

# **EVENTS AND WEBHOOKS AND MICROSERVICES, OH MY!**

**PHIL HAWKSWORTH**

# EVENTS

# WEBHOOKS

# MICROSERVICES



# **BUILDING BLOCKS**

# **AUTOMATION** *and* **IMAGINATION**

# HELLO

**@ PHIL HAWKSWORTH**  
**DEVELOPER EXPERIENCE,**  
**NETLIFY**

# REALTIME FINANCIAL DATA



# REALTIME FINANCIAL DATA







# REALTIME FINANCIAL DATA



# SHIPPING INSURANCE



# SHIPPING INSURANCE







■ R/GA





■ R/GA





netlify

Events, And Hooks, And Microservices

UpFront Conf, 2019

@philhawksworth



netlify



# MAKING THINGS







# PROJECTS

# THE PERFECT PROJECT TIMELINE



**BRIEF**

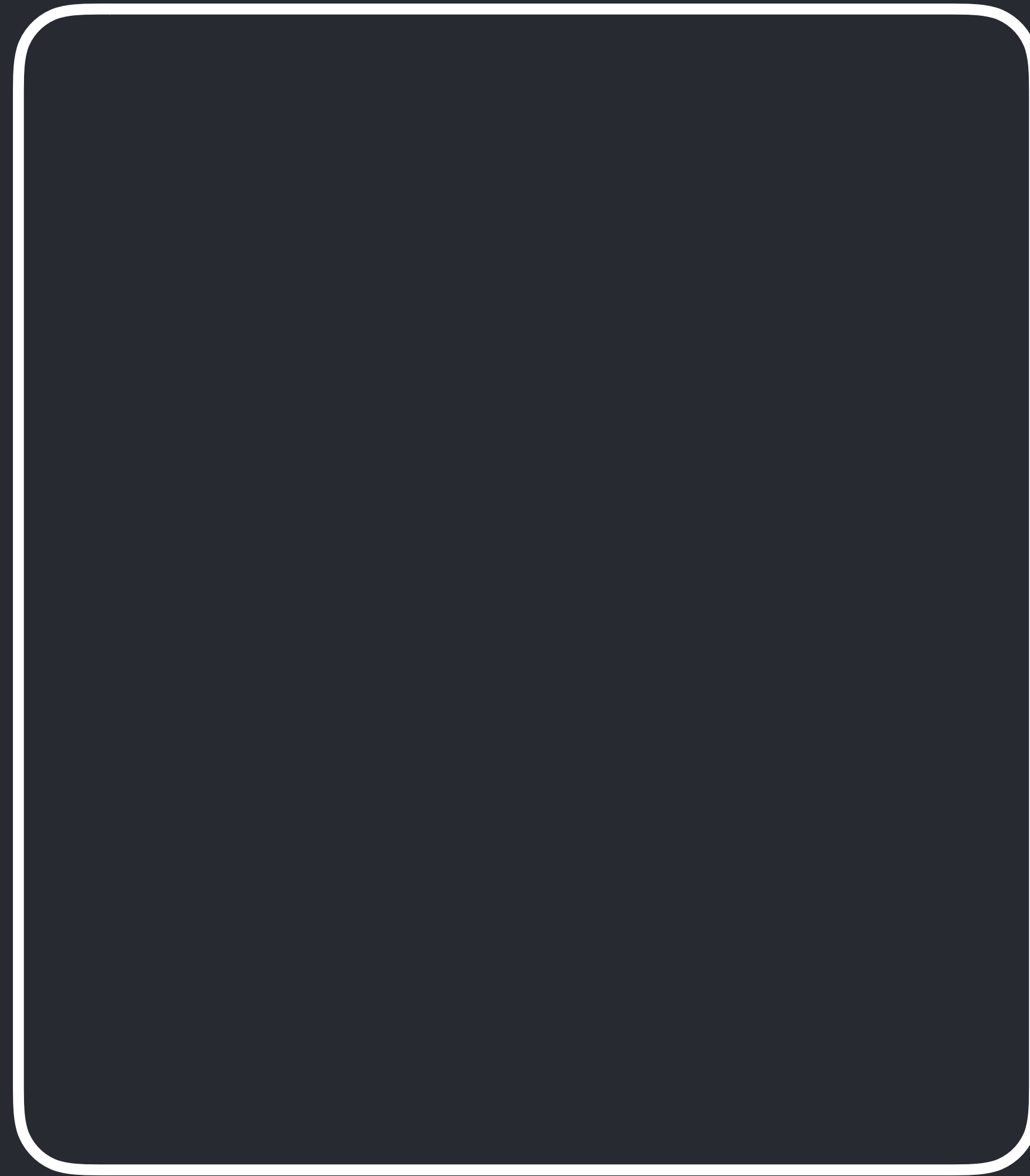


**AWARDS**

# LAUNCH DAY



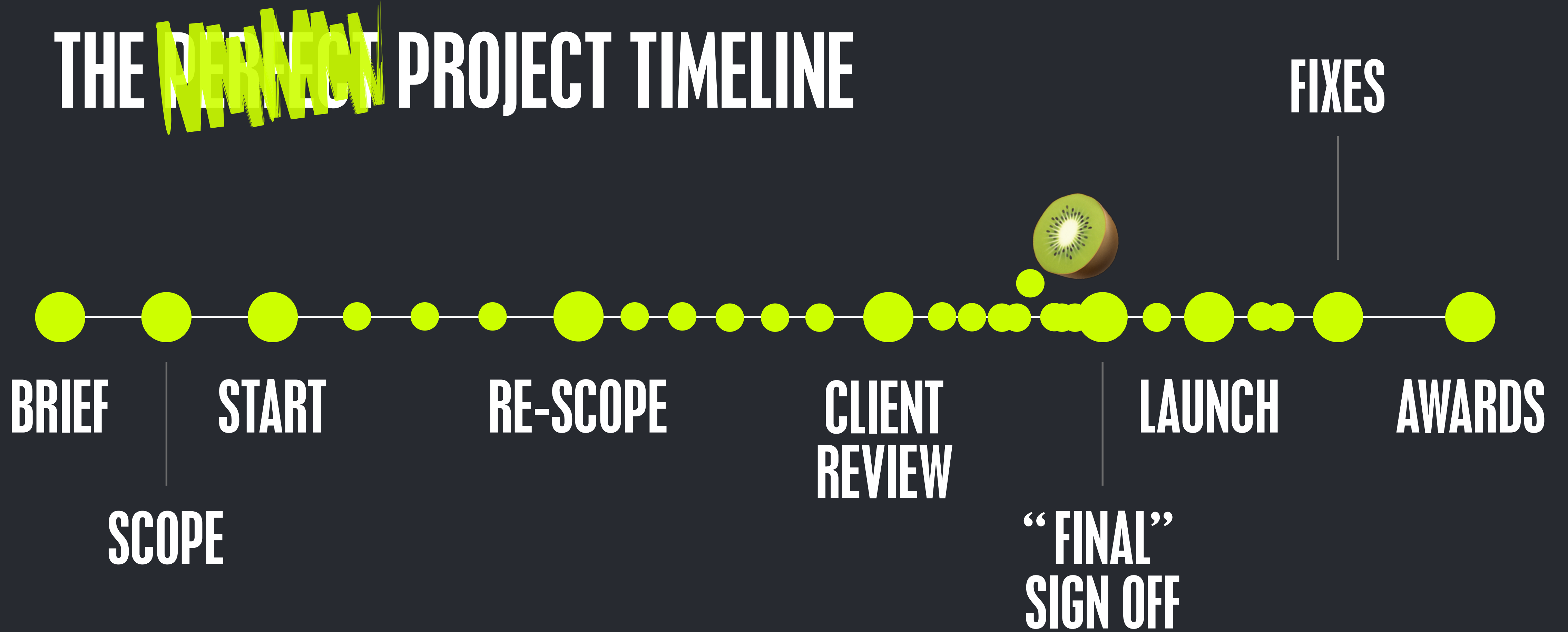








