NEXT WAVE INFRASTRUCTURE
DOING FAR MORE WITH MUCH LESS

PHIL HAWKSWORTH
HELLO
MAKING THINGS
STATIC SITES
GO ALL HOLLYWOOD
FRONTEERS, AMSTERDAM, 2015

@PHILHAWKSWORTH

I CAN SMELL YOUR CMS
THE GOAL FOR THIS TALK
TIME TO SEXY IT UP
NEXT WAVE INFRASTRUCTURE
DOING FAR MORE WITH MUCH LESS

PHIL HAWKSWORTH
NEXT WAVE INFRASTRUCTURE
DOING FAR MORE WITH MUCH LESS

PHIL HAWKSWORTH
EXOTIC OR NEW
WE LEARN A LOT AT CONFERENCES
CONFINING THESE LEARNINGS TO OUR LOCAL ENVIRONMENTS IS A WASTE
LET’S MAKE SURE THE GOOD STUFF REACHES YOUR USERS
GREAT...
HALF AN HOUR OF SLIDES
ABOUT PROCESS
ALL OF YOU
FOR THE NEXT 30 MINUTES OR SO

/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES
WHERE DOES IT HURT?
PROJECTS USUALLY INVOLVE
CLIENTS / DEADLINES / COMPLEXITY
SLEEPLESS NIGHTS
THE PERFECT PROJECT TIMELINE

BRIEF

START

RE-SCOPE

CLIENT REVIEW

"FINAL" SIGN OFF

FIXES

LAUNCH

AWARDS
LAUNCH DAY
NEWSFLASH

PROJECTS CAN BE HARD
PROJECTS USUALLY INVOLVE LEARNING
PROJECTS USUALLY INVOLVE CHANGE
INFRASTRUCTURE
OUR EVOLVING APPROACH TO INFRASTRUCTURE

ON SITE HARDWARE
SOME RACK SPACE
VIRTUAL SERVER
SOFTWARE AAS
FUNCTIONS AAS

(not Rackspace)
NEW DEPLOYMENT

CONVENTIONS
APPROACH
MINDSET
THIS IS WHERE IT HURTS

MANAGING CHANGE

MANAGING THE UNKNOWABLE
THIS IS WHERE IT HURTS

AT CRUNCH TIME, AS THE PRESSURE MOUNTS
THIS IS WHERE IT HURTS

WHEN THE PLAN GOES IN THE TRASH
CAN WE PLAN FOR THE PLAN GOING IN THE TRASH?
FOR THE NEXT 30 MINUTES OR SO

/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES
Story one

DEPLOYING ON MY FIRST DAY
A LARGE NATION-WIDE HEALTHCARE SITE
ONE TO NOT F**K UP
IT SHOULD HAVE GONE LIVE ON FRIDAY

MY NEW BOSS
CAN YOU HELP THE TEAM FIGURE OUT THE DEPLOYMENT?

MY NEW BOSS
THE DEPLOYMENT
UNKNOWABLE STATE
UNREPEATABLE PROCESS
DID IT GO LIVE?

YES, IT DID

WAS IT CORRECT?

YES.
PROBABLY.
HONESTLY, I DON’T THINK WE CAN REALLY KNOW
HOW DID THE NEXT DEPLOYMENT GO?

DO YOU NEED A HUG?

I’M NOT READY TO TALK ABOUT THAT

YES. YES I DO
Lessons

VERSION CONTROL SHOULD EXTEND TO YOUR DEPLOYMENTS

HUMAN INTERVENTION IN DEPLOYMENTS IS UNDESIRABLE

ATOMIC DEPLOYS ARE PREFERABLE TO PIECEMEAL DEPLOYS
PLENTY OF CHANGE

(passive aggressive)
SIGNIFICANT POLITICAL SENSITIVITY
MORE STAKEHOLDERS
GREATER STAKEHOLDER DIVERSITY
A GLOBAL LAUNCH
ONE TO NOT F**K UP
DEFINITELY ONE TO NOT F**K UP
“FIGURE OUT” DEPLOYMENT

- Brief
- Start
- Re-scope
- Client review
- Launch
- Awards
- Fixes
- “Final” sign off
DELIVERIES
DELIVER to QA
DELIVER to PRODUCERS
DELIVER to TRANSLATIONS TEAMS
DELIVER to OUR EXEC
DELIVER to THE CLIENT
DELIVER to THE CLIENT’S BOSSES
DELIVER to THE PUBLIC
LET’S DELIVER ANY VERSION AT ANY TIME

PHIL’S AMBITION
TAGS SHOULD CREATE RESOURCES AT URLs
URLS FTW
AITCH TEE TEE PEE DOUBLE MEH

ALEX SEXTON
http://foobar.com
TAGS SHOULD CREATE RESOURCES AT URLS
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ALL HAPPENED AGAINST **KNOWN VERSIONS**
Lessons

