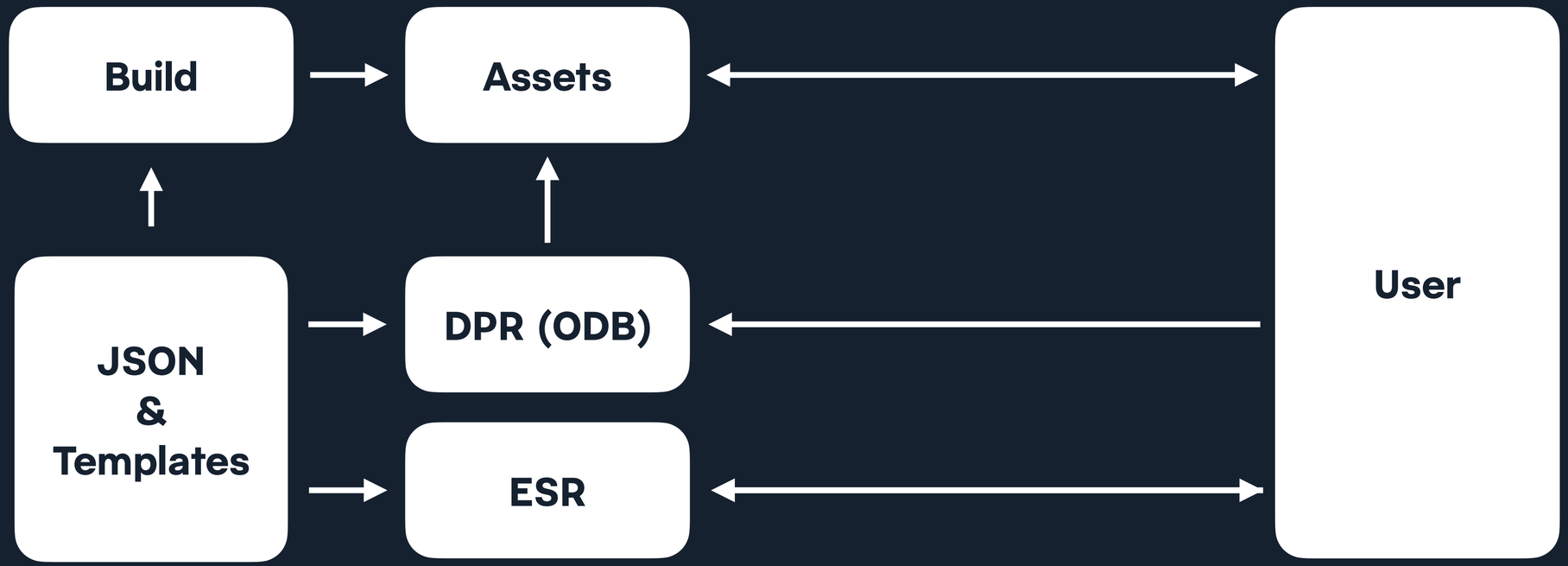
Making content changes directly on my live web server... easy does it!

Permalink | Twitter

Phil Hawksworth @philhawksworth • July 23rd 2007

www.hawksworx.com/note/mstdn/109913367394738833

/ Post page view
/ Social index pages
/ Content pages



/ Search results page

https://www.hawksworx.com/notes/1/

hawksworx blog speaking about search

NOTES

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Search the notes

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Phil Hawksworth @philhawksworth •
February 24th 2023

Quietly making a resolution to get my use of exclamation marks under control!

Dammit.

Permalink | Mastodon

Phil Hawksworth @philhawksworth •
February 23rd 2023

Started my day by making the *perfect* piece of hot buttered toast.
This made me happy.
End of message.

