

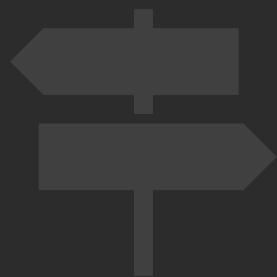
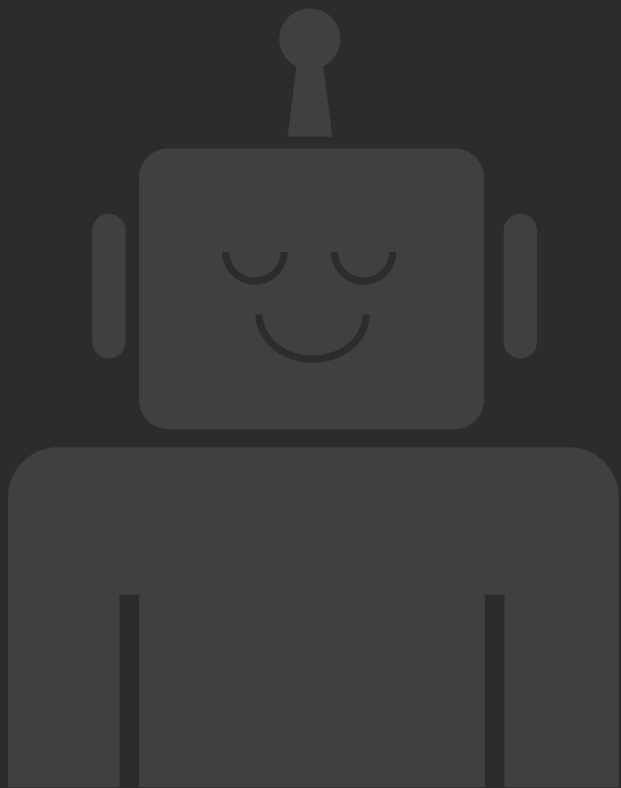
# building for a post-mobile world

*why mobile sites are doomed,  
why the future is made of structured content,  
and how to build Drupal sites that last*



hi. i'm @eaton!  
i'm with lullabot.

we plan, design, build, and teach.



# you might want to leave now if...

- ▶ Your site is a web app, not content-focused
- ▶ You're Karen McGrane
- ▶ You terrify easily

[twitter]I'll be firing off a few Drupal & mobile-strategy related tweets for a bit; feel free to unfollow me for an hour or so if you're allergic...[/twitter]

**change is here**



# 1. It's not "the future"

- ▶ **88%** have mobile devices (*129% in Australia*)
- ▶ **45%** access the web on mobile
- ▶ **17%** are mobile-only
- ▶ **90%** split tasks over multiple devices

[http://www.pewinternet.org/Commentary/2012/February/Pew-Internet-Mobile.aspx\[/tweet\]](http://www.pewinternet.org/Commentary/2012/February/Pew-Internet-Mobile.aspx[/tweet])

<http://centralcoast.businessinsider.net.au/stories/it/smartphone-uptake-results-in-29-million-mobile-services-in-australia->

[http://www.acma.gov.au/WEB/STANDARD/pc=PC\\_311301](http://www.acma.gov.au/WEB/STANDARD/pc=PC_311301)

<http://www.dearfuture.com/120/>

1. It's not "the future"
2. Mobile tasks are a myth

- ▶ **77%** watched TV while using other devices
- ▶ **65%** shopped on phone, purchased on PC
- ▶ **25%** searched on PC, read on phone
- ▶ **15%** planned trips on tablet, booked on PC

[twitter]90% of mobile users move fluidly between devices during tasks. <http://googlemobileads.blogspot.com/2012/08/navigating-new-multi-screen-world.html> Crippled mobile sites kill that flow. #postmobile[/twitter]  
<http://www.the-haystack.com/2012/07/09/great-works-of-fiction-presents-the-mobile-context/>



1. It's not "the future"
2. Mobile tasks are a myth
3. Responsive isn't perfect





©2012 Lyza Danger – <http://flic.kr/p/cfkULL>

responsive is your baseline fallback. it helps ensure that your site isn't a mess in new environments. However...

<http://alistapart.com/article/vexing-viewport>

[twitter]Keeping up with the pace of new devices and viewports is stretching responsive design to the breaking point. <http://notes.xoxco.com/post/39512921825/2012-recap/>[/twitter]



1. It's not "the future"
2. Mobile tasks are a myth
3. Responsive isn't perfect
4. Apps aren't magic

- ▶ **70%** of app time spent on games, social
- ▶ **400,000** apps have zero downloads
- ▶ **\$30k - \$150k** average app dev cost
- ▶ **Forked content** is dangerous

<http://blog.flurry.com/bid/92105/Mobile-Apps-We-Interrupt-This-Broadcast>

<http://gigaom.com/2012/07/31/app-store-infested-with-zombie-software-claims-analytics-startup-adeven/>  
[/me](#)

<http://www.godfrey.com/How-We-Think/B2B-Insights-Blog/Web-Design-and-Development/Costs-to-build-an-app.aspx>

<http://www.netmagazine.com/opinions/separate-mobile-website-no-forking-way>

[twitter]Building expensive mobile apps won't solve content problems; content will fork and workloads will multiply. <http://www.technologyreview.com/news/427785/why-publishers-dont-like-apps> #postmobile[/twitter]

1. It's not "the future"
2. Mobile tasks are a myth
3. Responsive isn't perfect
4. Apps aren't magic
5. Channels keep coming



BMW iDrive system – <http://www.bmwcoop.com>.