ADDRESSABLE AND ACCESSIBLE BUILD VERSIONS ARE A HUGE WIN

DECIDING WHEN AND WHAT TO TAG REQUIRES COORDINATION

ATOMIC DEPLOYS TO PROD REMOVE UNCERTAINTY FROM LAUNCH DAY
Story three

NETLIFY BUILDING NETLIFY
LEARNING THE APPROACH FOR DEVELOPING THE SITE AND PRODUCT
jamstack

JAVASCRIPT / API / MARKUP
jamstack

“STATIC++”
jamstack
“STATIC, WITH BENEFITS”
jamstack

ECOSYSTEM
MARKUP

JAVASCRIPT
APIs → MARKUP → JAVASCRIPT → SITE
NOT UNIQUE
jamstack
Next wave infrastructure
Script 18, Linz, January 2018
@philhawksworth
A GIT-BASED WORKFLOW
ALL THE WAY TO PRODUCTION
Netlify.com is a Jamstack site hosted on Netlify using Netlify to Netlify Netlify
PHIL, YOU PROMISED!
NETLIFY.COM IS A JAMSTACK SITE HOSTED ON NETLIFY USING NETLIFY TO NETLIFY NETLIFY
NETLIFY.COM IS A JAMSTACK SITE HOSTED ON NETLIFY USING NETLIFY TO NETLIFY NETLIFY
BUILDS ARE BASED ON
GIT COMMITS,
SO WE HAVE HISTORY
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AUTOMATION BASED ON GIT ACTIVITY
GENERATING PREVIEWS FROM PULL REQUESTS
This is a temporary fix to our current blog page. I had some trouble navigating our current codebase, so the CSS ain’t pretty, nothing about this is pretty, but I believe that it’s still an improvement.

Just like what I did with the CMS back in May, this is not to be seen as a well thought out effort, more of a temporary fix until we can address the problem properly...

... and what is the problem? In my opinion our current blog page lacks proper contrast and typography hierarchy, super thin title on top of a busy background, headers smaller than the body text, lack of hover states in links etc...

Before
CONFIDENCE IN THE FUTURE STATE
Lessons

EMBRACING VERSION CONTROL CONVENTIONS REMOVES NEED TO REINVENT THEM

REDUCED FRICTION BRINGS AGILITY AND CONFIDENCE

JAMSTACK GOES BEYOND STATIC SITES
FOR THE NEXT 30 MINUTES OR SO

/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES
RESOURCES

CIRCLE CI

Build faster. Test more. Fail less.

Automate the software development process using continuous integration and continuous delivery so you can focus on what matters: building great things, not waiting for great things to build.

Start Building for Free  Explore the Docs
See how CircleCI works

JENKINS

Say “hello” to Blue Ocean

Blue Ocean is a new user experience that puts Continuous Delivery in reach of any team—without sacrificing the power and sophistication of Jenkins.

Get started
Articles

Interview with Michael Rose, designer and front-end developer
Michael Rose, one of the most active webdesigner in the Jekyll community, shares his vision on static site generators.

Interview with Bud Parr, JAMstack engineer, Content Strategist
Bud Parr, founder of TheNewDynamic, shares his vision on the current state of the JAMstack ecosystem.

Interview with Bjarne Erik Pedersen, Hugo lead developer

JAMstack at O'Reilly's Velocity Conference: Git-based or API-driven CMSs

Best Practices

When building JAMstack projects, you can really get the most out of the stack if you stick to a few best practices.

- **Entire Project on a CDN**
  Because JAMstack projects don’t rely on server side code, they can be distributed instead of living on a single server. Serving directly from a CDN unloads build and performance that can’t be beat. The more of your app you can push to the edge, the better the user experience.

- **Everything Lives in Git**
  With a JAMstack project, anyone should be able to do a git clone, install any needed dependencies with a standard procedure (like npm install), and be ready to run the full project locally. No databases to configure, no complex installs. This reduces contributor friction, and also simplifies it, making live development easier.

- **Modern Build Tools**
  Take advantage of the world of modern build tools. It can be a jungle to get oriented in and it’s a fast moving space, but you’ll want to be able to use tomorrow’s web standards today without waiting for tomorrow’s browsers. And that currently means Gulp, PostCSS, Webpack, and more.
RESOURCES

THENEWDYNAMIC.ORG

JAMSTACK.ORG
MINDSETS
VERSION CONTROL For EVERYTHING
EXPOSE THE RED LIGHTS
A NOTE ON DEPLOYMENT

1. MAKE IT SCRIPTED
2. MAKE IT AUTOMATED
A NOTE ON DEPLOYMENT

1. MAKE IT SCRIPTED
2. MAKE IT AUTOMATED
3. MAKE IT REAL
A NOTE ON DEPLOYMENT

1. MAKE IT SCRIPTED
2. MAKE IT AUTOMATED
3. MAKE IT REAL
4. MAKE IT FIRST
A NOTE ON EXPERTISE

IT’S AN AWFULLY FULL STACK
A NOTE ON EXPERTISE

USE THE SKILLS OF OTHERS
EXPECT TIMES OF CHAOS
FACE YOUR DEMONS EARLY
DON’T LET YOUR INFRASTRUCTURE BE WHAT CREATES IT
THANK YOU

PHIL HAWKSWORTH

HAWKSWORX.COM / TALKS / SCRIPTCONF