Permalink | Mastodon

www.hawksworx.com/notes/search/?str=render

Voilà
Ai Artist

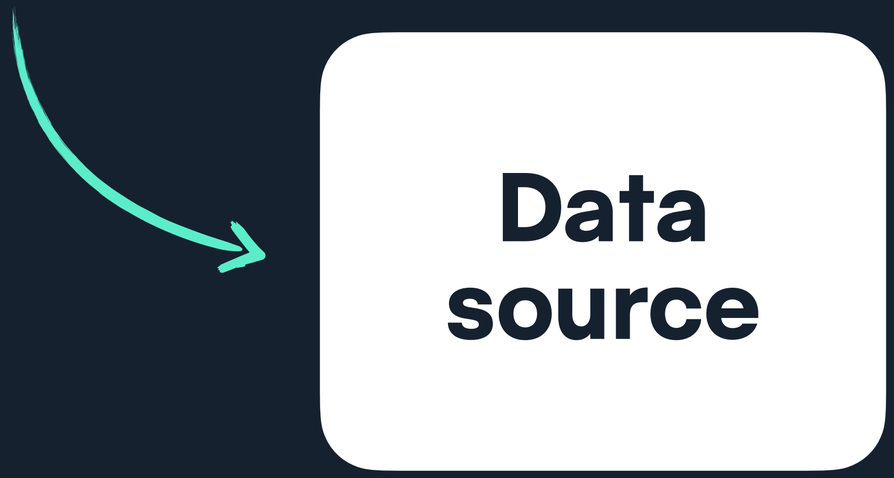
Voilà
Ai Artist

Abstraction

At build time

At request time

At build time



At request time

Rendering sugar

Nuxt / Astro / Eleventy / Next

and others

Applying this to personalisation

The Personalisation Spectrum

Global | Localised | Segmented | Personalised

The Personalisation Spectrum

Global | Localised | Segmented | Personalised

Pages generated at build time

SSG

The Personalisation Spectrum

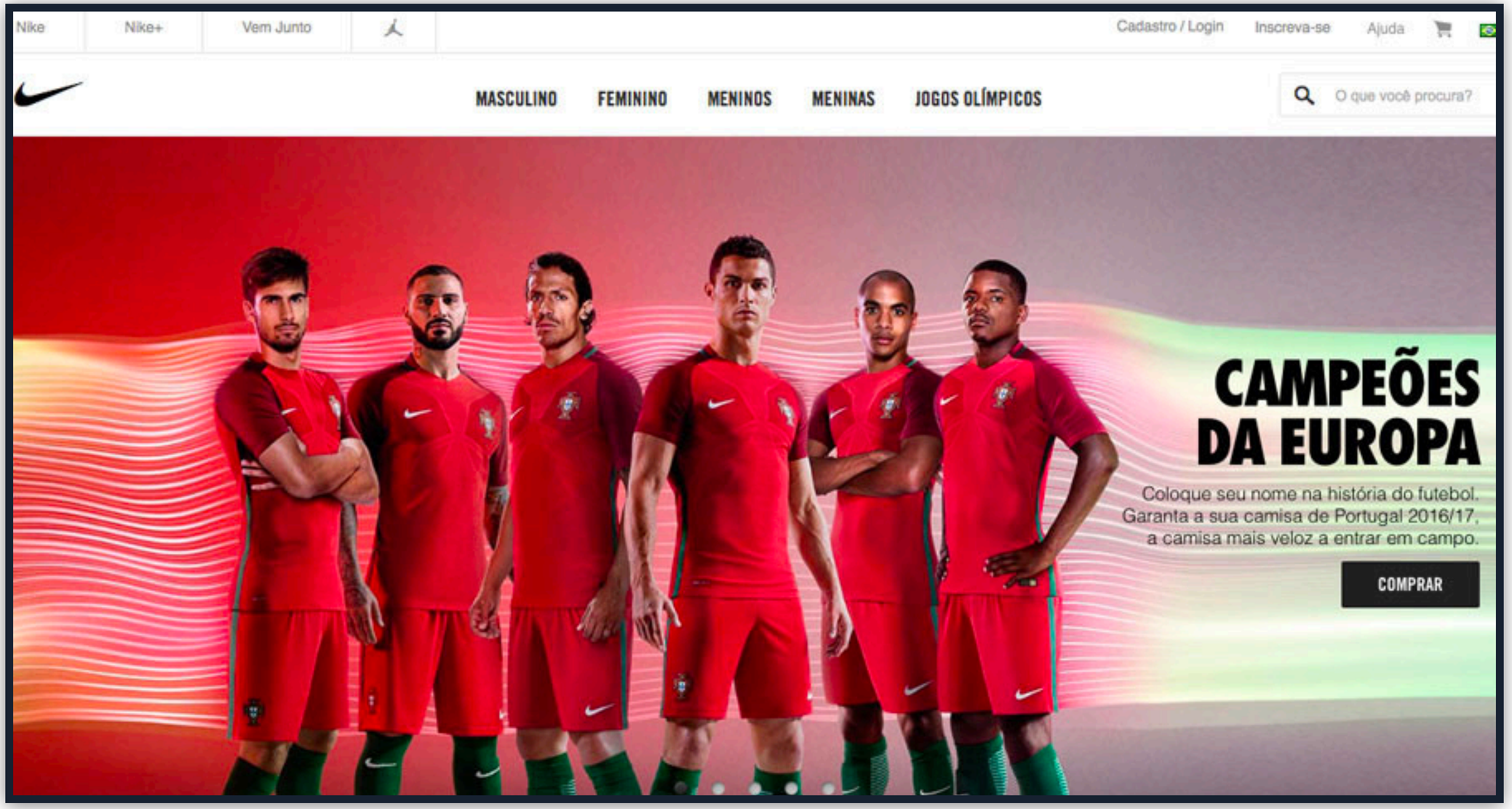
Global **Localised** Segmented Personalised