*Sweet mercy, some crazy Internet Refrigerator.*

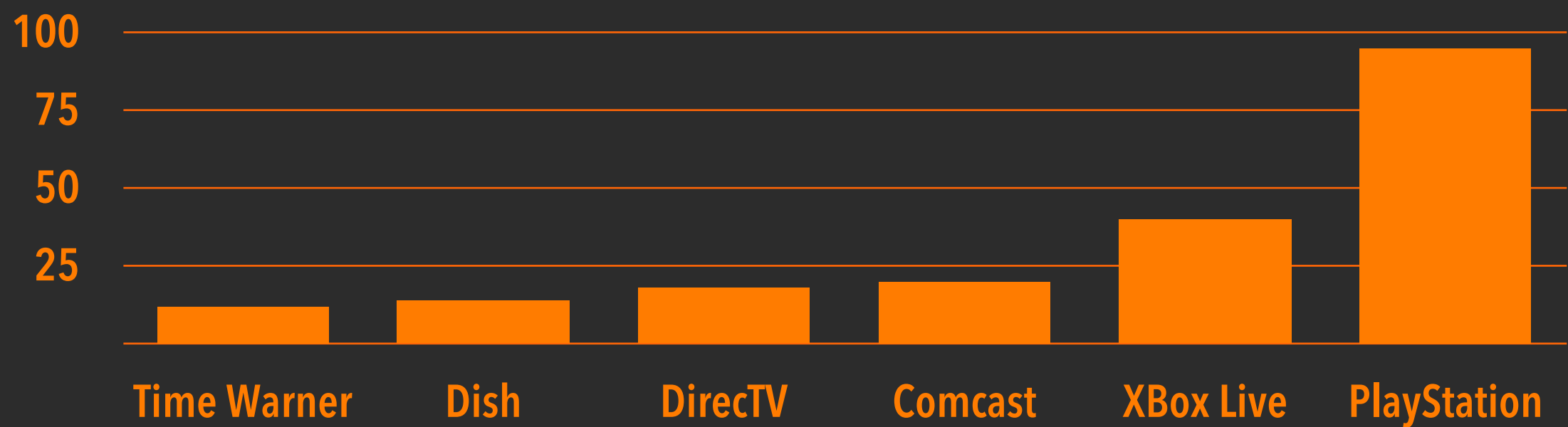




*Drupal.org on my living room television. No, seriously.*

<http://www.ign.com/articles/2012/01/10/ces-microsoft-reveals-xbox-360-sales-to-date>





# 40m on XBox Live

<http://www.ign.com/articles/2012/01/10/ces-microsoft-reveals-xbox-360-sales-to-date>

“People don't want different content or less content, tailored for the device. They want the same content, presented so they can find it, navigate it, and read it. They imagine that their devices are different windows on the same content, not entirely different containers.

Karen McGrane, A List Apart

**your content must  
adapt to constantly  
changing channels**

<http://alistapart.com/column/windows-on-the-web>

**there is a  
solution**



“Rather than thinking primarily about the final presentation – publishing web pages, mobile applications or brochures – an information-centric approach focuses on ensuring our data and content are accurate, available, and secure.

Whitehouse.gov, *Digital Government Blueprint*

[twitter]Rather than focusing primarily on presentation, ensure that content is accurate, available, and secure. <http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government.html> #postmobile[/twitter]

# 1. Cross-channel reuse



Your treasure trove of STUFF, the channels you need to push it to ...and all the work it takes to get there.

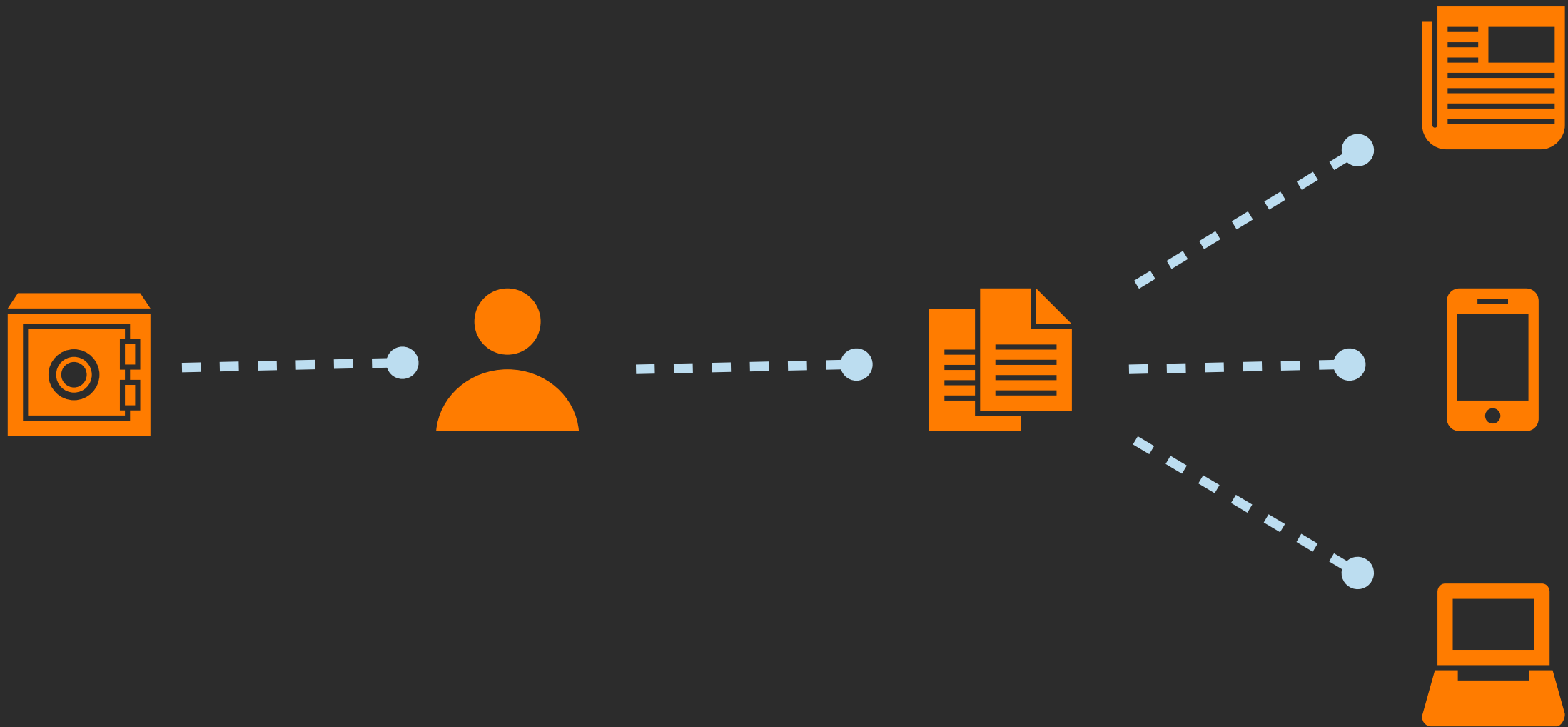
You want one canonical piece of content to be reused on across all of them.