# THE ~~PERFECT~~ PROJECT TIMELINE

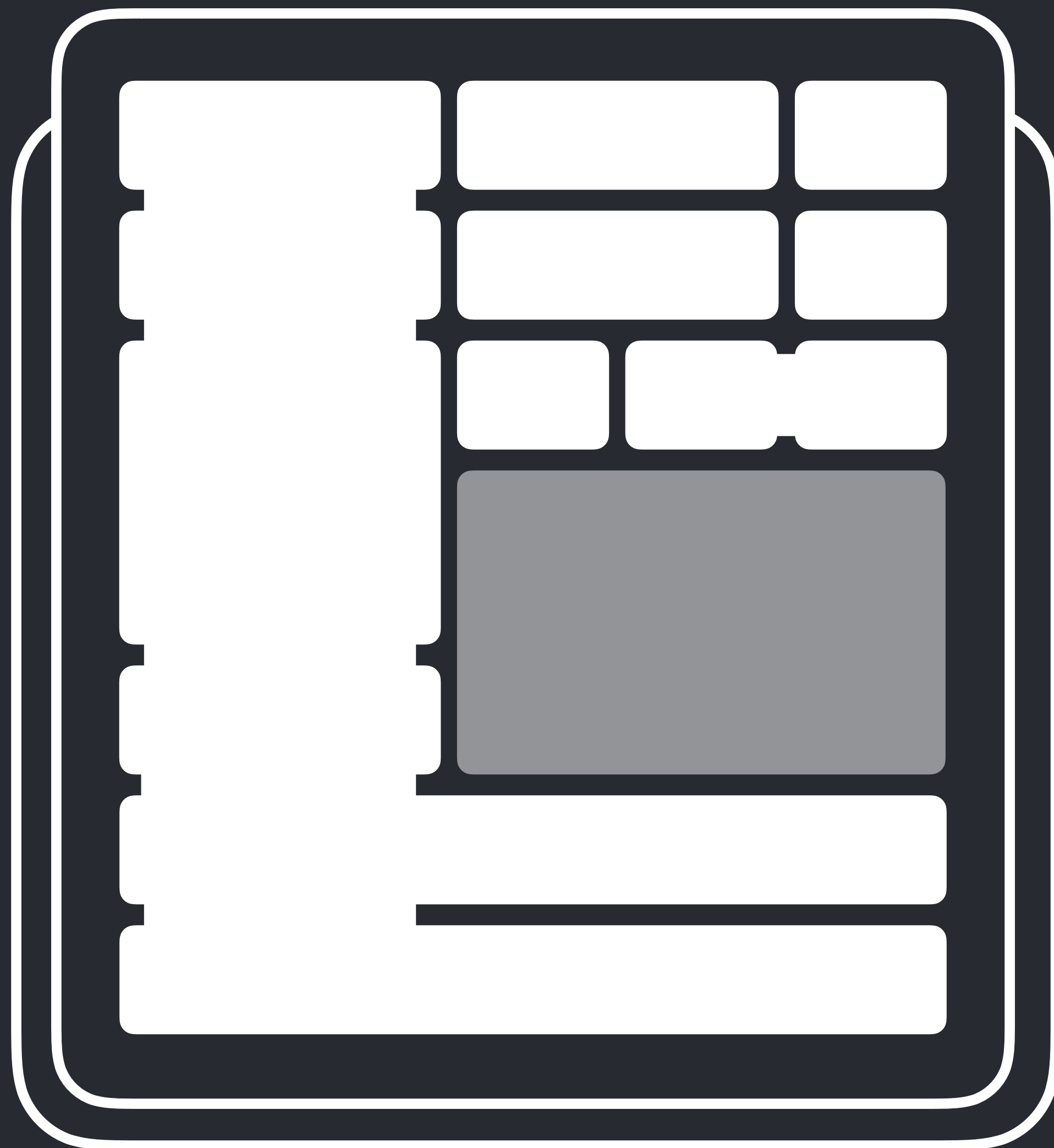




**crewmarket**



**SEEK TO ATTAIN  
LOOSE **COUPLING**  
AND TIGHT **COHESION****



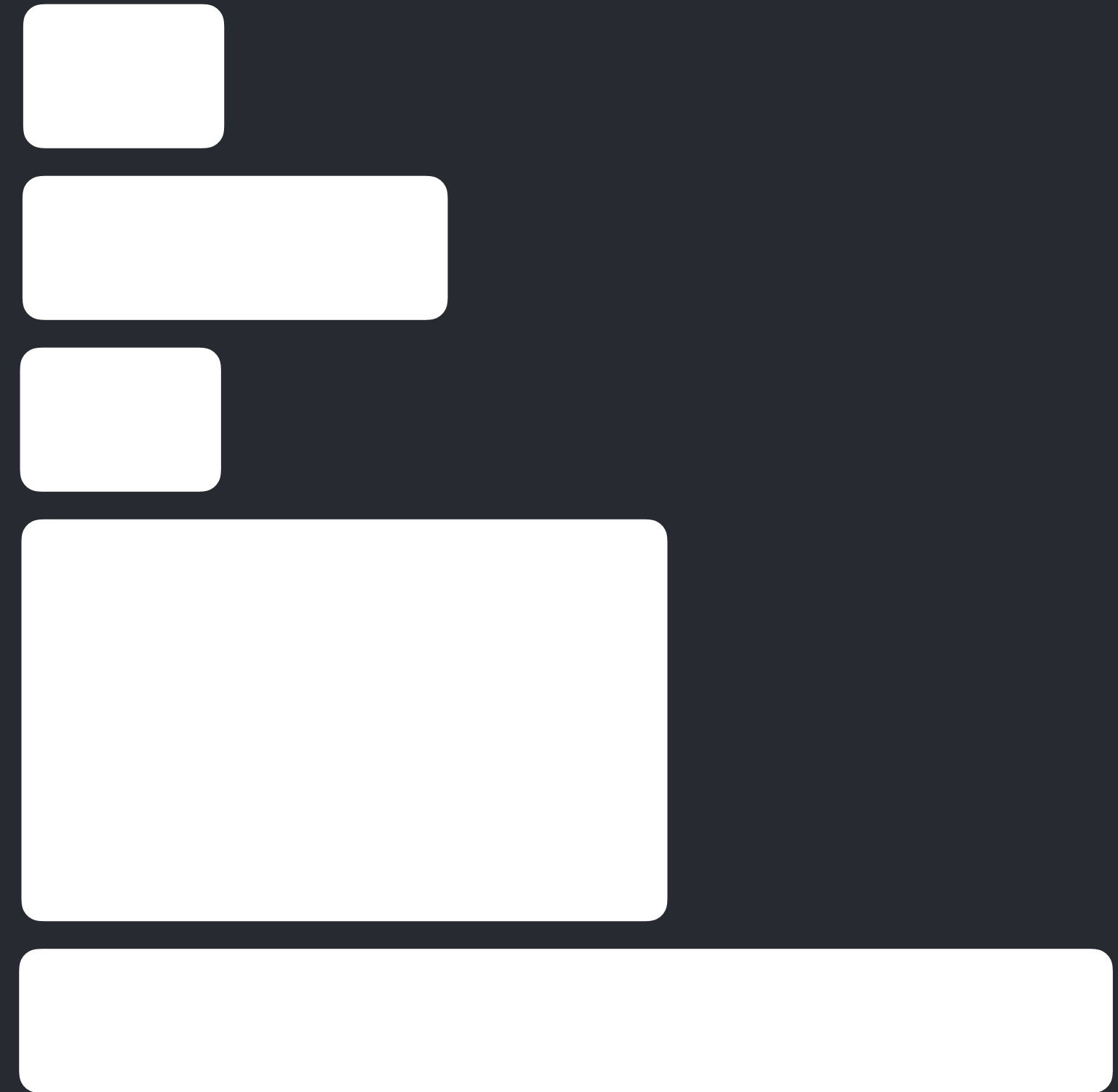
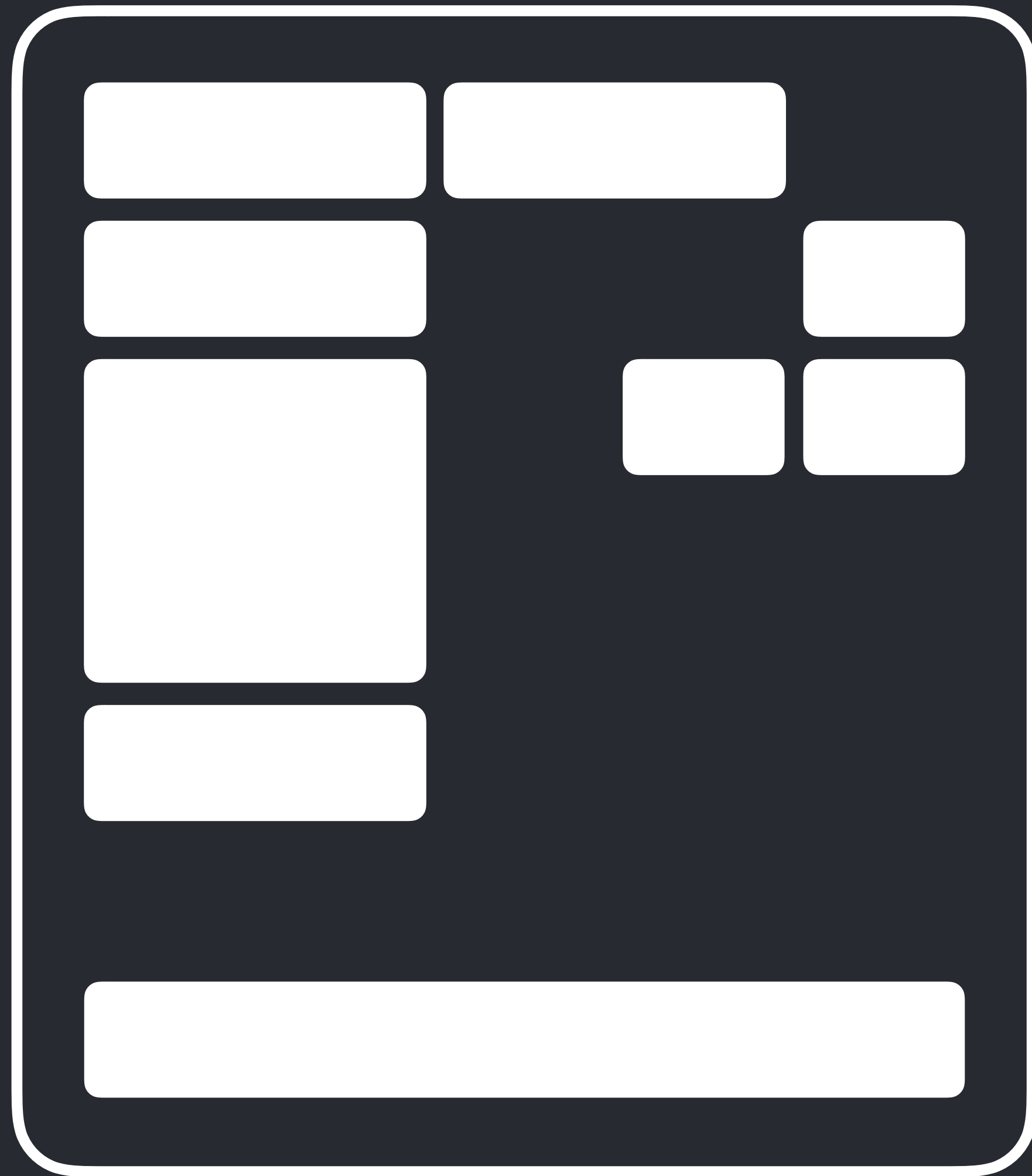




# A DIFFERENT APPROACH







**BY BREAKING THE  
MONOLITH APART,  
WE CAN ENJOY  
BOUGHT OR BUILT  
SPECIALIST SERVICES**

# ONE JOB

# YOU HAD ONE JOB

# FARRIE



# EVENTS, WEBHOOKS, MICROSERVICES AND APIS PROVIDE **GLUE**





# SERVICES



# BOUGHT SERVICES

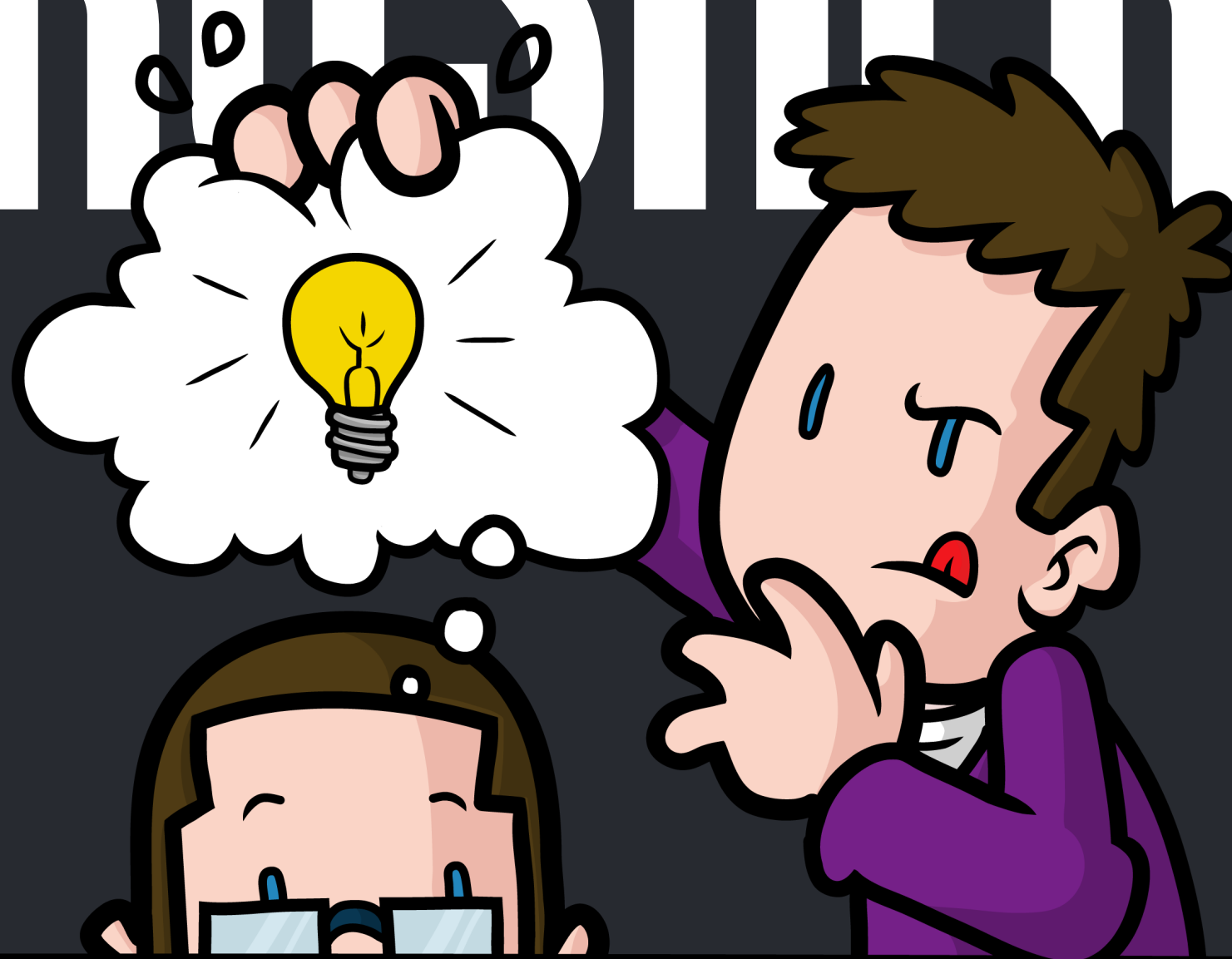
**CMS****CONTENTFUL  
SANITY  
GRAPHCMS****ASSETS****CLOUDINARY****COMMERCE****STRIPE  
SNIPCART****IDENTITY****AUTHO  
OAUTH**





