What is progressive enhancement

We use programming languages, database systems and frameworks to provide standards compliant, accessible HTML which enables users to achieve their goals. We then enhance the experience with design (using CSS) and behaviour (using JavaScript and modern APIs). This is **progressive enhancement**

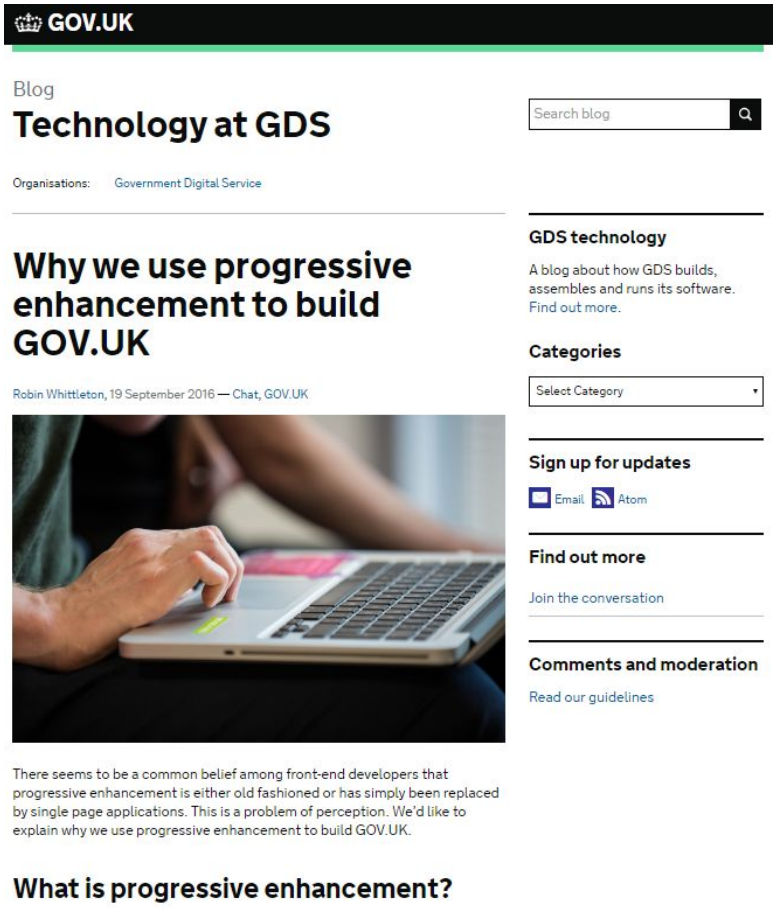
Why progressive enhancement? Because developing for browsers is different

"In traditional software development, you have some say in the execution environment. On the Web, you don't. I'll explain. If I'm writing server-side software in Python or Rails or even PHP, one of two things is true:

- I **control** the server environment, including the operating system, language versions, and packages.
- I don't control the server environment, but I **have knowledge of** it and can author my program accordingly so it will execute as anticipated.

... **On the Web, however, all bets are off. The Web is ubiquitous. The Web is messy. And, as much as I might like to control a user's experience down to the pixel, I understand that it's never going to happen because that isn't the way the Web works.**"

Aaron Gustafson


GOV.UK

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Why we use progressive enhancement to build GOV.UK

Robin Whittleton, 19 September 2016 — Chat, GOV.UK

There seems to be a common belief among front-end developers that progressive enhancement is either old fashioned or has simply been replaced by single page applications. This is a problem of perception. We'd like to explain why we use progressive enhancement to build GOV.UK.

What is progressive enhancement?

GDS technology

A blog about how GDS builds, assembles and runs its software. Find out more.