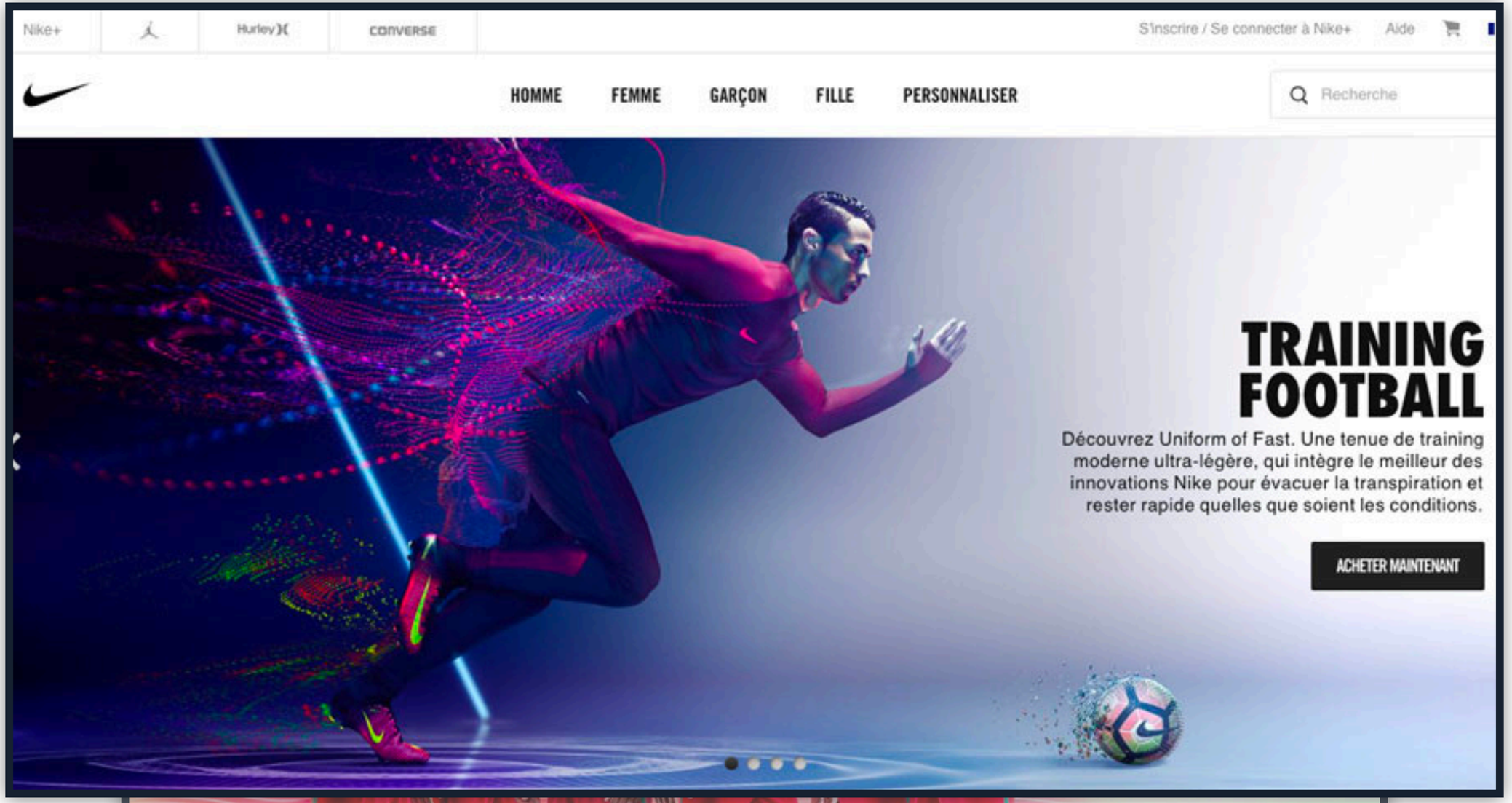
Global and localised pages
generated at build time.