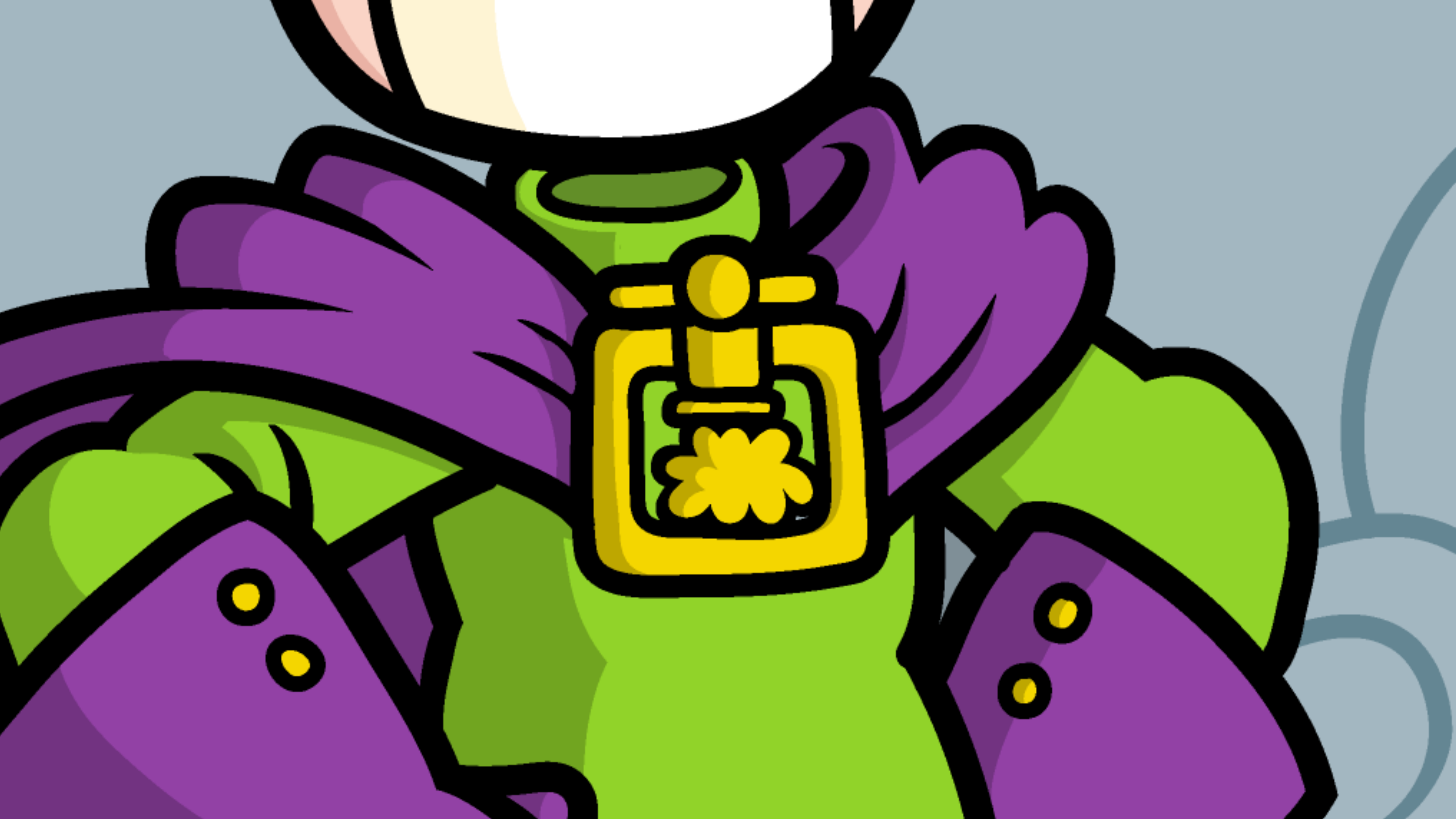
**BUT WHAT OF THE RISK?**

*the*  
**DREAM  
CRUISHER**









**VENDORS PROVIDING A  
SINGLE SERVICE  
DEPEND ON ITS SUCCESS  
MORE THAN YOU DO**

# TECHNICAL AND SERVICE LEVEL CONTRACTS





# BOUGHT SERVICES



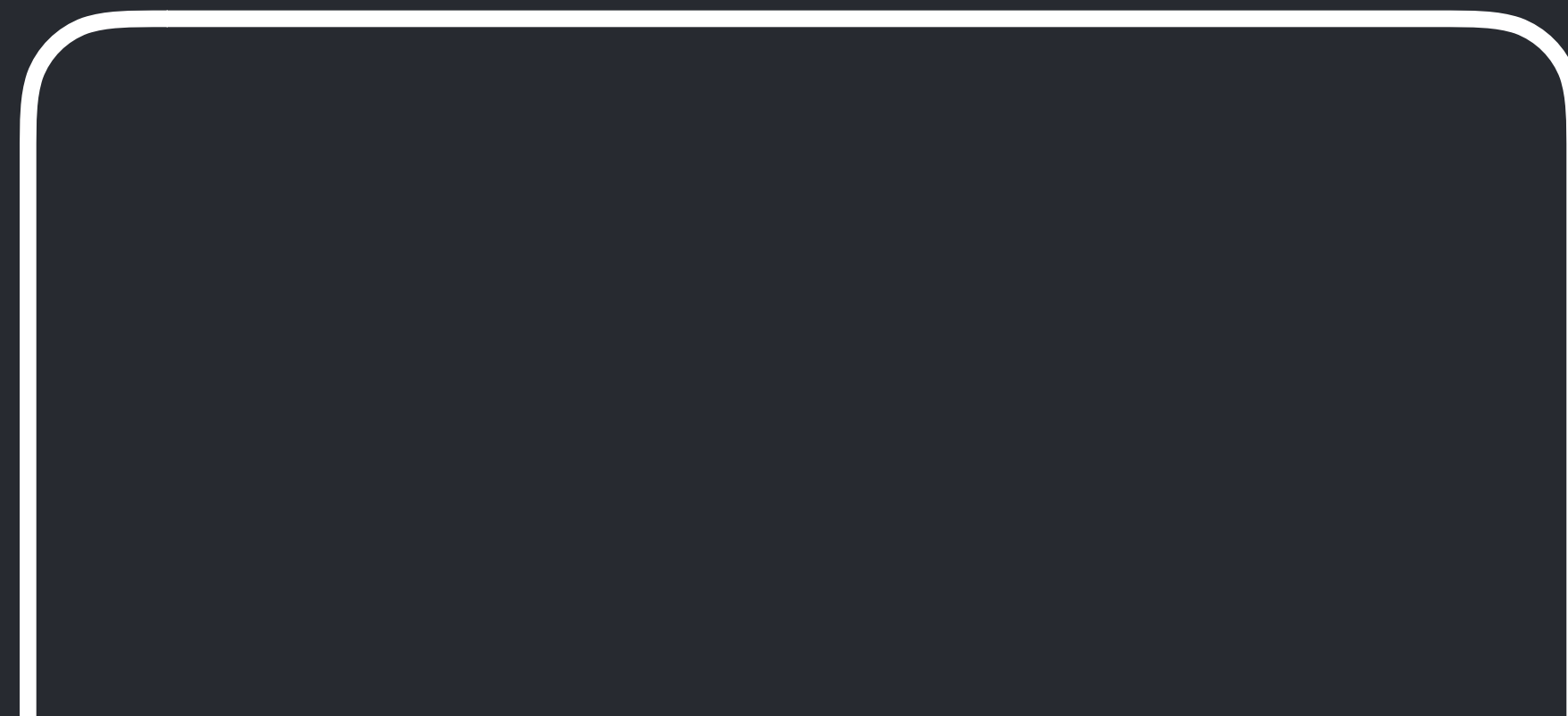
# BUILT SERVICES

**CMS**

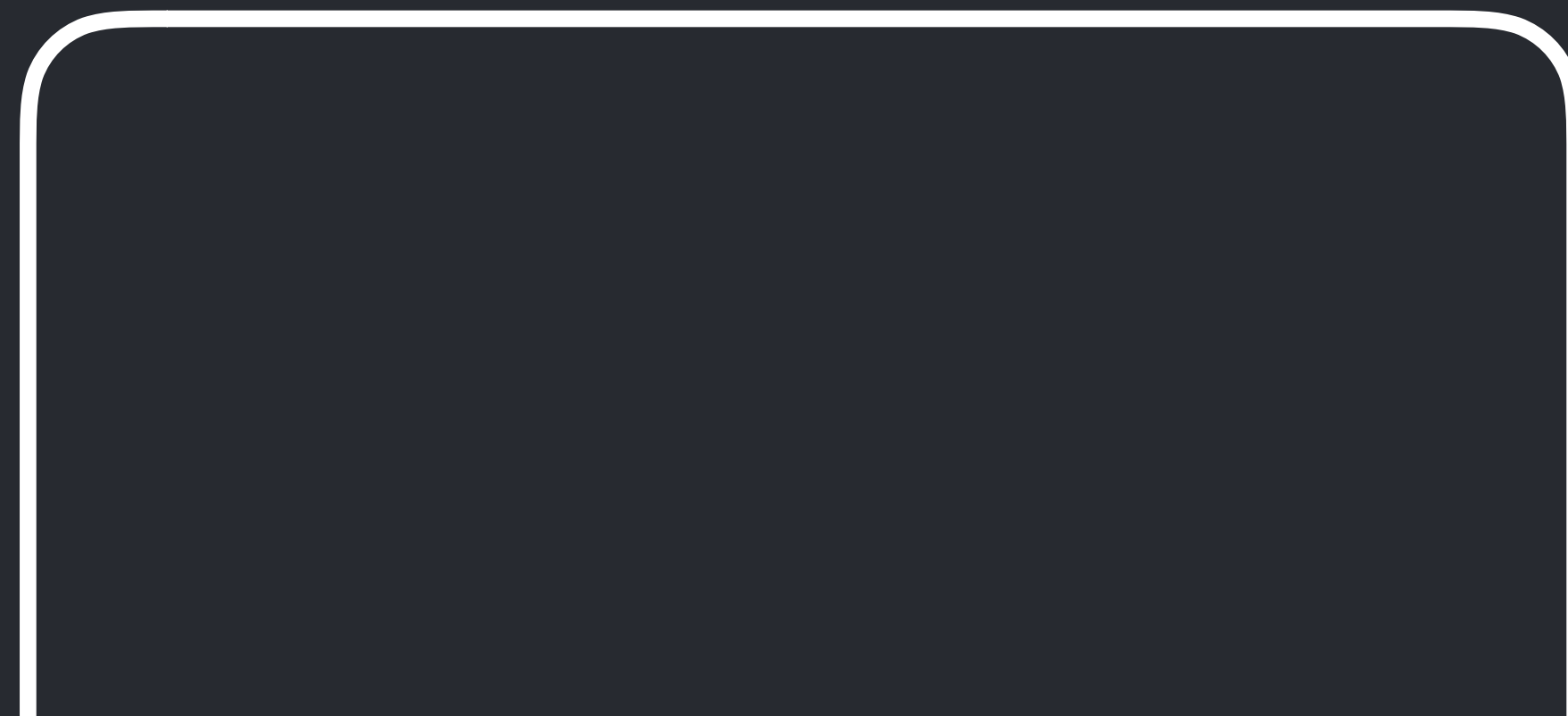
**DAMS**

**COMMERCE**

**IDENTITY**







**SMALLER SURFACES ARE  
EASIER TO REASON ABOUT,  
AND CREATE GREATER AGILITY**

**GREATER FOCUS PROVIDES  
A MORE OBVIOUS PATH TO MVP**





# A NOTE ABOUT MVP

**I WOULDN'T USE A  
MINIMUM VIABLE **PARACHUTE****

**A SPEAKER AT A CONFERENCE ONCE**

**I FUCKING WOULD**

**ME, IMAGINING A SITUATION WHEN I'D NEED A PARACHUTE**

**MVP IS NOT  
CHOOSING A  
WEAK PRODUCT  
OVER GOOD PRODUCT**



**MVP IS**  
**CHOOSING TO HAVE**  
**SOMETHING NOW**  
**AND SOMETHING BETTER LATER**





# SERVERLESS



# FUNCTIONS AS A SERVICE

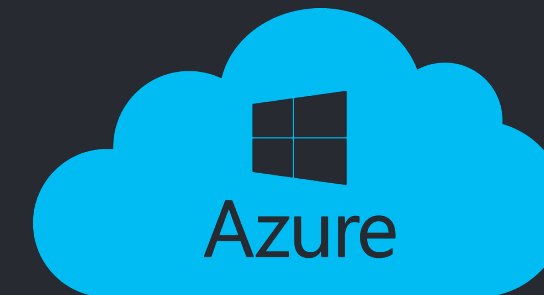


# FUNCTIONS AS A SERVICE **ENABLE** A MICROSERVICES ARCHITECTURE

**LOWERING THE OVERHEAD OF  
DEPLOYING / MAINTAINING /  
MANAGING / SECURING OUR CODE**

```
exports.handler = (event, context, callback) => {  
  
  callback(null, {  
    statusCode: 200,  
    body: 'Hello UpFront!'  
  })  
  
}
```

# SHIFT THE BURDEN



**SOFTWARE AND PATCHES**  
**OPERATING SYSTEM**  
**NETWORK**  
**PHYSICAL / VIRTUAL SCALING**





# WHAT DOES DEPLOYING SERVERLESS APIS LOOK LIKE?



# WHAT DOES DEPLOYING SERVERLESS APIS LOOK LIKE?

CREATE AN API / CREATE A UI / DEPLOY SOME CHANGES

philhawksworth / create-react-app-lambda-demo  
forked from netlify/create-react-app-lambda

Unwatch 2 Star 0 Fork 78

- Code
- Pull requests 0
- Projects 0
- Wiki
- Insights
- Settings

No description, website, or topics provided. [Edit](#)

[Manage topics](#)

16 commits 3 branches 0 releases 3 contributors

Branch: master New pull request Create new file Upload files Find File Clone or download

This branch is 16 commits ahead, 26 commits behind netlify:master. [Pull request](#) [Compare](#)

Phil Hawksworth include looks ups without branch Latest commit bbeffc87 on 9 Aug 2018

public	First commit	a year ago
src	include looks ups without branch	8 months ago
.gitignore	First commit	a year ago
README.md	Update README.md	8 months ago

# WEBHOOKS, TRIGGERS AND AUTOMATION



**BEHIND THE SCENES,  
NETLIFY IS USING AWS APIS  
TO CREATE OUR SERVERLESS...  
UM... APIS**

**BEHIND THE SCENES,  
NETLIFY IS USING AWS APIS  
TO CREATE OUR SERVERLESS...  
UM... APIS**





**THAT'S SOME  
CRAZY INCEPTION  
TYPE SHIT**

**— ANON**





# AUTOMATION

**VERY  
LOW  
FRICTION**





**Zach Leatherman**

@zachleat

Following

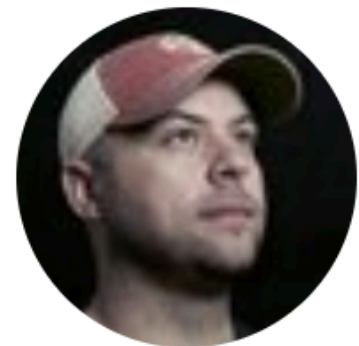


free side project idea: HTML-only static site generated clock that deploys a new version to [@netlify](#) every minute

8:54 PM - 19 Jul 2018

30 Likes





**Chris Coyier** 

@chriscoyier

Following



Replying to [@zachleat](#) [@hankchizljaw](#) [@Netlify](#)

Would be clever marketing for Netlify for sure. \_Builds so cheap you can set your clock by them.\_

(I'm still workshopping it.)