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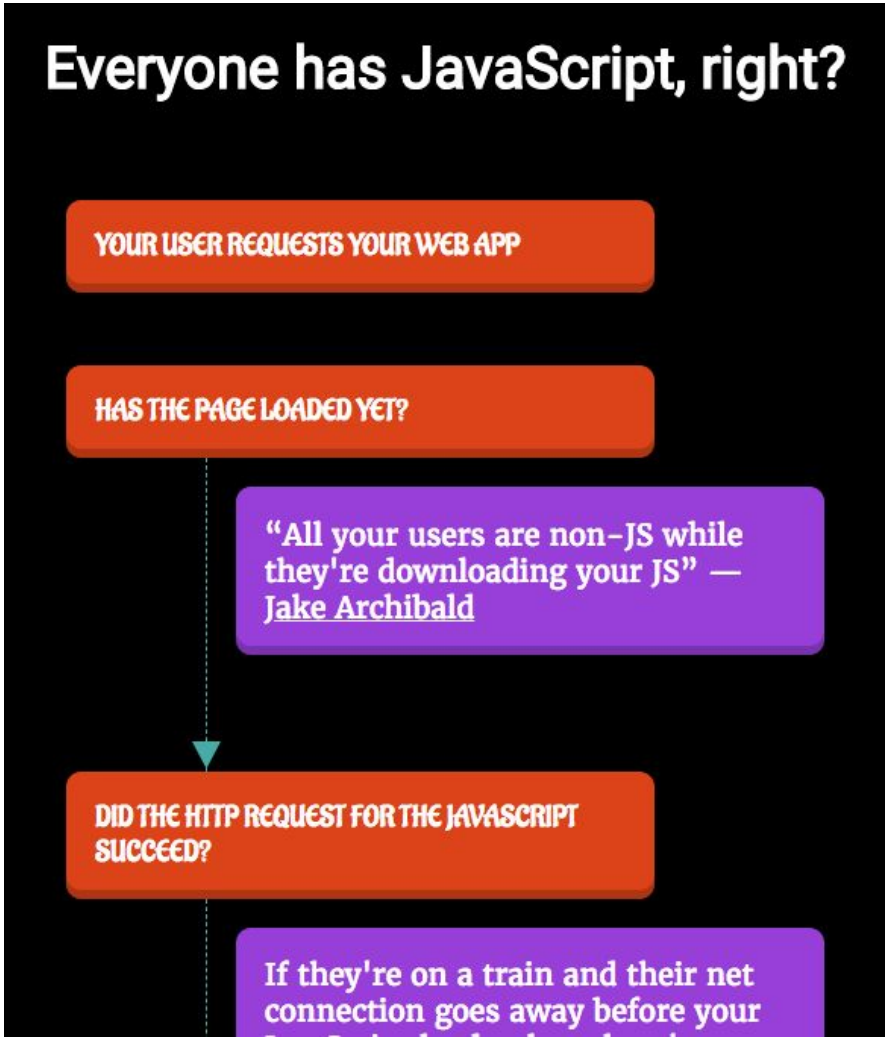
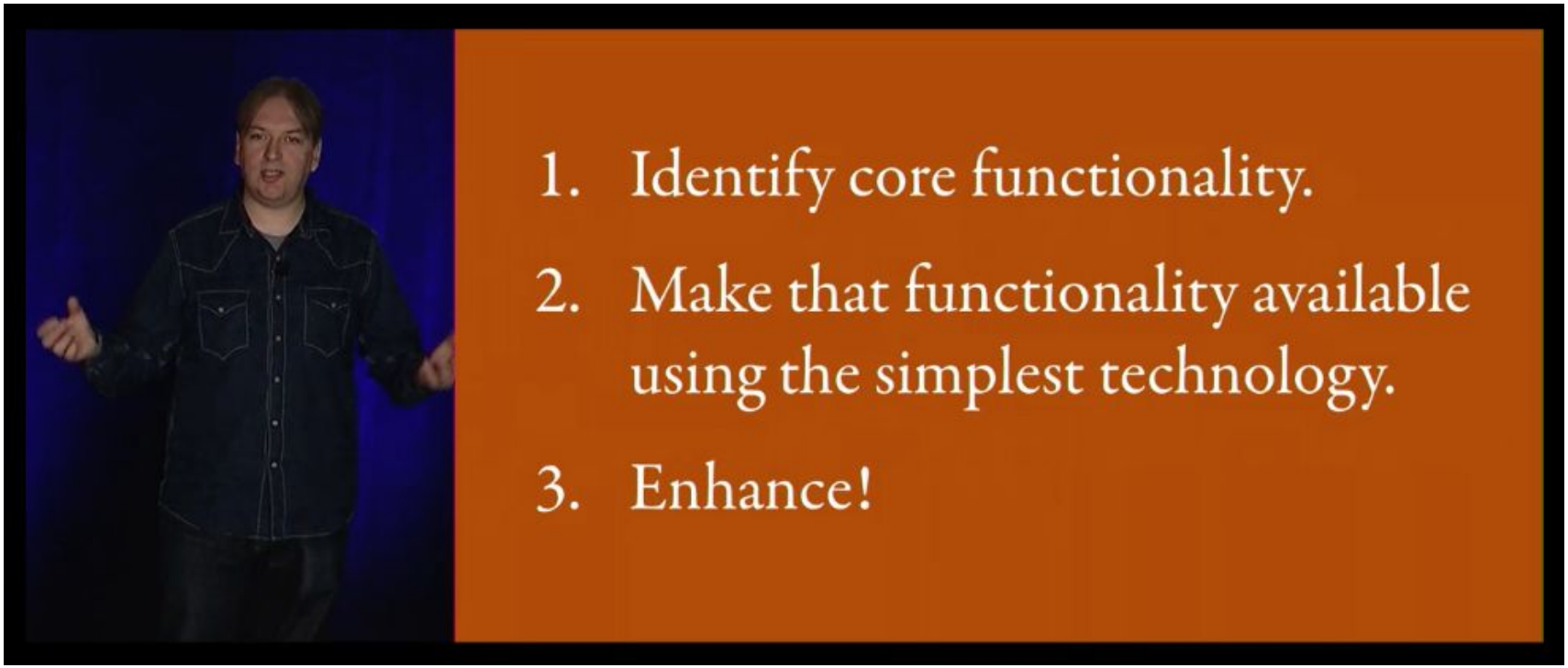
Everyone has JavaScript, right?