+

Users directed to appropriate URLs

SSG


Nike
Nike+
Vem Junto
Cadastro / Login
Inscreva-se
Ajuda
MASCULINO
FEMININO
MENINOS
MENINAS
JOGOS OLÍMPICOS
O que você procura?
CAMPEÕES DA EUROPA
Coloque seu nome na história do futebol.
Garanta a sua camisa de Portugal 2016/17,
a camisa mais veloz a entrar em campo.
COMPRAR


Nike+
Hurley
CONVERSE
S'inscrire / Se connecter à Nike+
Aide
HOMME
FEMME
GARÇON
FILLE
PERSONNALISER
Recherche
TRAINING
FOOTBALL
Découvrez Uniform of Fast. Une tenue de training moderne ultra-légère, qui intègre le meilleur des innovations Nike pour évacuer la transpiration et rester rapide quelles que soient les conditions.
ACHETER MAINTENANT

The Personalisation Spectrum

Global Localised Segmented Personalised

Global and localised pages generated at build time.

+

Users directed to appropriate URLs

+

Cookies and Edge Functions enrich views for returning users

SSG ESR

airtable.com

Untitled Base

Data | Automations | Interfaces

Help | Share | 2 | P

Clients | Pets | Add or import | Extensions | Record templates

Views | Form | Share form | Open form

Find a view

Grid view

Form

Create...

Grid

Form

Calendar

Gallery

Kanban

Timeline Team

List

Gantt Team

New section Team

Fields remove all

Drag and drop fields here to hide

Add a field to this table

Add a cover image Team

Add a logo Team

Form

Add a description for this form

Name

Notes

Welcome, Phil

We'd love to show you around so you can see what Airtable is all about. It'll only take a couple minutes.

Skip | Let's go!

The Personalisation Spectrum

Global **Localised** **Segmented** **Personalised**

Global and localised pages generated at build time.