9:12 PM - 19 Jul 2018

7 Likes





**Phil Hawksworth**

@philhawksworth



Replying to [@zachleat](#) [@chriscoyier](#) and 2 others

Hold my beer.

10:25 PM - 19 Jul 2018

12 Likes





**Phil Hawksworth**

@philhawksworth



Replying to [@philhawksworth](#) [@zachleat](#) and 3 others

Only an idiot would make what you are suggesting.





**Phil Hawksworth**

@philhawksworth



Replying to @philhawksworth @zachleat and 3 others

Only an idiot would make what you are suggesting.

[setyourwatchby.netlify.com](https://setyourwatchby.netlify.com)

2:02 PM - 20 Jul 2018

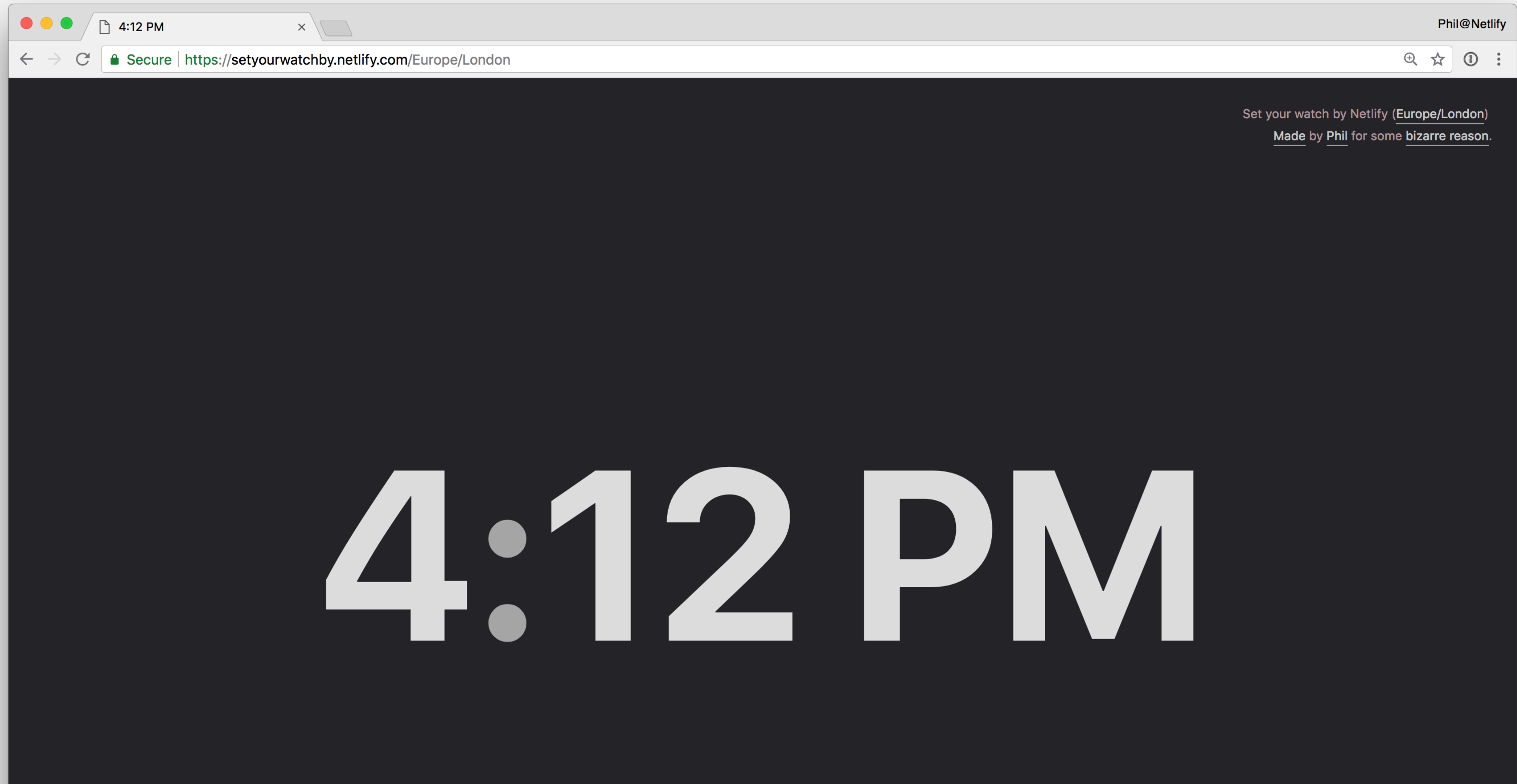
12 Retweets 41 Likes





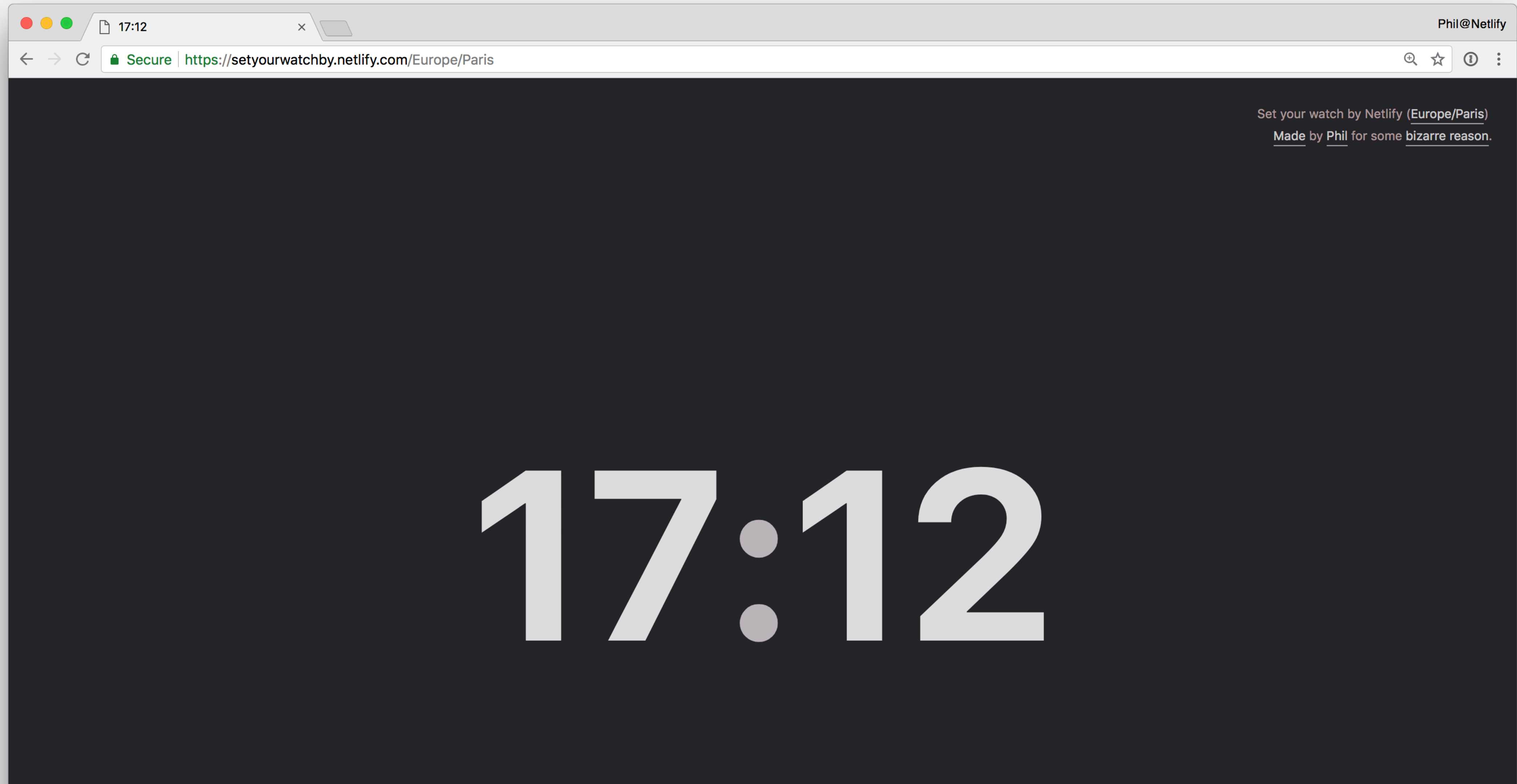
# FINDTHAT.AT/TIME

<https://setyourwatchby.netlify.com>



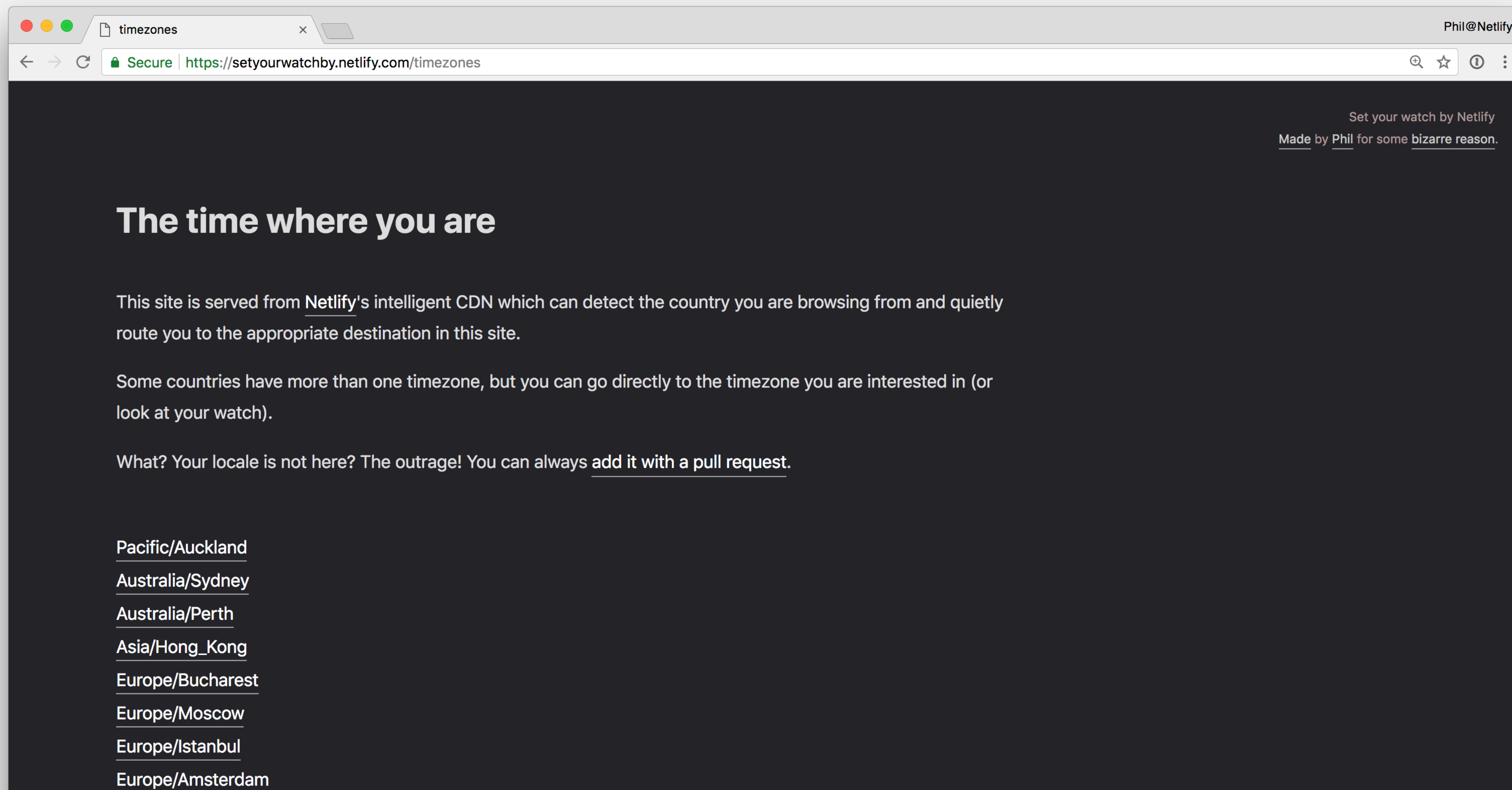
# FINDTHAT.AT/TIME

<https://setyourwatchby.netlify.com>



# FINDTHAT.AT/TIME

<https://setyourwatchby.netlify.com>



Phil@Netlify

Secure | <https://setyourwatchby.netlify.com/timezones>

Set your watch by Netlify  
Made by [Phil](#) for some [bizarre reason](#).