Your treasure trove of STUFF, the channels you need to push it to ...and all the work it takes to get there.

You want one canonical piece of content to be reused on across all of them.





Your treasure trove of STUFF, the channels you need to push it to ...and all the work it takes to get there.

You want one canonical piece of content to be reused on across all of them.

# NPR COPE

**Create**

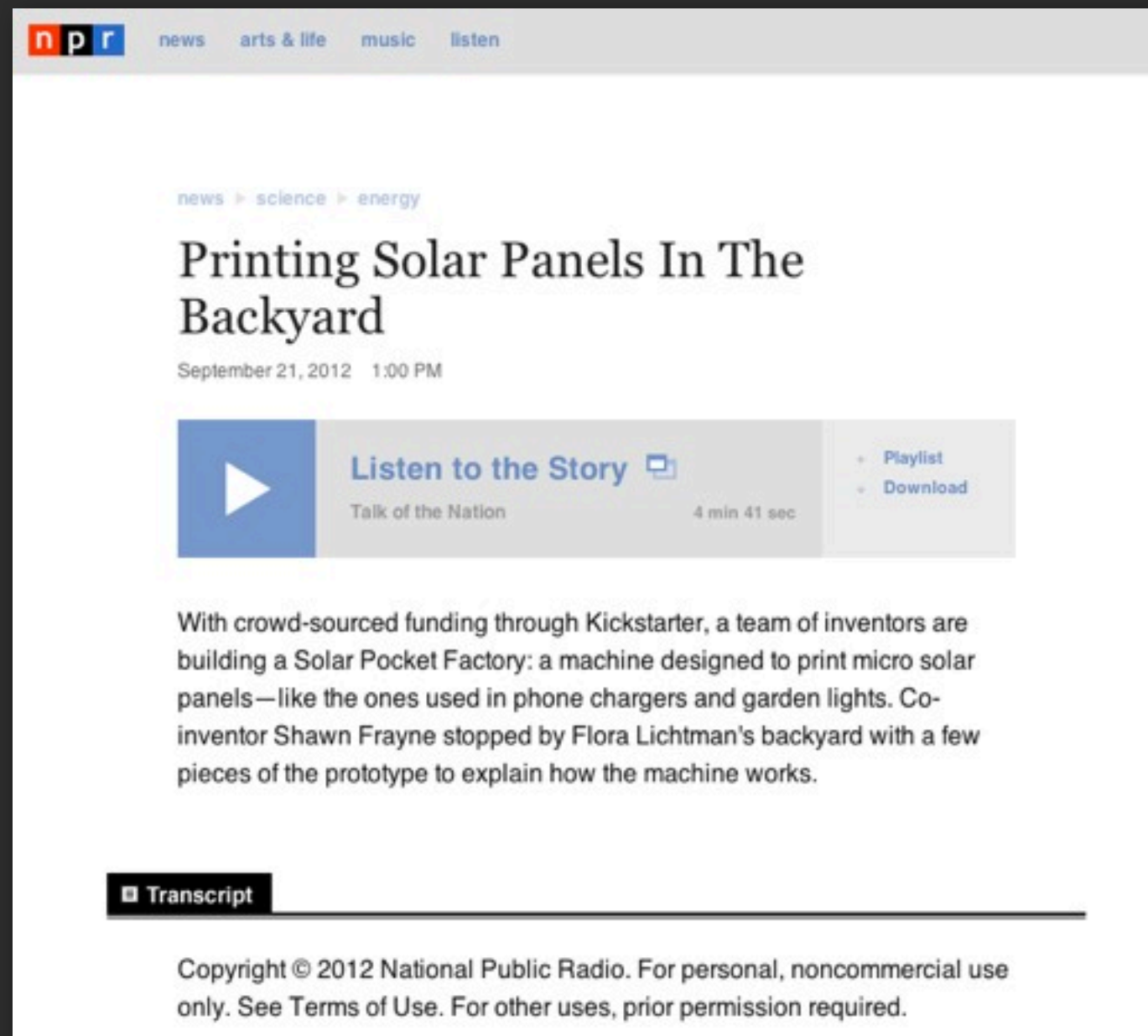
**Once**

**Publish**

**Everywhere**

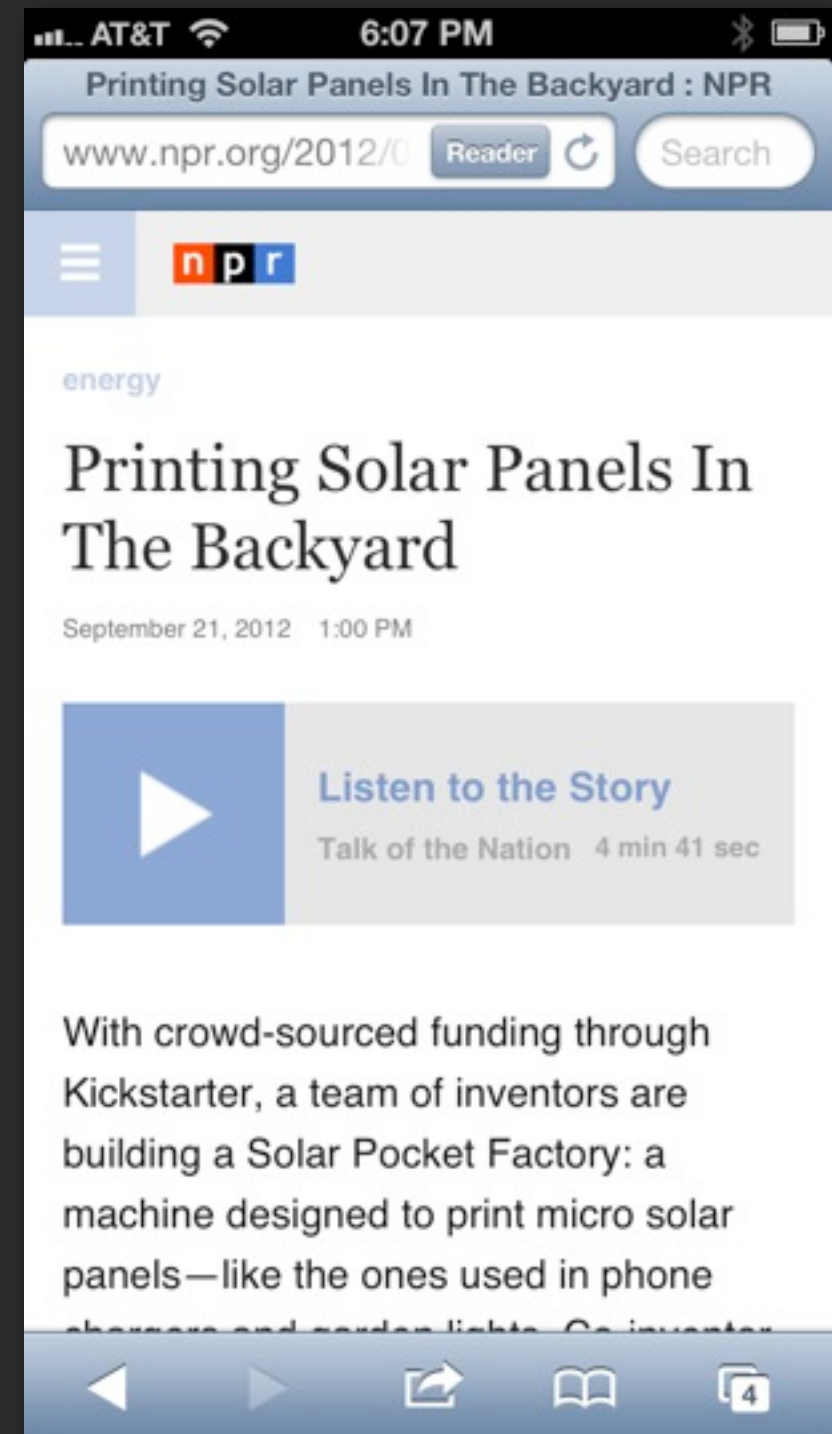
# NPR COPE

## ► Desktop



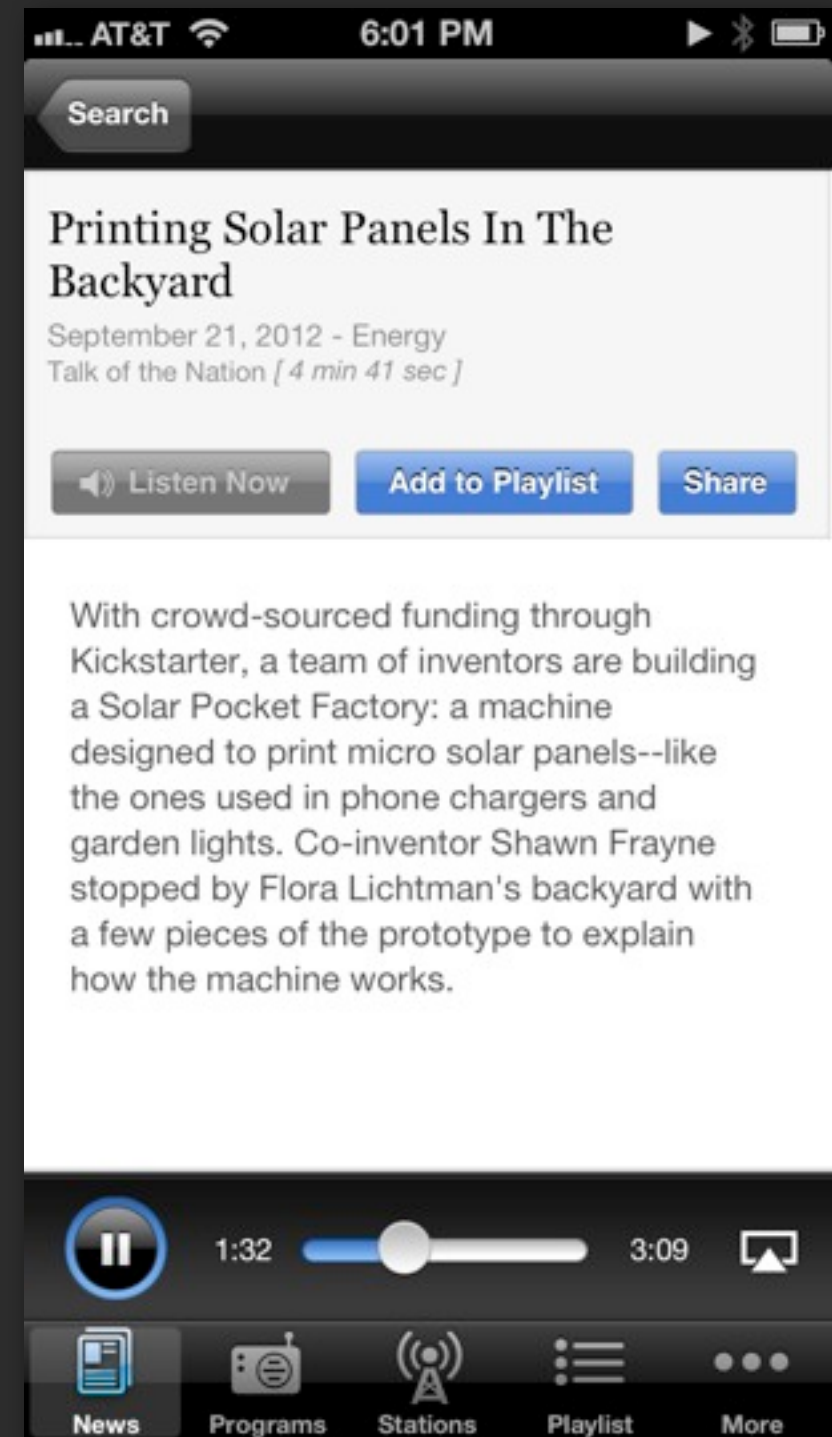
# NPR COPE

- ▶ Desktop
- ▶ Mobile



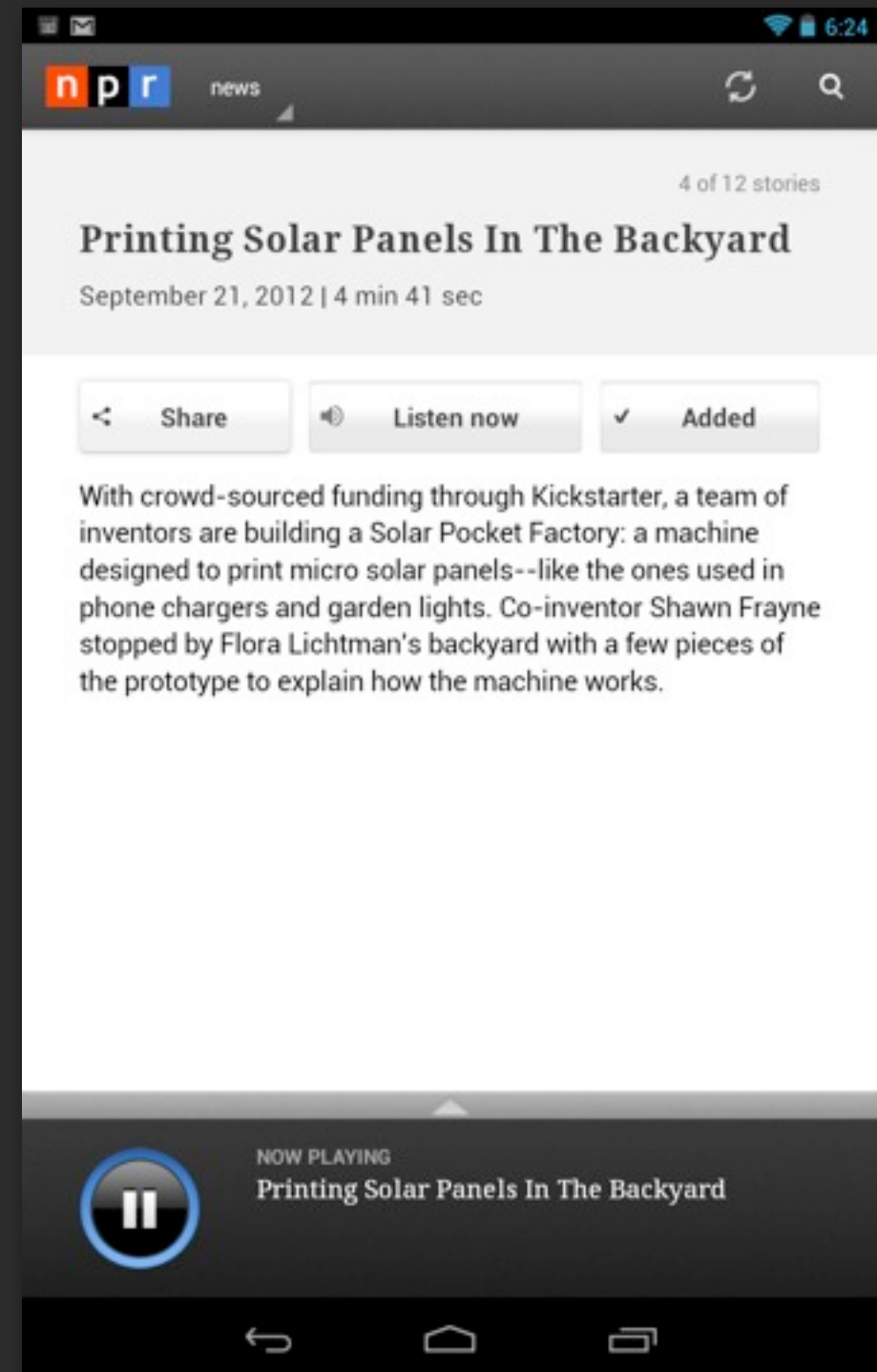
# NPR COPE

- ▶ Desktop
- ▶ Mobile
- ▶ iPhone



# NPR COPE

- ▶ Desktop
- ▶ Mobile
- ▶ iPhone
- ▶ Android



