

7 Carrots - No Stick...

A Better Business-Case for Accessibility

No Tree-Hugging or Empty Threats!

When Tim Berners Lee set out his vision for the web, it was a vision with accessibility at its core. Tim's vision understood that real power of the web would come through its universality [1].

Thoughtworks is a company that is known for its commitment to social responsibility. One would therefore be forgiven for thinking that a ThoughtWorks article on accessibility would focus on a desire to point out our moral and legal obligation to "do the right thing" in terms of society (and indeed humanity).

Though laudable, this is **NOT** the approach we are taking with this article.

"If your site doesn't adhere to basic accessibility guidelines you could get yourself into legal trouble..."

In the author's experience, this kind of posturing seldom gains traction within the harsh reality of project situations. As is so often the case, the law accommodates plenty of wiggle room. So long as organisations can show "best endeavours" in trying to improve accessibility - the chance of serious litigation is limited. More often than not, a few shallow meetings that simply pay lip-service to tackling accessibility issues are enough to avoid a sticky legal situation.

Instead of taking the high moral ground or highlighting legal obligation, this article will attempt to show that many of the considerations around accessibility stack-up to simply be just good business.

A Better Business Case for Accessibility

We believe that once the issues around accessibility are better understood - the carrot of business benefit is much more compelling than the stick of potential litigation.

Forget about accessibility for a second... Instead, consider if the following things are important to you:

1. SEO

Most publicly available web-sites understand the importance of trying to play nicely with Google and other search-engines. If something is not easy to find online - it is often doomed to failure. By making our offerings accessible, we automatically cater for the busiest “blind” users in the world - Google’s search robots. Best practice for accessibility helps to encourage semantic markup of content and as a result improves SEO. Search robots capitalise on well structured semantic markup to derive meaning and relevance from indexed content. [2]

2. Mobile Strategy

The growth of mobile and tablet market is unquestionable. In fact, forward thinking companies follow the mantra “Mobile First”. They will often prioritise mobile strategy over and above traditional web as this is where the largest opportunities for growth reside.

State-of-the-art responsive design techniques are used to allow products to respond to their context. Using these techniques, a quality and tailored experience can be provided across multiple channels. The foundations of responsive design for mobile are rooted in good semantic markup that separates content from presentation. Such markup practices are also a prerequisite for accessibility. Levels of javascript support vary wildly across different mobile devices. Accessibility best-practice ensures that users without appropriate scripting support can still achieve site goals. If you are building an accessible site - you are building a site that can more easily be adapted to service multiple channels. [3]

3. Speed

When following accessibility practices, the commitment to front-end technical excellence often results in an increase to perceived performance. Normally when we think of performance-tuning we focus our energy on ways to make things faster in the back-end. Yahoo’s work on understanding high-performance web pages has showed that aside from server-turnaround and network lag - slow rendering of pages in the browser made a significant impact on what users perceive as “fast”. In fact, up to 80% of end-user response time is spent in the front end [4]. Again, accessibility practices which champion clean and well structured semantic markup will often result in a faster and more responsive user-experience.

4. Maintainability and Rapid Response to Change

Web pages are never “done”. They continue to grow, change and evolve according to new requirements and emerging market demands. Continuous Delivery [5] practices help to provide the technical foundation for being able to deploy new changes into production quickly. The speed of making the change itself also depends on the flexibility and maintainability of the existing code-base

(both in the front and back-end). Even with test-driven development, automated testing of the visual rendering of the front-end proves difficult. If your front-end code is spaghetti, it is going to be hard to change. Again, a structured and semantic approach to mark-up will help make sure code remains both accessible and easy to maintain.

5. Iterative Thinking

When it comes to dealing with rich interactions from an accessibility standpoint, historically, we used to attempt graceful degradation [6]. This involved designing and implementing rich-interactions and then trying to get the solution to “gracefully degrade” when scripting or styling was removed. In practice, it was difficult to get this to work. More often than not solutions would not gracefully degrade. The “extra effort” required to make solutions degrade to become accessibility-compliant was often de-scoped.