Web Consultant and Developer Stuart Langridge created the [Everyone has JavaScript, right?] web page in order to illustrate (and reference evidence of) the several circumstances that can result in users being unable to run the JavaScript on your site.



Progressive enhancement is a three-step approach



Jeremy Keith at An Event Apart - *Resilience: Building a Robust Web That Lasts*

Progressive enhancement is a modern and effective use of development capability

Some common questions from new developers (and the short answers to them):

“We have limited development resource and competing demands - wouldn’t it be better to require users to have a capable greenfield browsers?” No, it wouldn’t. By embracing the reality of the web’s inherent variability progressive enhancement reduces development time and cost. It also results in significantly more maintainable and robust applications.

“Does this mean I can’t use [insert] new technology?” No. If anything, progressive enhancement broadens the range of technologies you can use - so long as they are judiciously applied as ‘non-breaking’ enhancements.

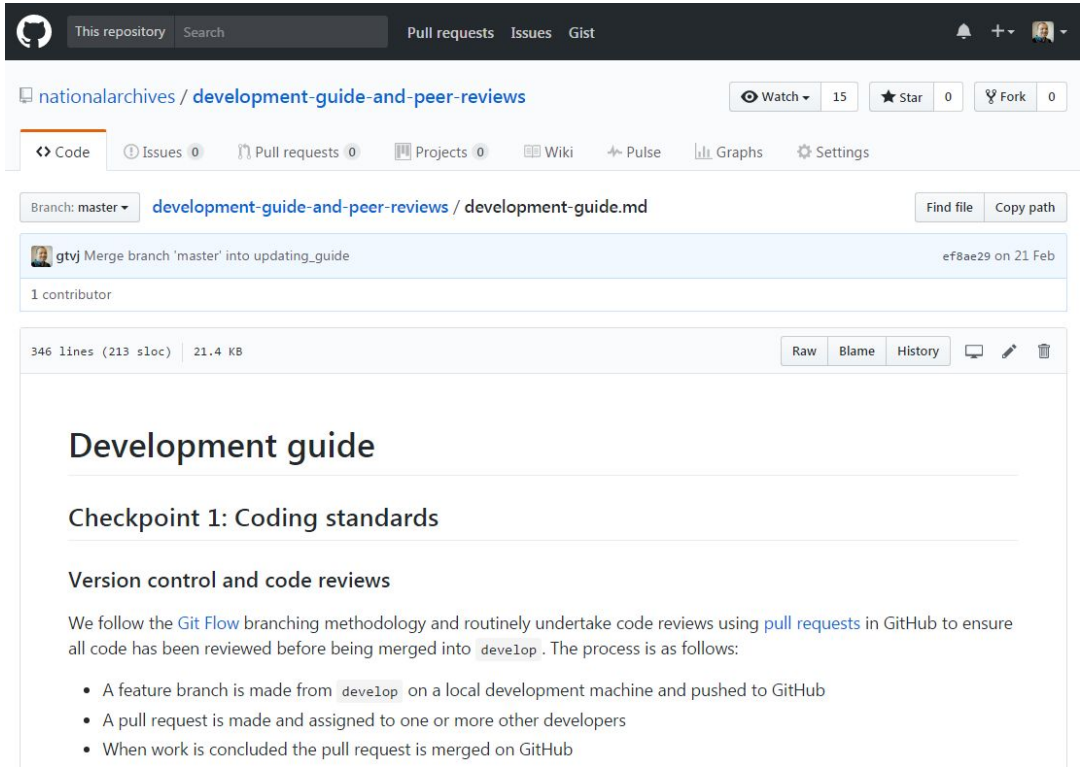
“Do users really turn off JavaScript?” Probably not, but that doesn’t necessarily mean your JavaScript will run for them or that they’ll have access to the APIs you’re using

“Are you suggesting we build two systems - a JavaScript version and a non-JavaScript version?” No. We identify the ‘core’ functionality and build one system that uses the simplest technology available (HTML) to provide that functionality. You then progressively enhance that capability to improve the experience and provide other ‘non-core’ enhancements to that functionality.

Our living development guide

Providing intuitive, interactive and accessible user experiences with progressive enhancement is a complex task that requires careful thought at all stages of development.

We have therefore published a development guide to support our development teams deliver high quality, inclusive and maintainable digital services while achieving a good balance between innovation and effective use of our development capability.



The National Archives