# NPR COPE

- ▶ Desktop
- ▶ Mobile
- ▶ iPhone
- ▶ Android
- ▶ Partner



The screenshot shows the MPRnews website interface. At the top, there's a navigation bar with the Minnesota Public Radio logo, a 'NEWS' tab, and other program tabs like 'THE CURRENT' and 'CLASSICAL'. Below this is the 'MPRnews' logo and a 'Member Supported · Join Now' link. A secondary navigation bar lists categories: Arts & Culture, MN Today, Politics, Business, Education, and Environment. The main content area features a headline 'Printing Solar Panels In The Backyard' from National Public Radio, dated September 21, 2012. Below the headline is an audio player with a play button, a progress bar at 00:00, and a volume icon. The article text describes a team building a Solar Pocket Factory using Kickstarter funding. At the bottom, it lists 'Broadcast Dates' as 'Talk of the Nation, September 21, 2012'.

MINNESOTA PUBLIC RADIO® NEWS THE CURRENT CLASSICAL Archive Events

## MPRnews

Member Supported · Join Now ›

Arts & Culture MN Today Politics Business Education Environment

### Printing Solar Panels In The Backyard

from National Public Radio  
September 21, 2012

▶ 00:00 00:00

With crowd-sourced funding through Kickstarter, a team of inventors are building a Solar Pocket Factory: a machine designed to print micro solar panels--like the ones used in phone chargers and garden lights. Co-inventor Shawn Frayne stopped by Flora Lichtman's backyard with a few pieces of the prototype to explain how the machine works.


#### Broadcast Dates

Talk of the Nation, September 21, 2012