Enter “progressive enhancement”. This new approach to accessibility flips the graceful degradation approach. Instead of building the whizzy rich-interaction first, progressive enhancement forces you to first consider - the simplest vanilla interaction that will help the user achieve the goal. Once this is in-place and working, it is enhanced (via css and scripting) to provide the richer interaction experience.

The side effect of this kind of approach is that it forces teams to “plan to iterate” [7] over the front-end. The simplest vanilla interaction that achieves the goal - is inevitably the quickest and cheapest to build. Rich-interactions are still implemented, but an iterative approach allows feedback to be canvassed from users and team members each step of the way. This feedback can be used to inform investment decisions thus allowing the team to focus on only those rich-interactions deemed really valuable.

A progressive enhancement approach to accessibility has the side-effect of coaching your team in the iterative thinking philosophy that is fundamental to successful agile delivery.

6. Increased Usability

Many of the approaches we use to achieve accessibility also serve to improve overall usability. For example, accessibility guidelines require that each form input have an associated label. Apart from allowing the form to be manipulated via assistive tools, the by-product of this approach is that it also allows browsers to detect each label as a clickable way to provide focus to the input. People find it easier to hit a bigger clickable target thus overall usability and form completion times are improved (Fitt’s Law [8]).

Accessibility also forces us to think about keyboard only access. By ensuring websites are operable without a mouse, we do not just cater for a disabled audience. Expert and advanced users also rely on keyboard accelerators and shortcuts to improve their efficiency [9]. The increased prevalence of “couch-surfing” also means that users may be browsing using the “keys” on the remote control on their Internet enabled TV. [10]

7. Positive Brand Perception

Championing accessibility provides a clear public testament to your organisation’s commitment to being inclusive. Accessibility is a great way to show that you really care about your customers. We

all know that brands can be easily damaged. Although the legal threats around non-compliance to accessibility are often muted, the ramifications in terms of negative PR, marketing and brand perception should not be underestimated.

The Positive Side-Effects

Apart from these seven key benefits, it is worth mentioning that there are also several “positive side-effects” to championing accessibility:

More Customers For The Taking

The World Health Survey estimates that worldwide 15.6% of adults (aged 18 years and over) live with a disability [11]. Additionally, in countries with life expectancies over 70 years, individuals spend on average about 8 years, or 11.5% of their life span, living with disabilities [12]. As our populations continue to age, these numbers will only increase.

Naturally, some disabilities have little effect on the way that customers access the web (eg. mobility impairments affecting only the lower body). Others however, can provide a real impediment. In the United States alone, 16.6 million of its 36 million disabled citizens suffer from vision impairment or hearing loss [13]. This figure does not include many other groups of potential customers such as those with cognitive, or dexterity impairments.

It is important to remember that the people who benefit from accessibility best practice are not just the ones who might not have ticked the box on a disability survey.

Those with dyslexia, arthritis, a below basic literacy rate (15% of the U.S. population) [14] or indeed the people who are using your website but haven't yet put on their glasses will all find an accessible site easier to use. This is a lot of potential customers.

Legal Compliance

In both the United States and the United Kingdom, there are legal frameworks in place to prevent disability discrimination by a business or service offered over the web. In the US, this is referred to through the Americans with Disabilities Act [15] and *Section 508* [16]. In the UK, *The Equality Act* came into force in 2010 [17], replacing the *Disability Discrimination Act (DDA)*.

Test cases have been filed. A recent example is BMI-baby which in 2012 has had legal action brought against it by the RNIB [18]. In the era of social media where customer outrage is so easily propagated, the negative PR associated with this kind of incident can be catastrophic.

Doing the Right Thing

UN Convention on the Rights of Persons with Disabilities recognizes access to information and communications technologies, including the Web, as a **basic human right**. [19]

At ThoughtWorks, we believe that there is room in business to give something back to society. It could be argued that the freedom and accessibility of the web helps those with a disability more than

any other section of society. Championing accessibility on projects offers us a rare opportunity where doing the right thing in terms of social responsibility, inclusion and freedom also stacks up in terms of just being good business.

Conclusion: Challenging Pre-Conceptions

As is so often the case when dealing with matters of disability, we must challenge our pre-conceptions.

Adhering to accessibility principles should not be thought of as merely jumping through legally defined hoops that make your projects slower and/or more costly. This focus on cost over value misses the point.