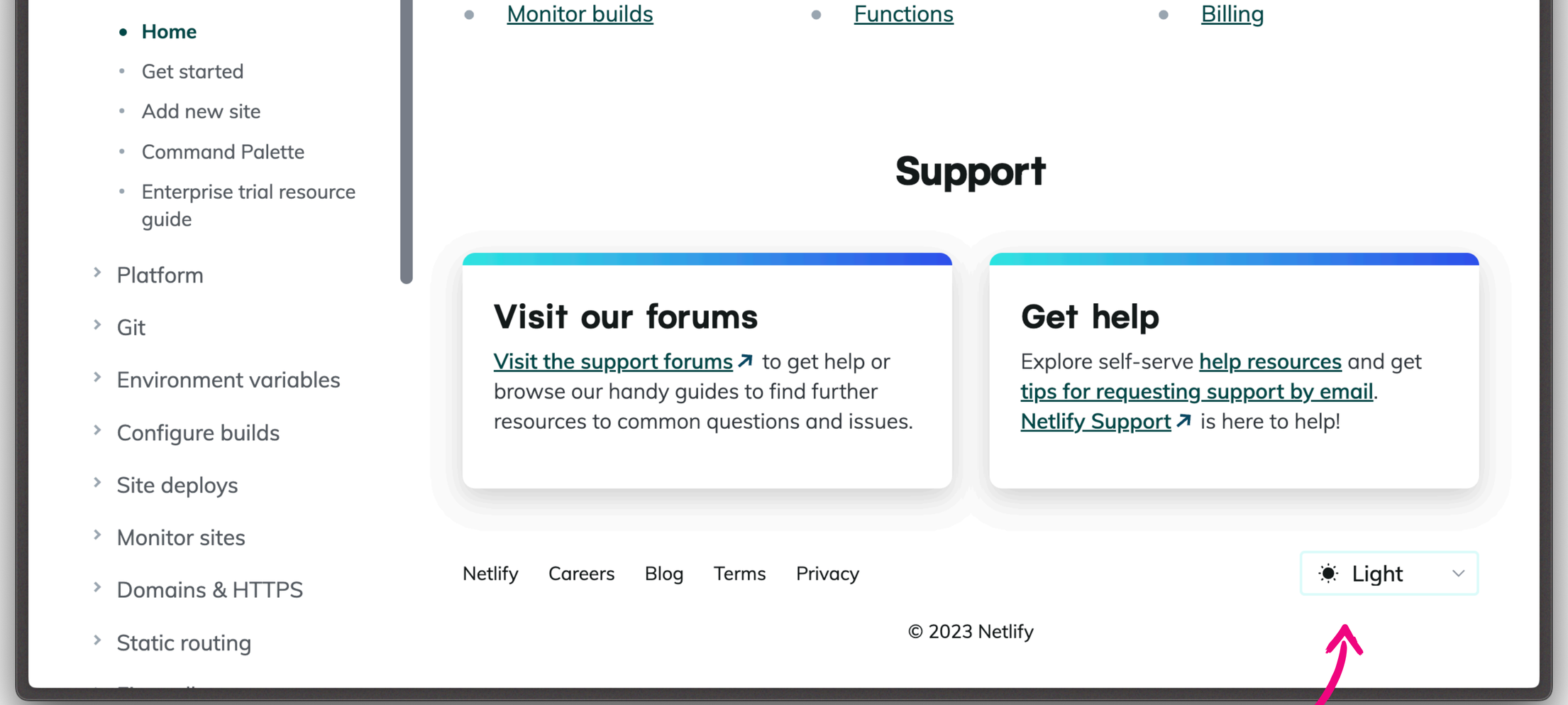
+

Users directed to appropriate URLs

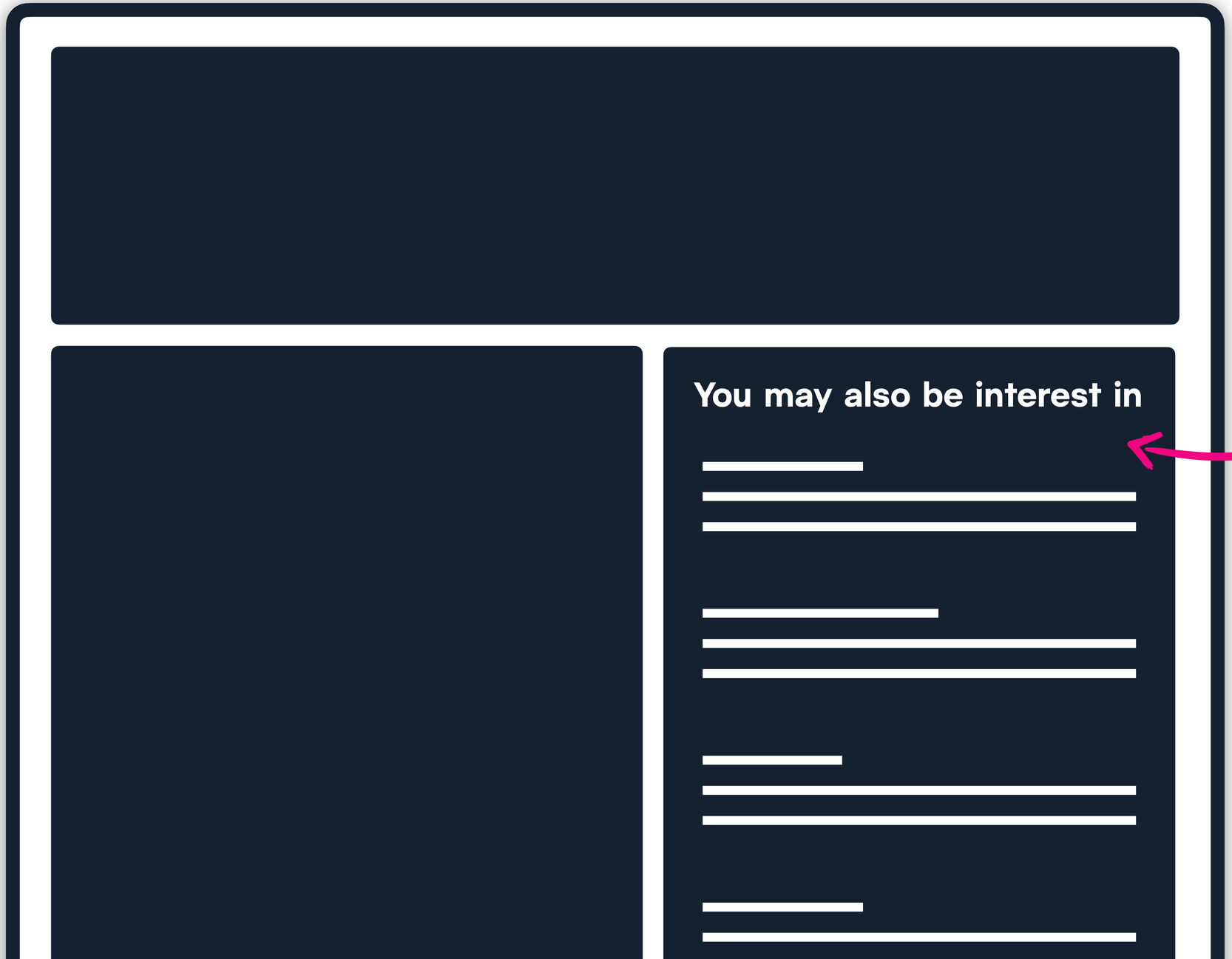
+

Cookies and Edge Functions enrich views for user preference, behaviours

SSG ESR



Based on system preferences or user input



Based on recent navigation

The Personalisation Spectrum

Global **Localised** **Segmented** **Personalised**

Global and localised pages generated at build time.

+

Users directed to appropriate URLs

+

Cookies and Edge Functions enrich views for user preference, behaviours

SSG ESR

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Global **Localised** **Segmented** **Personalised**

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Personal content added via authenticated APIs

SSG ESR CSR

app.netlify.com

Phil Hawksworth's team

Search anything... ⌘K

News

Support

Phil Hawksworth's team Netlifriend

Current usage period (Aug 20 to Sep 20)