# NPR COPE

- ▶ Desktop
- ▶ Mobile
- ▶ iPhone
- ▶ Android
- ▶ Partner
- ▶ Microsite


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[WAYS TO](#)

VIEW CURRENT WEEK

## Video

**POPULAR VIDEOS**

- Getting a Grip on Finger Wrinkles
- What's So Cool About Frozen Water?
- Where's The Octopus?
- Behold the Mighty Water Bear
- Shooting Stars
- What is a Flame?
- Reel Science Friday: 2012 Highlights
- Step into an Optical Illusion
- Blue Whale Barrel Roll
- Super-Sized Snapshot

**ARCHIVE**


- 2012
- 2011
- 2010
- 2009
- 2008
- 2007

**SUBSCRIBE**



- Podcast
- YouTube

SEP. 21, 2012

### Printing Solar Panels in the Backyard



Solar Pocket Factory Ocean-Invention 8.6.12

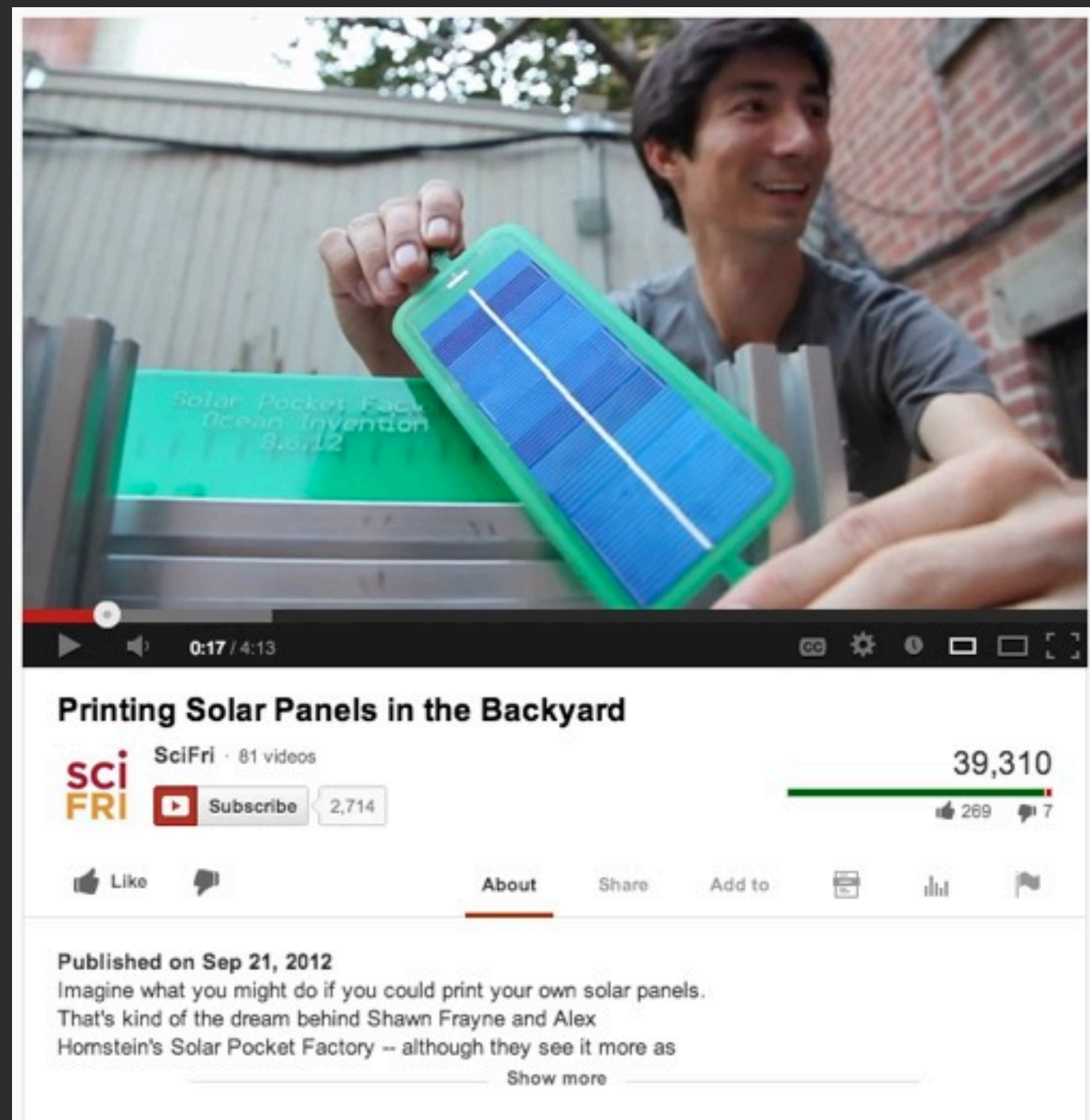
EMBED  DOWNLOAD  [Tweet](#)

