

# perpendicular angel design

organizing and simplifying, one illumination at a time

## AN EVENT APART DC: WHY DESIGN SYSTEMS FAIL BY UNA KRAVETS

Una is awesome. Last year she did a fantastic talk about the technological challenges behind optimizing images, and this year she followed up with a strategic look at design systems and their failures. As someone who's working to (re)build a design system, I found the talk to be both timely and enlightening.

(pdf backup)



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Now [@Una](#) on why design systems fail.

Una's put a lot of different work into different systems. [#AEADC](#)

10:19 AM - Jul 31, 2018



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[Styleguides.io](#) has a ton of resources on design systems. So does [github.com/alexpate/aweso...](#)

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**alexpate/awesome-design-systems**

 A collection of awesome design systems. Contribute to awesome-design-systems development by creating an account on GitHub.  
[github.com](#)



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What is a design system?

- Style guide or visual pattern library
- Design tooling (sketch, invision)
- Component library
- Code usage guidelines and documentation
- Design usage documentation
- Animation language
- Voice and tone guidelines [#AEADC](#)

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21 people are talking about this





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### Style guide

This is just a visual pattern library, nothing to prototype with  
Design tooling can go with this

A sketch file with all the colors, iconography, alerts, button types,  
etc.

### Component library

Actual code artifacts you can plug and play with [#AEADC](#)

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### Guidelines and standards

Unified set of arguments and decisions already made so that when  
code was written internally it's all unified

### Design usage documentation

List of each of the types of something (like a drop down) with  
guidelines on when to use what. [#AEADC](#)

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### Animation language

IBM uses things out of their own history (like a tape head spinning)  
or typewriters to build out their animation, and document all the  
details of the animation (and how it relates [#AEADC](#))

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Voice and tone guidelines

Mailchimp has the best example: [styleguide.mailchimp.com](http://styleguide.mailchimp.com) and [voiceandtone.com](http://voiceandtone.com)

Examples:

- Fun but not silly
- Confident but not cocky
- Informal but not sloppy

Voice is what you say, tone is how you say it [#AEADC](https://twitter.com/hashtag/AEADC)

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## MailChimp Content Style Guide

**Welcome to the MailChimp Content Style Guide | MailChimp Cont...**

Guidelines and resources for web writers and editors. Includes: voice and tone, grammar, web style, social media, email newsletters, blog [styleguide.mailchimp.com](http://styleguide.mailchimp.com)

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There are a lot of reasons a design system can fail. Some of them are very similar to why diets fail.

What's it mean for a design system to fail?

Nobody uses it.

If that's true, all the benefits are being lost#AEADC

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In @Una's last job they had a design system for dashboards, and a different one for marketing, and then created a new version for the first system. Which resulted in people using three different systems. Or rolling their own CSS - which happened more than anything else #AEADC

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You have to understand the underlying reason why people aren't using the existing system

Happy design systems

- scale good standards
- build in accessibility
- unify component styles
- unify code styles
- unify prep
- speed up delivery #AEADC

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If we're all being judged on different metrics, it can be hard to get everyone on board to using the system. One person's goal is copy/paste, build, ship. Another person's goal is get the design system used. You have to get support from everyone [#AEADC](#)

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Separate your own Objectives and Key Results (OKRs) from what someone else is being judged on so that you can empathize with them [#AEADC](#)

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1. Investment - this is at the org level. A lot like going to the gym and working out. Small incremental changes result in big changes overall. Continuous effort to invest resources in it. You can't clean up once and then walk away. [#AEADC](#)

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Invest in good core practices at the beginning of building the design system. It's good to have ownership, some person or team dedicated to it, to ensure that investment is ongoing. You need a really solid base [#AEADC](#)

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Communication is multidirectional. Include as many people as possible. Once you invest in a design system - the team needs to act as a bridge between design and engineering and all the stakeholders. Nobody wants to be told what to do or prescribe a solution [#AEADC](#)

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Ask your users what they want  
Listen to your users needs  
\*Make your users feel heard\*  
Incorporate feedback into the system [#AEADC](#)

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Buy-in is really important to get throughout the company. You want people to want to use the system, so there's a path of least resistance to usage.

Showing is more powerful than telling  
Have developers use the design system in a low-stakes situation

Hackathons! #AEADC

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Hackathons are like candy to a budding design system because people build faster, and you see what bugs are in the design system. "It felt like an unfair advantage to use the design system". It can also help the word spread about the system #AEADC

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Solid architecture  
Primer ([styleguide.github.com](https://styleguide.github.com)) has a Core aspect, a Product aspect, and a Marketing aspect. Product and Marketing pull from Core. Lots of different pieces flow together. Kept very modular and separated #AEADC

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if you create utility classes you can use the Chrome tools to inspect them. Learn the design system by seeing it through the code system.

Semantic versioning: naming system of major.minor.patch

All the version numbers can be updated independently#AEADC

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If you have to design something in an older version, it helps to ensure that you know which ones are the older versions. Can move forward with your design system (as well as the components) as you go.