Bandwidth	Build minutes	Concurrent builds	Team members
17 GB	27	0/5	3

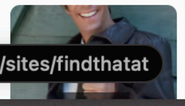
Sites →

Add new site

www.hawksworx.com
Deploys from GitHub with 11ty Eleventy

findthat.at
Deploys from GitHub

hawksworx-cards
Deploys from GitHub



the-fonz
Deploys from GitHub

app.netlify.com/sites/findthatat

Builds →

hawksworx-cards Completed
Production: master@HEAD

www.hawksworx.com Completed
Production: master@HEAD

hawksworx-cards Completed
Production: master@HEAD

www.hawksworx.com Completed
Production: master@HEAD

www.hawksworx.com Failed

Many techniques and options across the personalisation spectrum

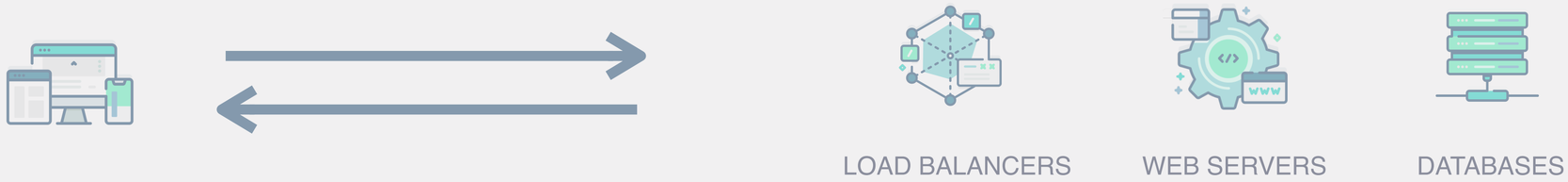
FINALLY

Lessons

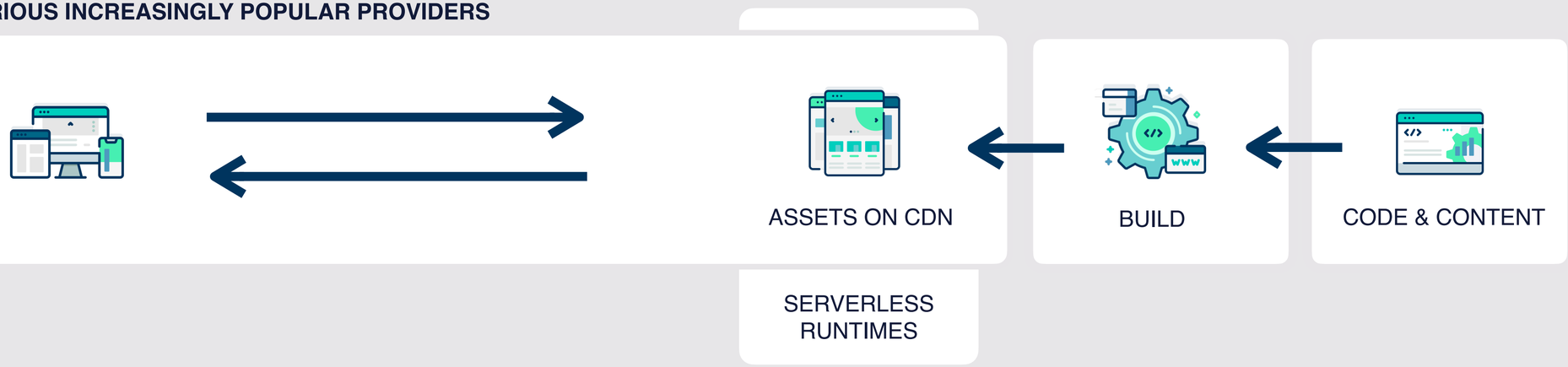
Amid the confusion, what did we learn?

There is no one right way

TRADITIONAL STACK



VARIOUS INCREASINGLY POPULAR PROVIDERS



Personalisation exists on a spectrum

Do work ahead of time if you can

You can mix and match rendering methods

Never choose an approach until you understand the requirements

Never choose an approach until you understand the constraints

Keep the rule of least power in mind

Not all of Phil's
tweets are pure gold

For more

hawksworx.com
netlify.com/blog/tutorials
twitter.com/philhawksworth

Phil Hawksworth, Netlify

Thanks

Grab me for questions
(or to say hello)

Phil Hawksworth, Netlify

findthat.at/personalisation