Imagine what you might do if you could print your own solar panels. That's kind of the dream behind Shawn Frayne and Alex Hornstein's Solar Pocket Factory -- although they see it more as the "microbrewery" of panel production rather than a tool for everyone's garage. With over \$70,000 of backing from a successful [Kickstarter campaign](#), the inventors are now



# NPR COPE

- ▶ Desktop
- ▶ Mobile
- ▶ iPhone
- ▶ Android
- ▶ Partner
- ▶ Microsite
- ▶ Youtube



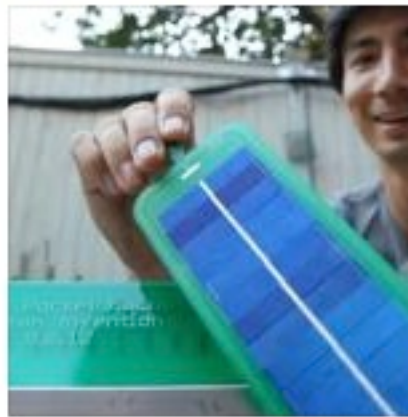
# NPR COPE

- ▶ Desktop
- ▶ Mobile
- ▶ iPhone
- ▶ Android
- ▶ Partner
- ▶ Microsite
- ▶ Youtube
- ▶ Social



**Jeff Eaton**

Just stumbled across this doing some research for a presentation. Pretty awesome stuff. <http://sciencefriday.com/topics/engineers-gadgets-geeks/video/09/21/2012/printing-solar-panels-in-the-backyard.html>



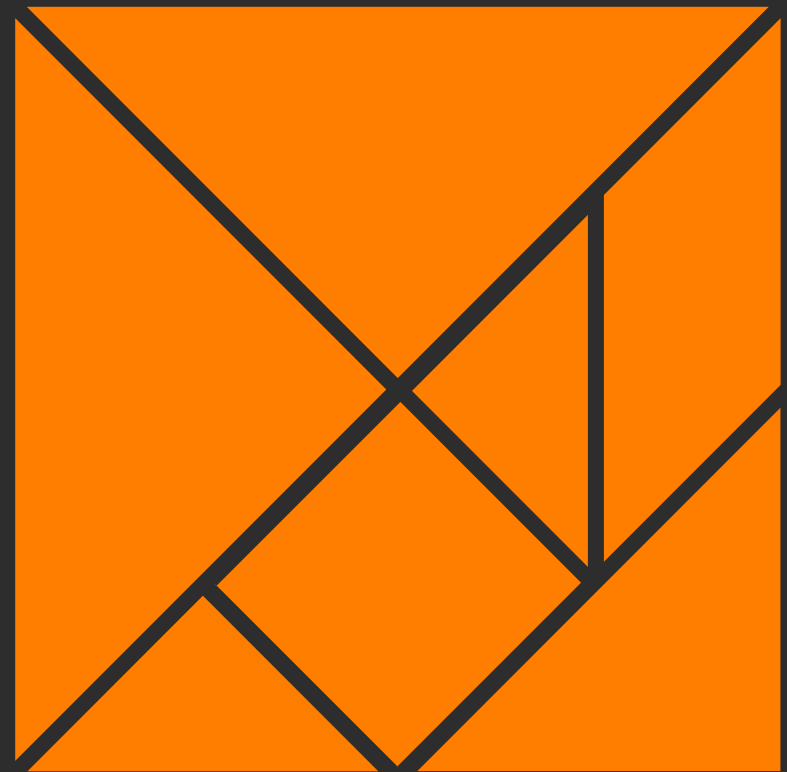
**Printing Solar Panels in the Backyard**  
[www.sciencefriday.com](http://www.sciencefriday.com)

With over \$70,000 of backing from a successful Kickstarter campaign, inventors Alex Hornstein and Shawn Frayne are working on a machine that prints micro solar panels.