## The time where you are

This site is served from [Netlify](#)'s intelligent CDN which can detect the country you are browsing from and quietly route you to the appropriate destination in this site.

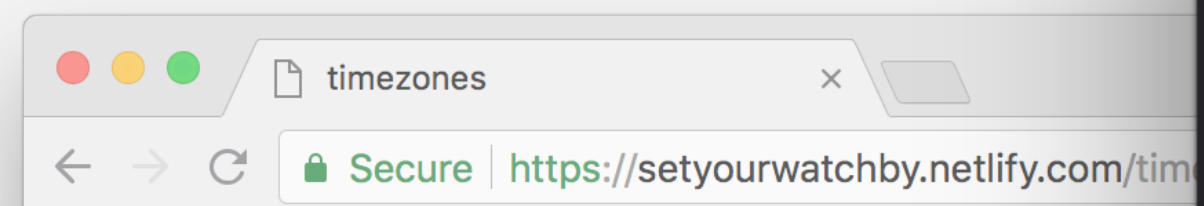
Some countries have more than one timezone, but you can go directly to the timezone you are interested in (or look at your watch).

What? Your locale is not here? The outrage! You can always [add it with a pull request](#).

- [Pacific/Auckland](#)
- [Australia/Sydney](#)
- [Australia/Perth](#)
- [Asia/Hong\\_Kong](#)
- [Europe/Bucharest](#)
- [Europe/Moscow](#)
- [Europe/Istanbul](#)
- [Europe/Amsterdam](#)

# FINDTHAT.AT/TIME

<https://setyourwatchby.netlify.com/timezones>



## The time where you

This site is served from [Netlify's](#) intelligent routing system which will route you to the appropriate destination based on your location.

Some countries have more than one time zone (e.g. Australia, look at your watch).

What? Your locale is not here? The output of the [timezones](#) endpoint will list the available time zones for your location.

[Pacific/Auckland](#)

[Australia/Sydney](#)

[Australia/Perth](#)

[Asia/Hong\\_Kong](#)

[Europe/Bucharest](#)

[Europe/Moscow](#)

[Europe/Istanbul](#)

[Europe/Amsterdam](#)

[Pacific/Auckland](#)

[Australia/Sydney](#)

[Australia/Perth](#)

[Asia/Hong\\_Kong](#)

[Europe/Bucharest](#)

[Europe/Moscow](#)

[Europe/Istanbul](#)

[Europe/Amsterdam](#)

[Europe/Paris](#)

[Europe/London](#)

[America/New\\_York](#)

[America/Chicago](#)

[America/Denver](#)

[America/Los\\_Angeles](#)

# WEBTASK.IO

The screenshot shows a web browser window with the title "Webtask Editor" and the URL "https://webtask.io/make". The page features a blue header with the text "Would you like the webtask.io experience in your own SaaS? Try Extend". Below the header is the "webtask" logo and a "Documentation" link. The main content area is split into two panels. The left panel, titled "Scheduler", contains a search icon, a close button, and a "Refresh" button. It has a "Remove schedule" button and a checked checkbox for "Write an advanced schedule". Below this are five input fields for scheduling: Minute (\*/1), Hour (\*), Day (\*), Month (\*), and Weekday (\*). A large blue "Update schedule" button is at the bottom of this panel. The right panel, titled "Netlify-HTML-time-scheduler", contains a code editor with a blue "+" button on the left. The code in the editor is as follows:

```
1 var request = require('request');
2
3 module.exports = function(cb) {
4   request({
5     method: 'POST',
6     url: 'https://api.netlify.com/build_hooks/5b51210902ed836d8a7073c4
7   });
8   cb(null, { msg: 'done '});
9 };
10
```

At the bottom right of the page, it says "Powered by Extend".



# WEBTASK.IO

The screenshot shows a web browser window with the URL `https://webtask.io/make`. The page features a purple header with the text "Would you like the webtask.io experience in your own SaaS? Try Extend". Below this is the "webtask" logo and a "Documentation" link. A modal window is open, displaying the following information:

- Update schedule** (button)
- Stats**
- Run count: **226494** Error count: **32**
- Completed seconds ago
- View last run** (button)

The background interface includes a search icon, a "Schedule" section with a "Refresh" button, a "Write" checkbox, a cron expression input field containing `*/*` with a "Minute" label below it, and a "Stats" section with a "Run count" label. At the bottom right, it says "Powered by Extend".