Instead, these guidelines provide well documented and testable ways to:

1. Improve SEO
2. Help Mobile Strategy
3. Increase Speed
4. Improve Maintainability and Rapidly Respond to Change
5. Encourage Iterative Thinking
6. Improve Usability
7. Create Positive Brand Perception

Much more carrot than stick...

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Where To Look Next

More information on accessibility the varying levels of compliance can be found at
<http://www.w3.org/WAI>

RNIB - Design and Build Accessible Websites
http://www.rnib.org.uk/professionals/webaccessibility/designbuild/Pages/design_build.aspx

Crowd Sourcing from the disabled community to name and shame inaccessible sites
<http://www.fixtheweb.net/>

Free web accessibility evaluation tool provided by WebAIM
<http://wave.webaim.org/>

Behind the Curtain - A blind users first week with the iPhone
<http://behindthecurtain.us/2010/06/12/my-first-week-with-the-iphone/>

Beyond ALT Text - Making the Web Easy to Use for Users With Disabilities (NNG)
<http://www.nngroup.com/reports/accessibility/>

Videos on Computer Accessibility
<http://www.assistiveware.com/videos.php>

Plain English Campaign - Fighting the use of jargon and gobbledegook in public information
<http://www.plainenglish.co.uk/>

2012 Best Screen Reader Software Comparisons and Reviews

<http://screen-reader-software-review.toptenreviews.com/>

The Guild of Accessible Web Designers

<http://www.gawds.org/>

Sources:

[1] "The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect." -- *Tim Berners-Lee* (*Inventor of the World Wide Web*)

[2] SEO and Web Accessibility Come Hand in Hand

<http://www.searchenginejournal.com/seo-and-web-accessibility-come-hand-in-hand/7600/>

[3] Web Content Accessibility and Mobile Web

<http://www.w3.org/WAI/mobile/>

[4] High Performance Web Sites: The Importance of Front-End Performance

http://developer.yahoo.com/blogs/ydn/posts/2007/03/high_performance/

Best Practices for Speeding Up Your Web Site

<http://developer.yahoo.com/performance/rules.html>

[5] Continuous Delivery - Jez Humble's work blog

<http://continuousdelivery.com/>

[6] Graceful Degradation & Progressive Enhancement

<http://accessites.org/site/2007/02/graceful-degradation-progressive-enhancement/>

[7] Don't know what I want, but I know how to get it

http://agileproductdesign.com/blog/dont_know_what_i_want.html

[8] Fitts's Law

http://en.wikipedia.org/wiki/Fitts%27s_law

[9] Flexibility and efficiency of use (Ten Usability Heuristics - Jakob Nielsen)

http://www.useit.com/papers/heuristic/heuristic_list.html

[10] Designing for TV

https://developers.google.com/tv/web/docs/design_for_tv

Internet TV: UX a potential casualty in the battle for the living room?

<http://www.nomensa.com/blog/2010/internet-tv-ux-a-potential-casualty-in-the-battle-for-the-living-room/>

[11] WHO World Report on Disability

http://www.who.int/disabilities/world_report/2011/en/index.html

[12] Fact sheet for the UN Convention on the Rights of Persons with Disabilities -

<http://www.un.org/disabilities/convention/pdfs/factsheet.pdf>

[13] 2010 American Community Survey (ACS) 1-Year Estimates -

<http://factfinder2.census.gov>

[14] 2003 National Assessment of Adult Literacy (NAAL), key facts -

http://nces.ed.gov/naal/kf_demographics.asp

[15] Americans with Disabilities Act

<http://www.ada.gov/>

[16] Section 508

<http://www.section508.gov/>

[17] Equality Act

<http://www.homeoffice.gov.uk/equalities/equality-act/>

[18] RNIB serves legal proceedings on bmibaby

<http://www.rnib.org.uk/aboutus/mediacentre/mediareleases/mediareleases2012/Pages/pressrelease27Jan2012.aspx>

<http://www.hassellinclusion.com/2012/01/rnib-bmi-baby-accessibility-lawsuit/>

[19] UN Convention on the Rights of Persons with Disabilities

<http://www.un.org/disabilities/convention/conventionfull.shtml>

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