Put everything on a CDN to unify and separate and organize

#AEADC

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Don't wait to namespace! If you don't namespace your system, you will get collisions!

Not "button", "bx-button" or whatever works for your org. #AEADC

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Tech stack choice

Every company has different needs.

Buzzfeed's design system (called Solid) uses SASS, Atomic CSS, float-based grid, no JS, Sketch template. You don't have to use JS in a design system. [#AEADC](#)

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Carbon (IBM BlueMix)

SASS

Block-Element Modeling

No specified grid

React AND Vanilla JS

Sketch Template

Design docs

Voice and tone [#AEADC](#)

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AtlasKit (Atlassian)

CSS in JS

No specified grid

React-based

Sketch Template

Design Docs

Voice and Tone

But their (and much) design tooling isn't solved [#AEADC](#)

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Reduce friction:

You have to make your design system the path of least resistance. Lower cognitive overhead for both designers and developers. If it's harder to use than the current system, people won't use it. If it's complicated and over engineered it won't be used. [#AEADC](#)

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One option: pull the system into the code, really performant code, very extensible, everyone in technical design was happy  
Option 2: put a link to pull from the CDN in to the top of the website. This was the primary way people were using the system [#AEADC](#)

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The best time to build a design system is while it's evolving, but there's no time like the present.

Bugs will generally only increase. We need to remove code more than we add code. But it's still important to find them earlier whenever possible [#AEADC](#)

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Empower product growth with design systems:

Investment

Communication

Buy-in

Solid Architecture

Reduced Friction

Really hard to measure the impacts, but really important#AEADC

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How to build: set a goal or hypothesis that's measurable.

"We are building a design system because..."

Increase performance

Decrease inconsistencies

Decrease code cruft/bugs

Etc. #AEADC

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Review what you have \*and measure it\* so you have baselines.

[Webpagetest.com](http://Webpagetest.com) for page load time, for example. That way when you've made changes you can compare against it #AEADC

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[Webaim.org](http://Webaim.org) is a great place to check for accessibility bugs, so that you can measure against that metric. [Pally.org](http://Pally.org) to monitor errors, warnings, etc. for accessibility. You can run it locally and have it live on a web server. [#AEADC](#)

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[Csstats.com](http://Csstats.com) for comparing old CSS to new CSS for code cruft and things like that - once again, set baseline.

Check your colors - do you have 74 greys? You probably don't need all those. [#AEADC](#)

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Component cut-up activity: print your pages, cut them up, see what you're actually using as components, and which ones you really want to use. Fix classes, templates, smooth over time. [#AEADC](#)

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User buy-in follows the stats. "Look at our results, you too can get these benefits" [#AEADC](#)

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Make a plan

Put it into writing

Make sure it's incorporated into the development cycle

Make sure people are accountable for using it

Make technical decisions about the system [#AEADC](#)

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Build a hook-based system to create custom components. That way when you do need something new, you can base it on the standard.

Build components that are prepared for media queries at small, medium, and large.

Have the ability to only pull the components you need [#AEADC](#)

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[Gov.uk](#) also has prototyping and production in different systems so they have different documentation for the two. One's easier to use and the other is more performant. [#AEADC](#)

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Buttons are like the “hello world” for design systems.  
buttons, small buttons, mini buttons, icon buttons... what are all the  
different states, how do they interact? [#AEADC](#)

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Incorporate multiple components working together.

Do you include layout in the system? To what extent?  
Generally design systems don't include layout because it's hard to  
create a view and say “this is the view in which you must work”.

[#AEADC](#)

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Having space around components and a standard vertical rhythm  
can be very important, so building space into the components (but  
not necessarily building layouts) can be a good solution [#AEADC](#)

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Focus on interaction and accessibility. “Every hover has an equal (not opposite) focus” for example. Document interactions and accessibility usage. [#AEADC](#)

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Inform your users! Show components, what’s under review, what’s deprecated, what’s updated. You want lots of people interacting with you and working with you. It’s good to have a team mitigating all the requests and prioritizing [#AEADC](#)

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Keep consistent communication!  
Designer communication is not the same as developer communication [#AEADC](#)

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- What’s the ultimate visual source of truth?
- What is the usage for each component?
- When is the component inappropriate to use?
- What does the interaction look and feel like?
- How do the various states look?
- How does this component interact with others?#AEADC

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Different needs have different solutions! A 5-person design team isn't the same as a 300-person design team. You can't compare polished big design systems to our real life. It's like comparing someone's instagram life to our real life. #AEADC

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Una said the following opinion could be considered controversial:



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You might not need a design system. You can't be the sole advocate to a design system. If the cost is higher than the benefit, it's not going to work. #AEADC

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As for me, I think everyone has a design system, but for some people that system is called “chaos”.



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Not everyone enjoys the same workout, but you can get the same result by doing something that's tailored to your needs. The same is true of design systems. Your personal needs are more important than someone else's prior work#AEADC

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