# EVENTS & WEBHOOKS

# **WEBHOOKS** GIVE US A WEB-WIDE API

# WEBHOOKS ARE **URLS**

URLS FTW





**AITCH TEE TEE PEE  
DOUBLE MEH**

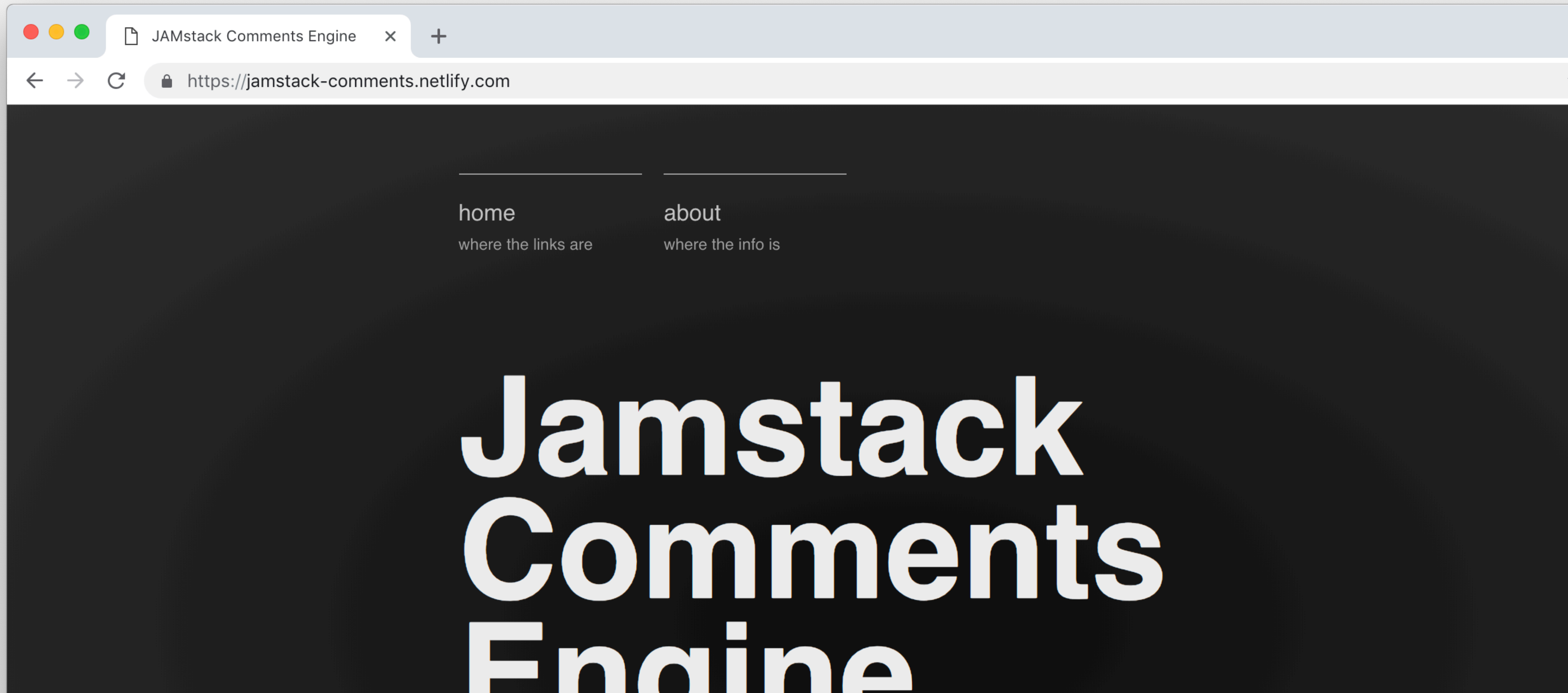
**ALEX SEXTON**

http://foobar.com

http://foobar.com

# FINDTHAT.AT/COMMENTS

https://jamstack-comments.netlify.com





**HOSTING**

**AUTOMATED BUILD**

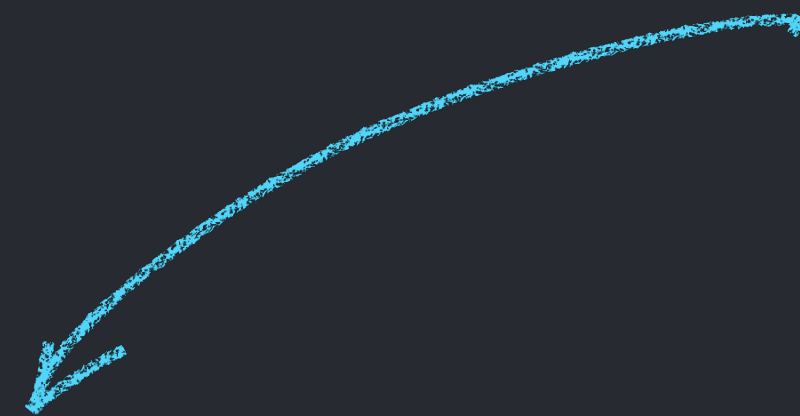
**FORM API**



**NOTIFY**

**MOVE**





**HOSTING**

**AUTOMATED BUILD**

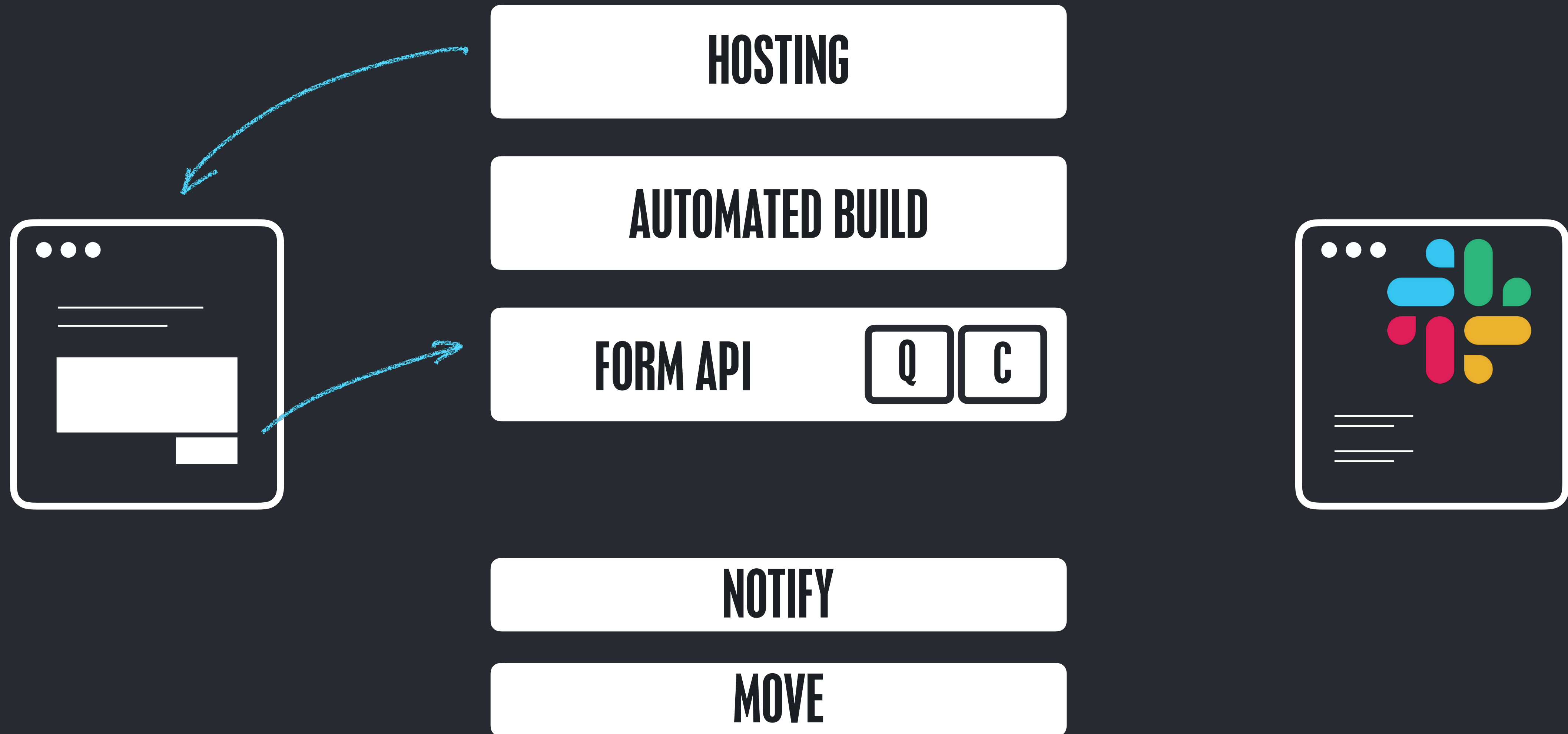
**FORM API**

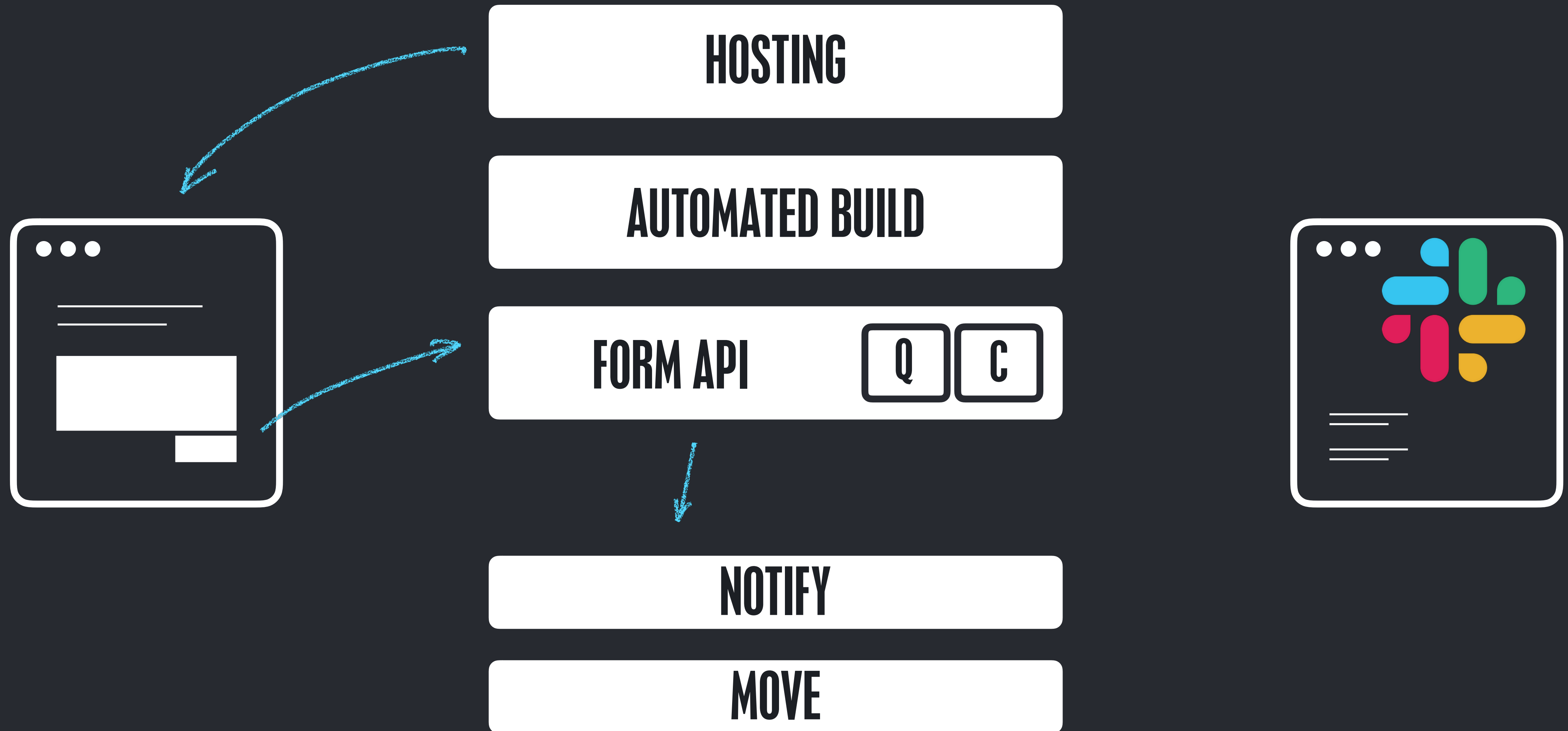


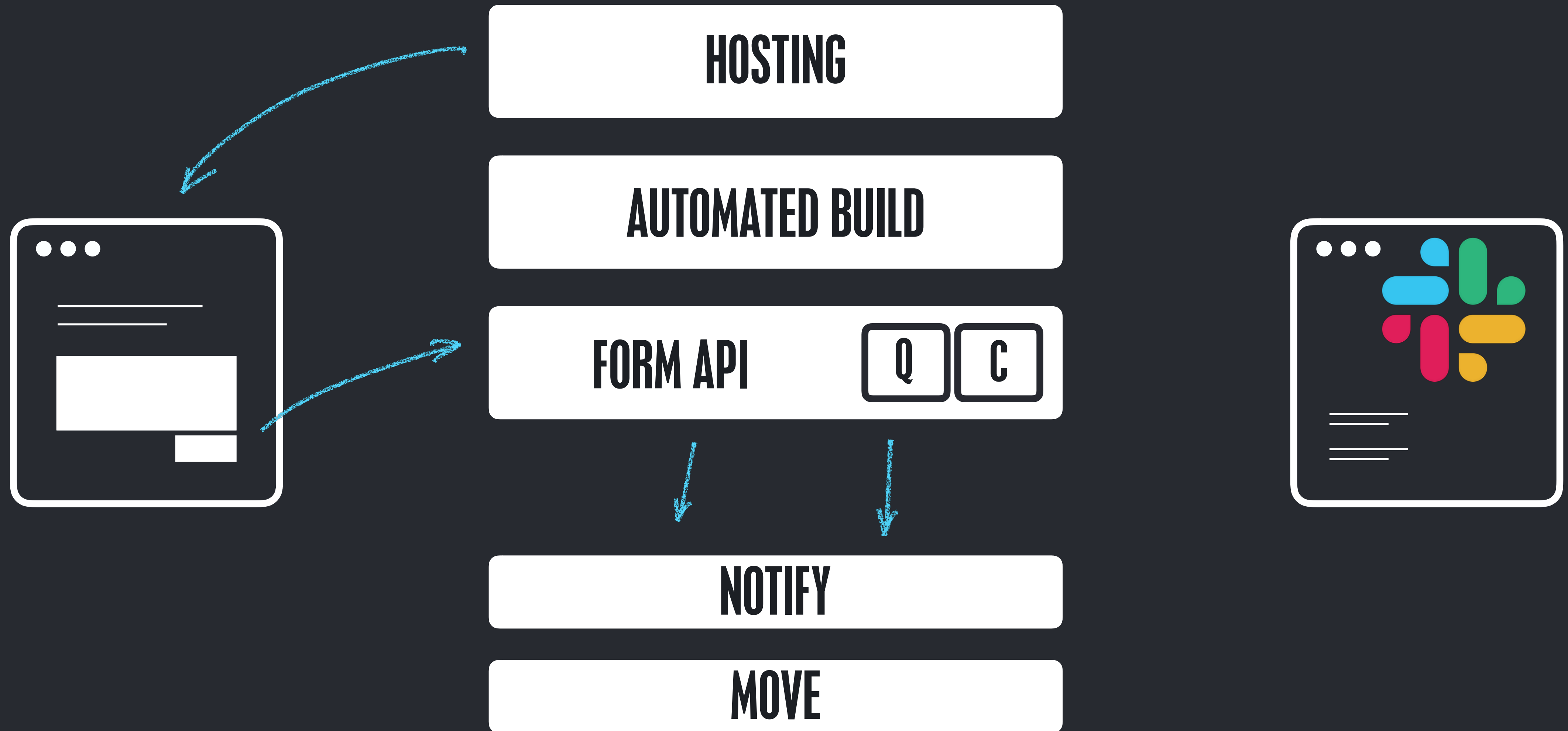
**NOTIFY**

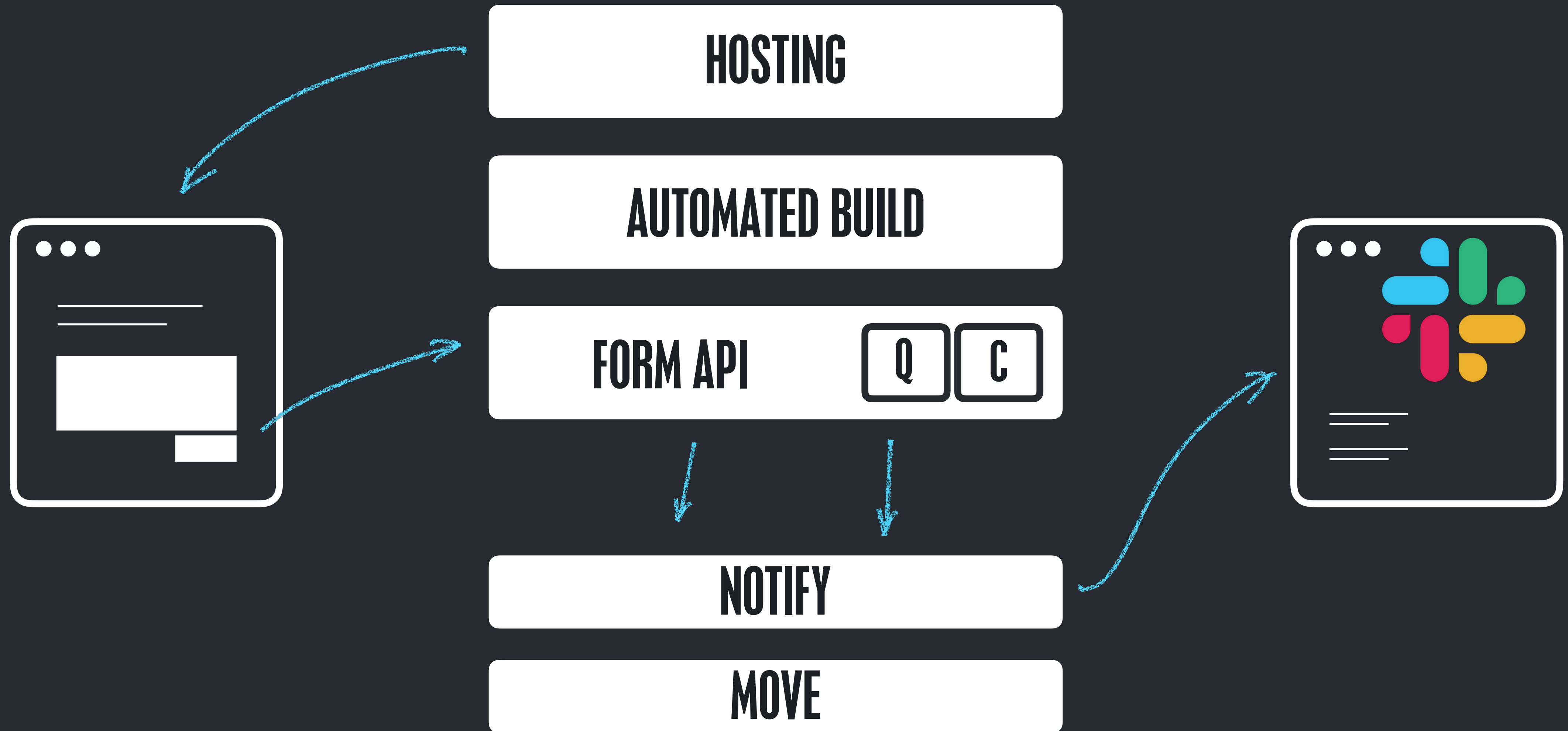
**MOVE**



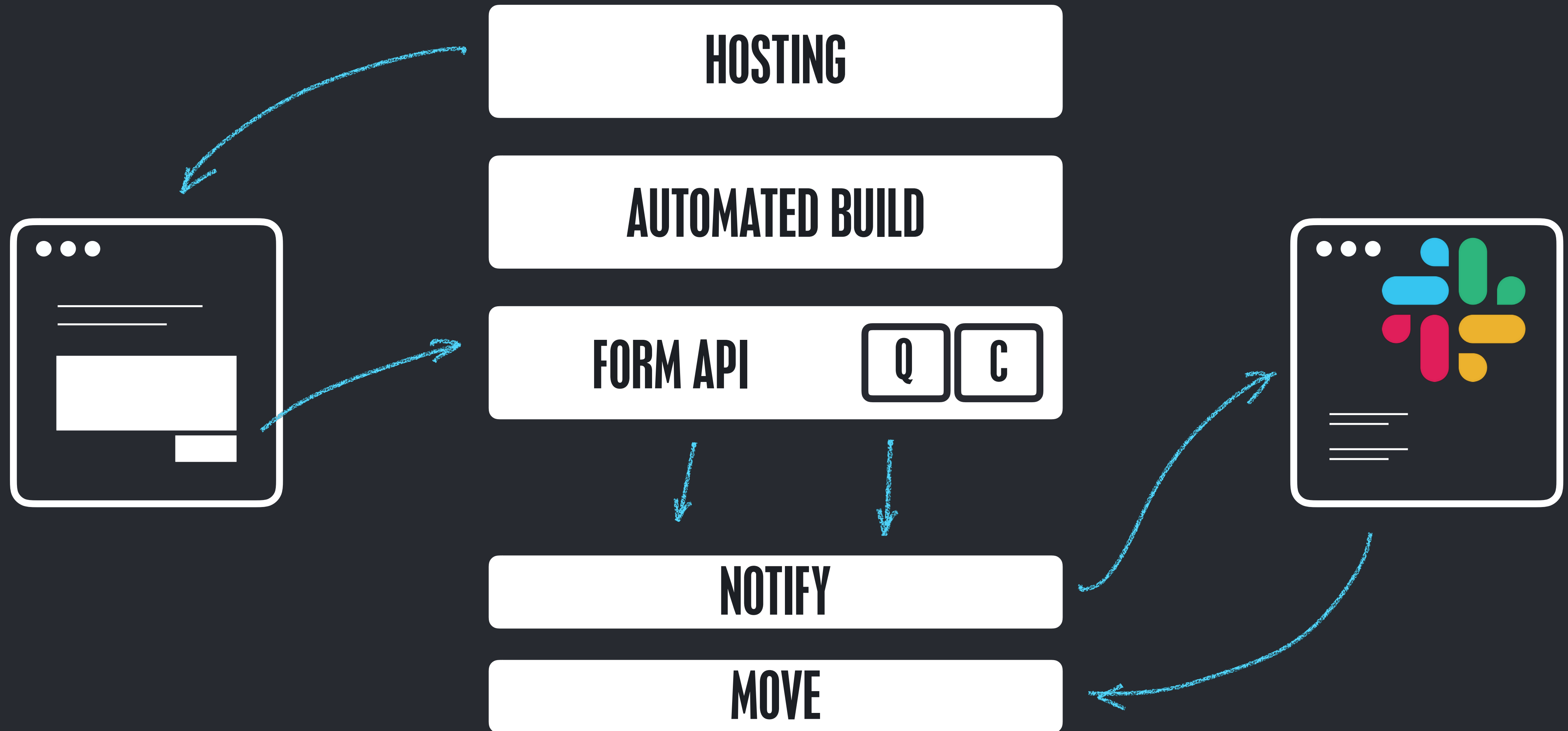


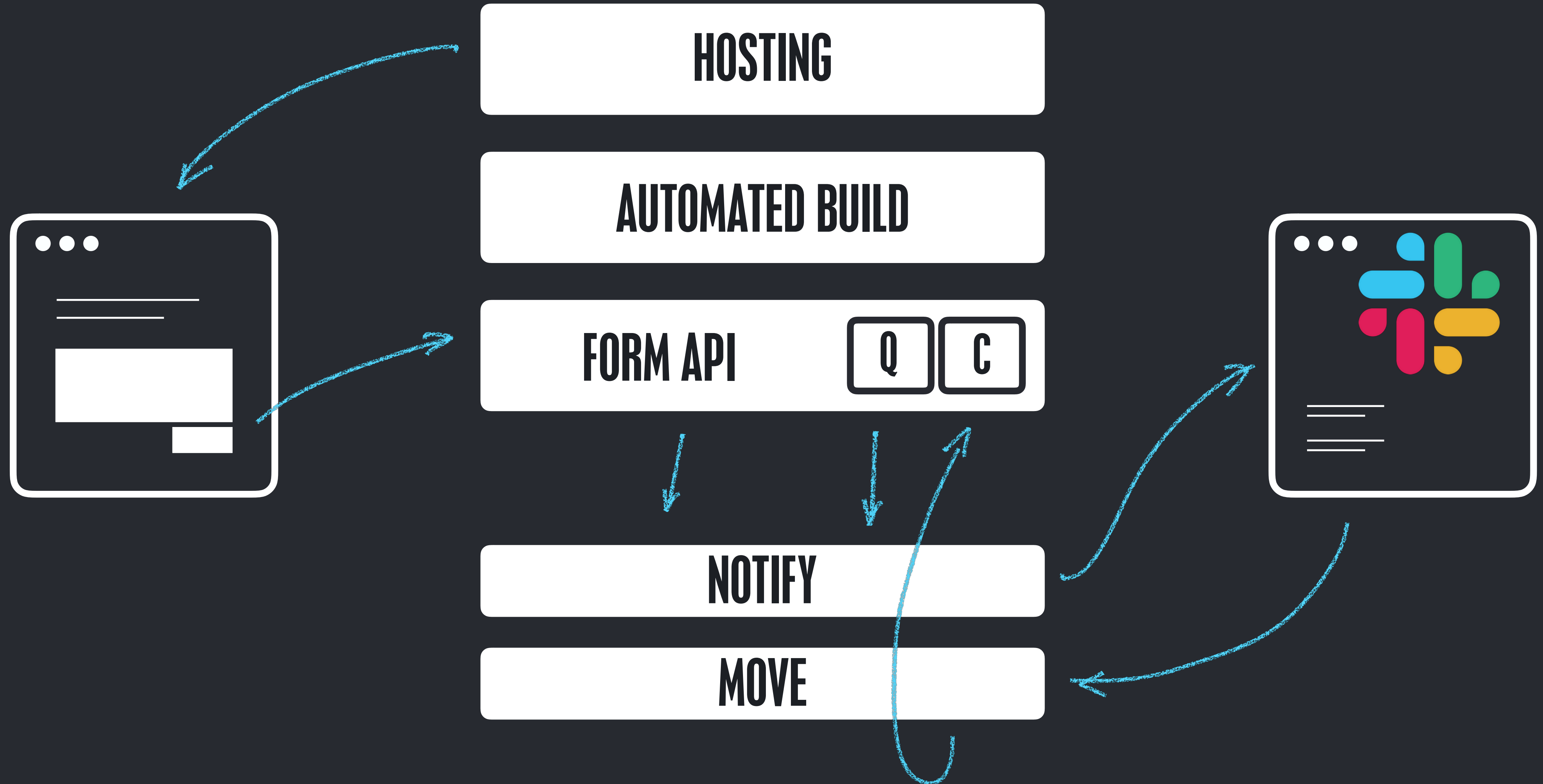


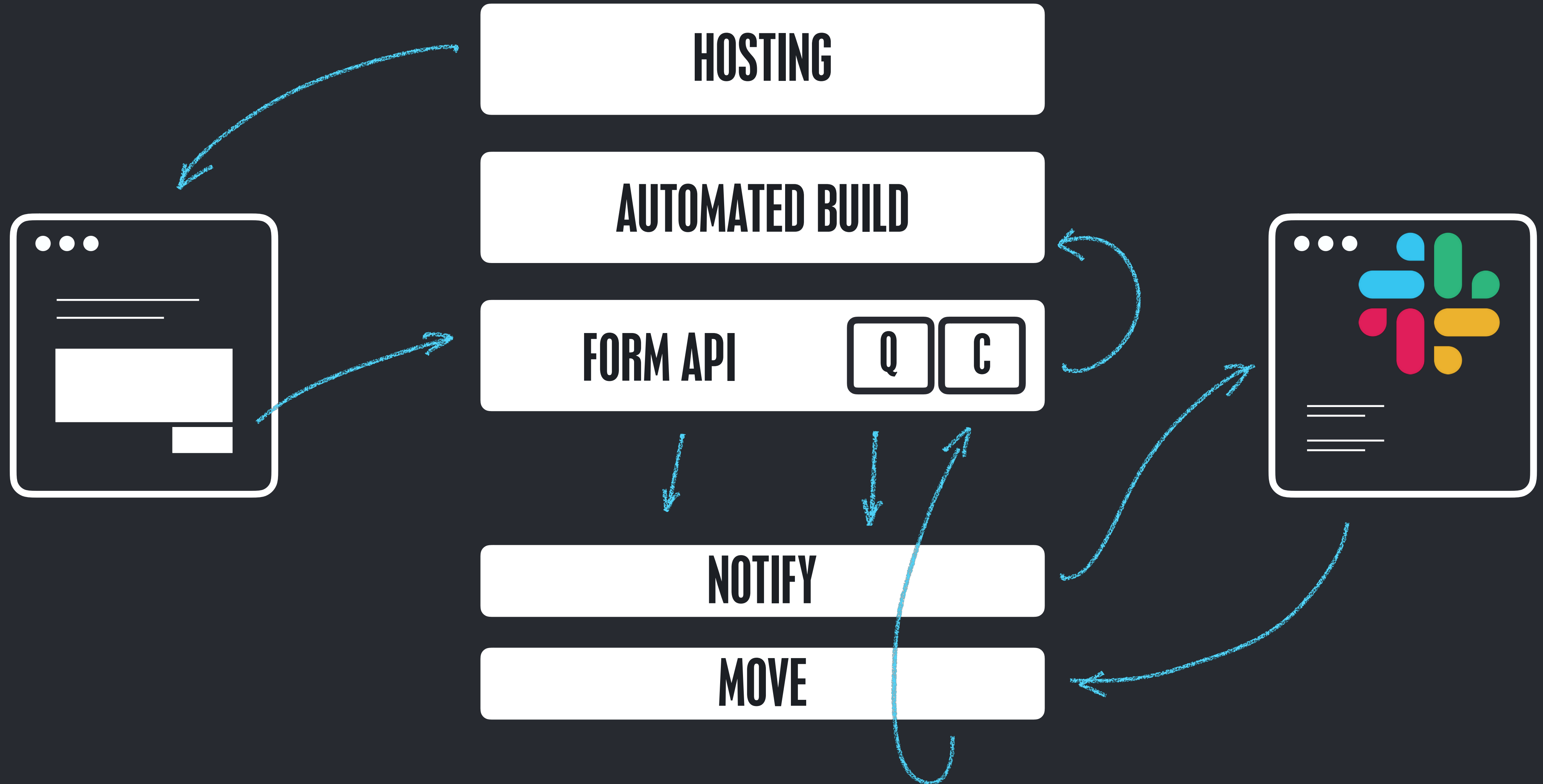


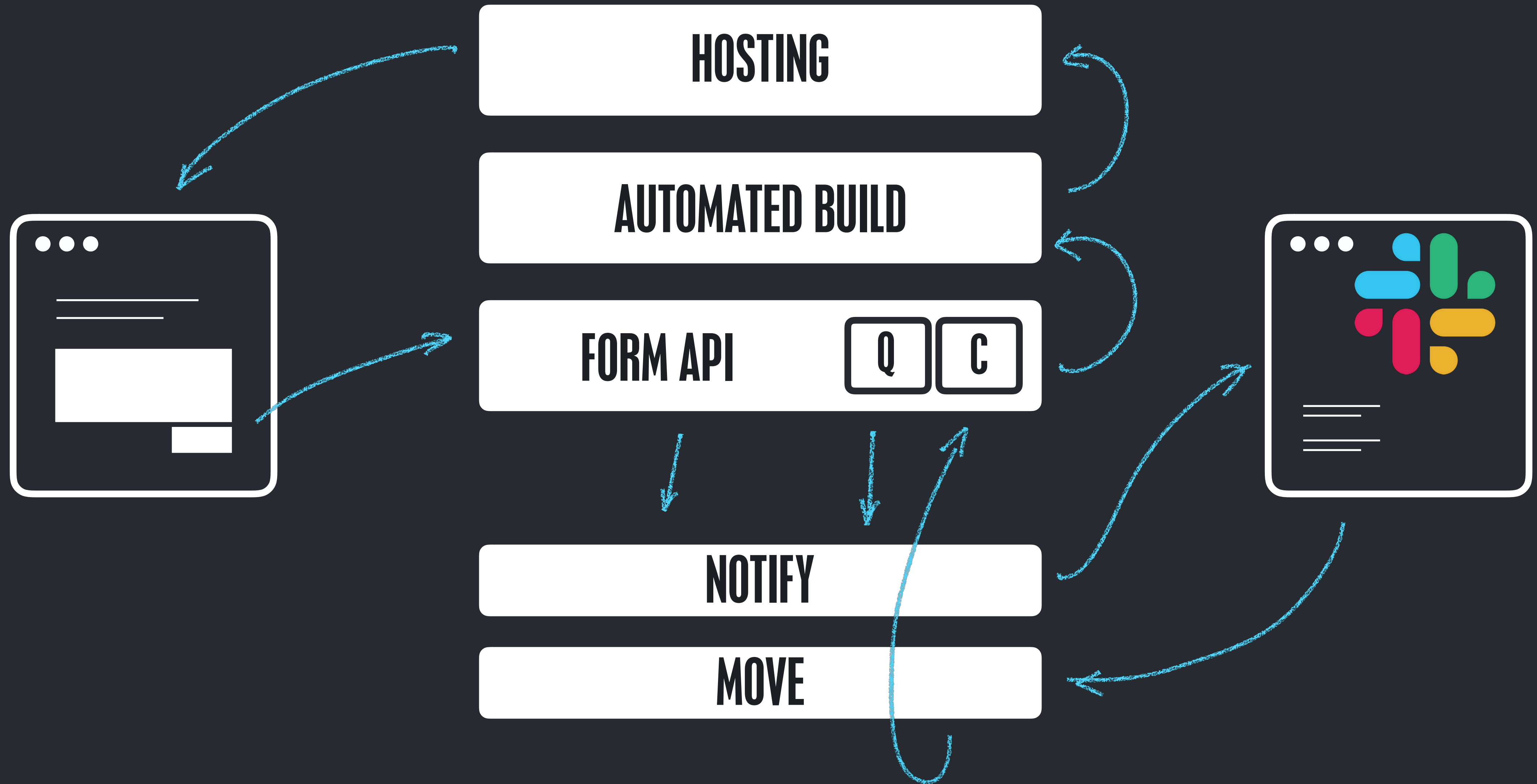


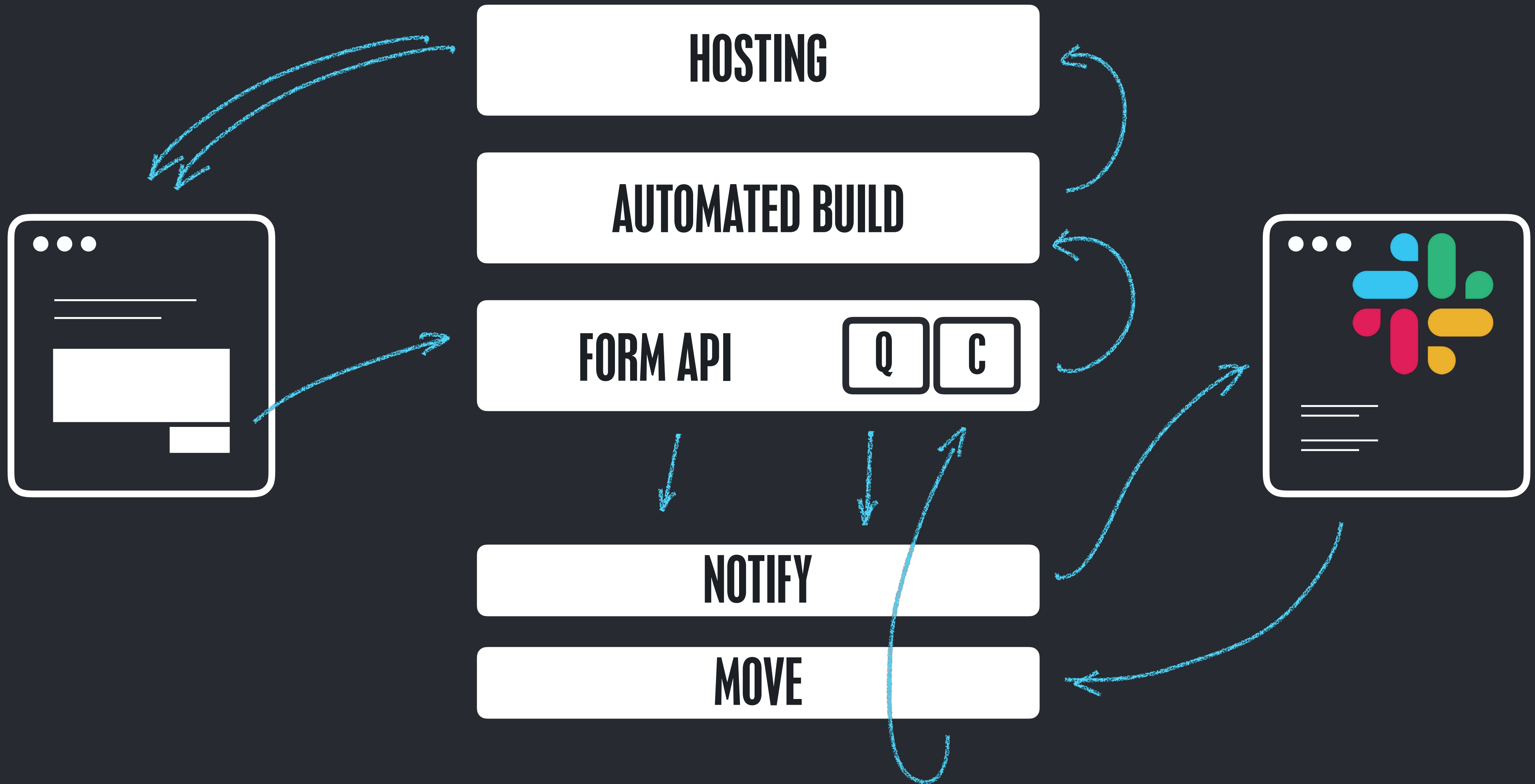








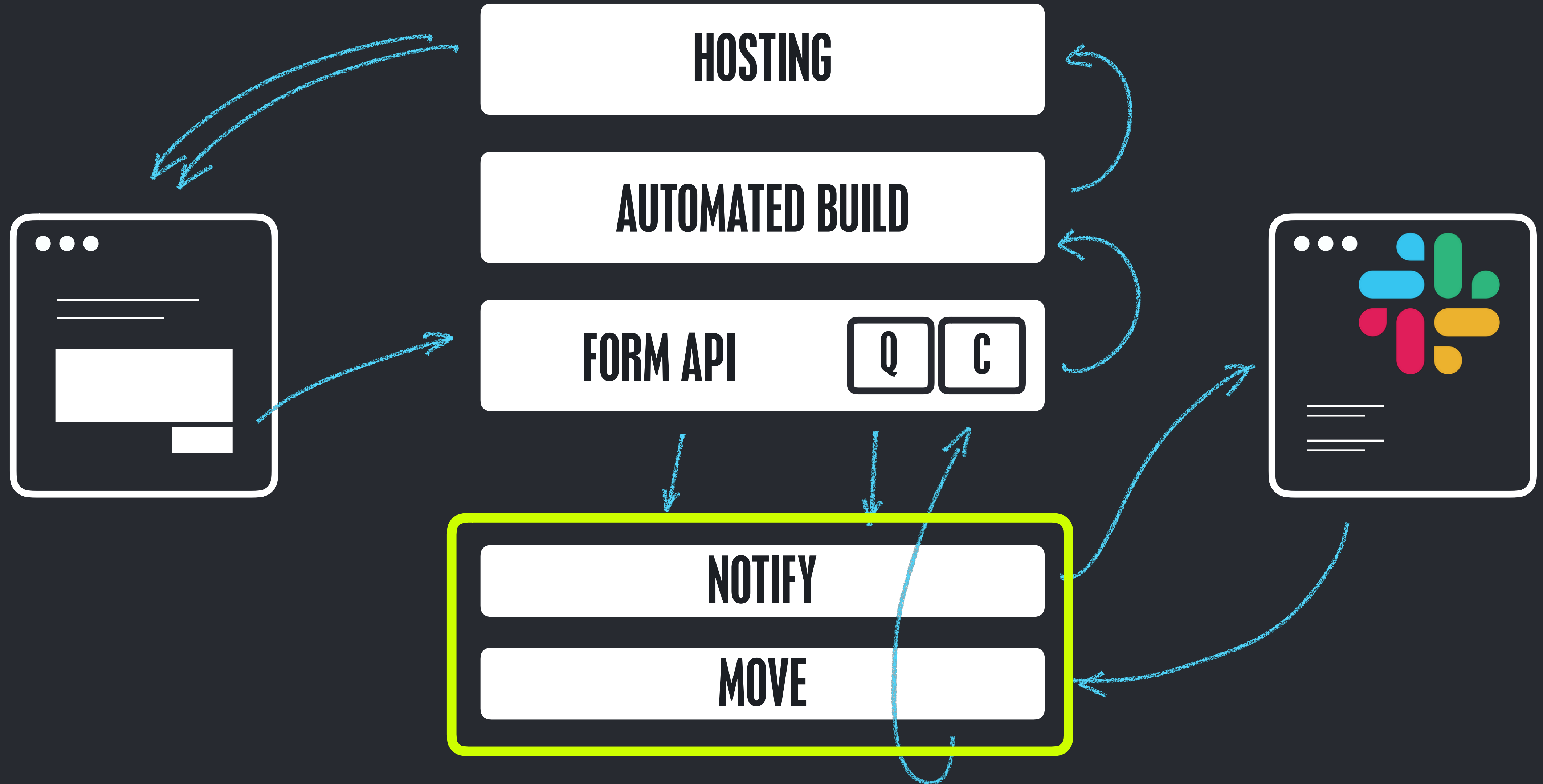






**ARGGGGHHH!  
SO MANY  
MOVING PARTS**

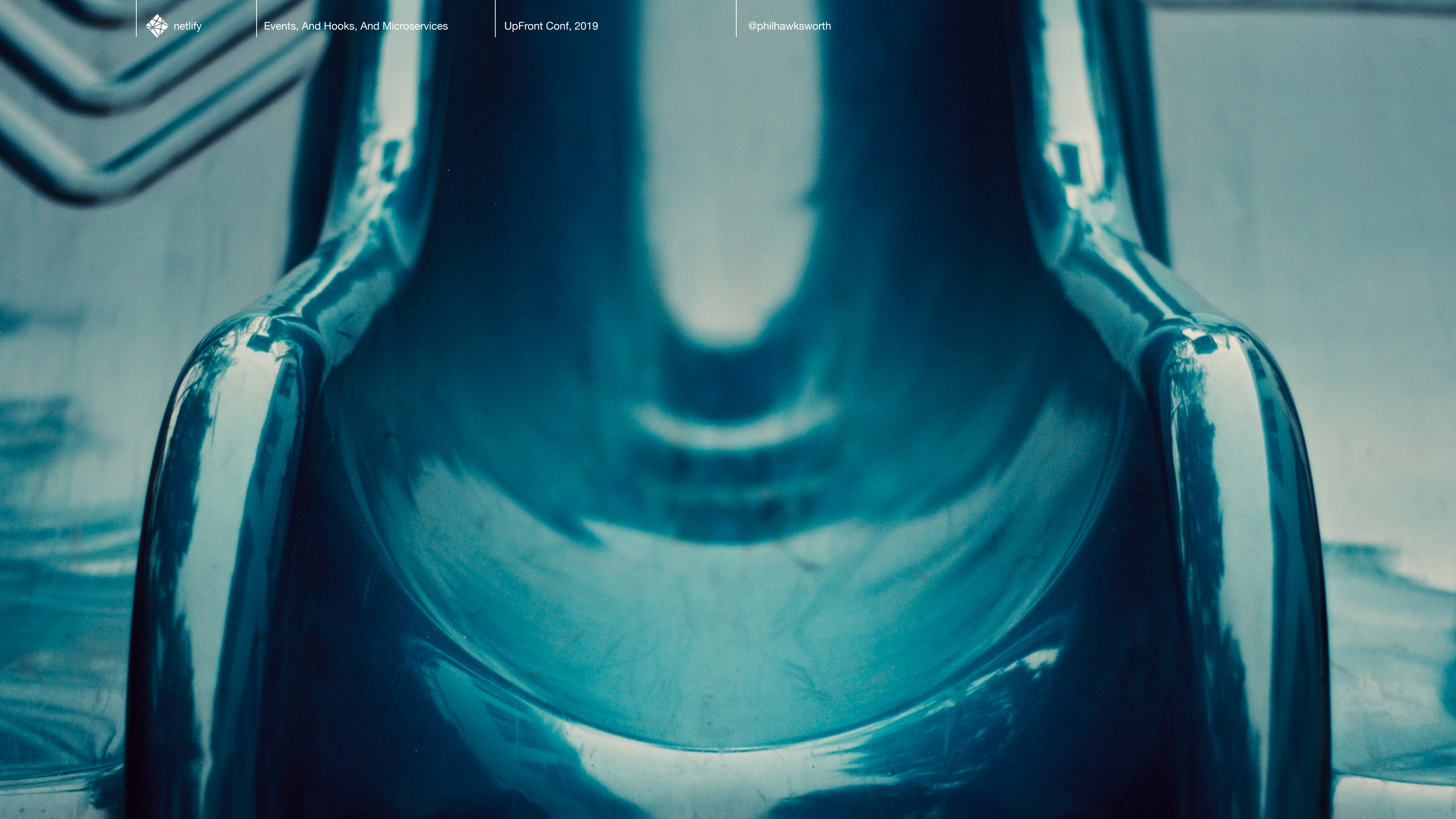
















SO...



**WITH MICROSERVICES AND APIS,  
WE HAVE A VAST ARRAY OF  
BUILDING BLOCKS**

**WITH WEBHOOKS  
WE HAVE LIMITLESS OPPORTUNITIES  
TO **COMBINE** THESE BUILDING BLOCKS**

**WITH EVENTS AND AUTOMATION  
WE CAN HAVE NEW LEVELS OF  
CONFIDENCE AND AGILITY**

**WE HAVE MORE POWER  
THAN EVER BEFORE**



**MAKE AWESOME STUFF**

# SERVERLESS EXAMPLES AND TUTORIALS

[FUNCTIONS.NETLIFY.COM](https://functions.netlify.com)

# TOOLS, SERVICES, VENDORS

[THEPOWEROFSERVERLESS.INFO](https://thepowerofserverless.info)

# COMMENT ENGINE

[JAMSTACK-COMMENTS.NETLIFY.COM](https://jamstack-comments.netlify.com)

# ABOUT SETYOURWATCH

[NETLIFY.COM/BLOG/2018/08/02/EXPLORING-THE-POTENTIAL-OF-FRICTION-FREE-DEPLOYMENTS](https://netlify.com/blog/2018/08/02/exploring-the-potential-of-friction-free-deployments)

**FINDTHAT.AT/SLIDES**

**TWITTER.COM/PHILHAWKSWORTH**

**THANK YOU**

**PHIL HAWKSWORTH**