Like · Comment · Share · Promote · a few seconds ago near Geneva ·

1. Cross-channel reuse
2. Meaningful structure

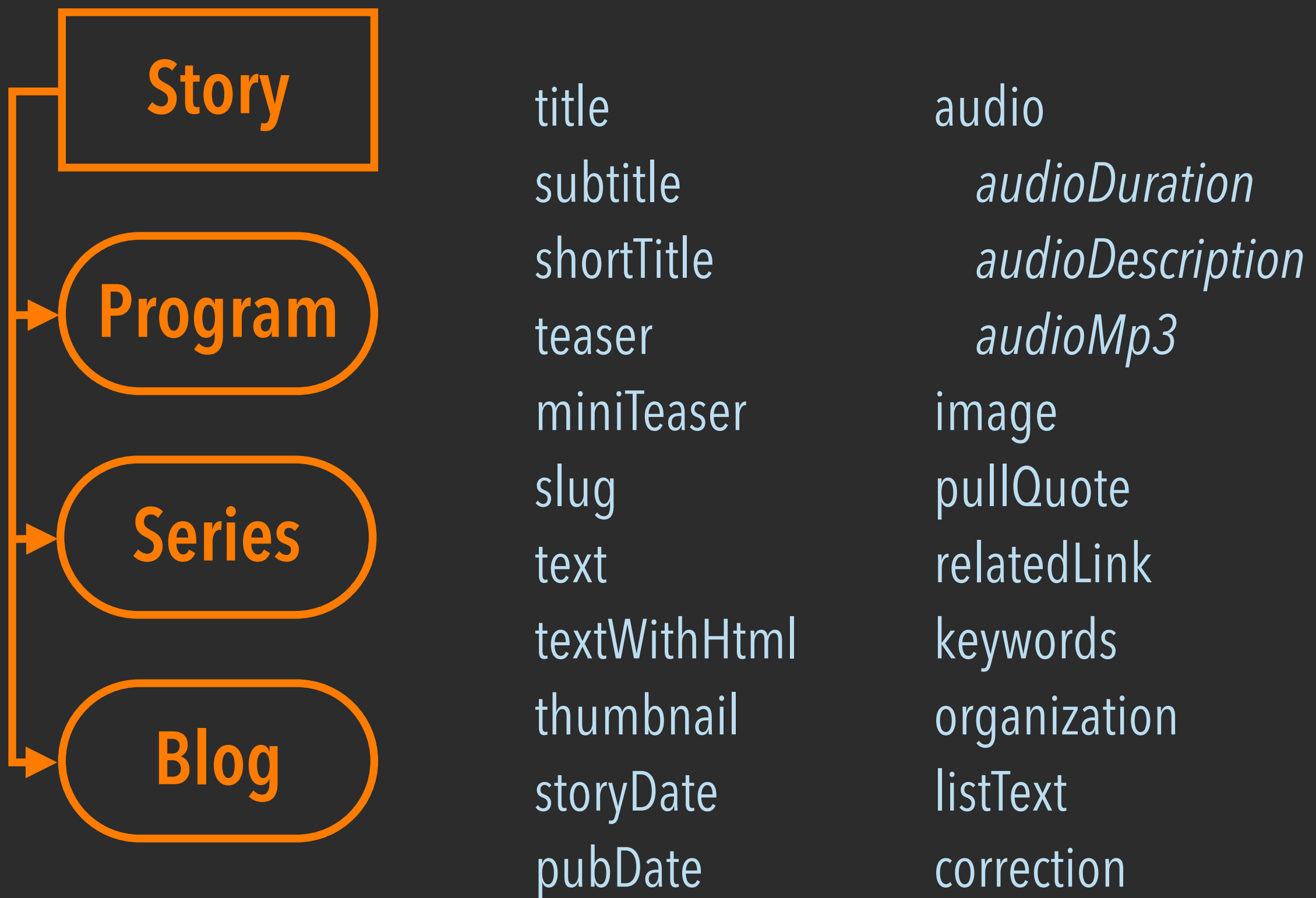
# Content made of remixable pieces



Tangram puzzles: find the outline, build it with the shapes. It relies on smaller pieces being “remixable”







1. Cross-channel reuse
2. Meaningful structure
3. Decoupled delivery

[twitter]Managing content is like parenting; eventually we have to let it go and adapt to life on its own.

<http://contentstrategy.rsgracey.com/adaptive-content-our-primary-platform-is-burning-time-to-jump> #postmobile[/twitter]



**[http://api.npr.org/query?](http://api.npr.org/query?fields=title,teasers&format=NRML&id=170510189&apiKey=MDEwNzg...)**  
**[fields=title,teasers](http://api.npr.org/query?fields=title,teasers&format=NRML&id=170510189&apiKey=MDEwNzg...)**  
**[&format=NRML](http://api.npr.org/query?fields=title,teasers&format=NRML&id=170510189&apiKey=MDEwNzg...)**  
**[&id=170510189](http://api.npr.org/query?fields=title,teasers&format=NRML&id=170510189&apiKey=MDEwNzg...)**  
**[&apiKey=MDEwNzg...](http://api.npr.org/query?fields=title,teasers&format=NRML&id=170510189&apiKey=MDEwNzg...)**

NPR has an API, and all of its content can be queried.

<http://api.npr.org>

```

<story id="161551774">
  <link type="html">http://www.npr.org/2012/09/21/16...</link>
  <link type="api">http://api.npr.org/query?id=161551774</link>
  <link type="short">http://n.pr/Sc6mZV</link>
  <title>Printing Solar Panels In The Backyard</title>
  <teaser>
    With crowd-sourced funding through Kickstarter, a team of
    inventors are building a Solar Pocket Factory: a machine
    designed to print micro solar panels. Co-inventor Shawn
    Frayne stopped by Flora Lichtman's backyard with a few
    pieces of the prototype to explain how the machine works.
  </teaser>
  <miniTeaser>
    A Kickstarter-funded project aims to build a machine to print
    micro solar panels.
  </miniTeaser>
</story>

```

This is the result! All the channels we saw are pulling source data and remixing it.

1. Cross-channel reuse
2. Meaningful structure
3. Decoupled delivery
- 4. Payoff?**

“Having an API allows us to be highly efficient at building new platforms. **We build the presentation, and the 'data' is already ready to go.** In 12 months we doubled our online audience and launched 11 products, including a site redesign, with limited dev resources.

*NPR, What We Did Wrong: NPR Improves Its API Architecture*

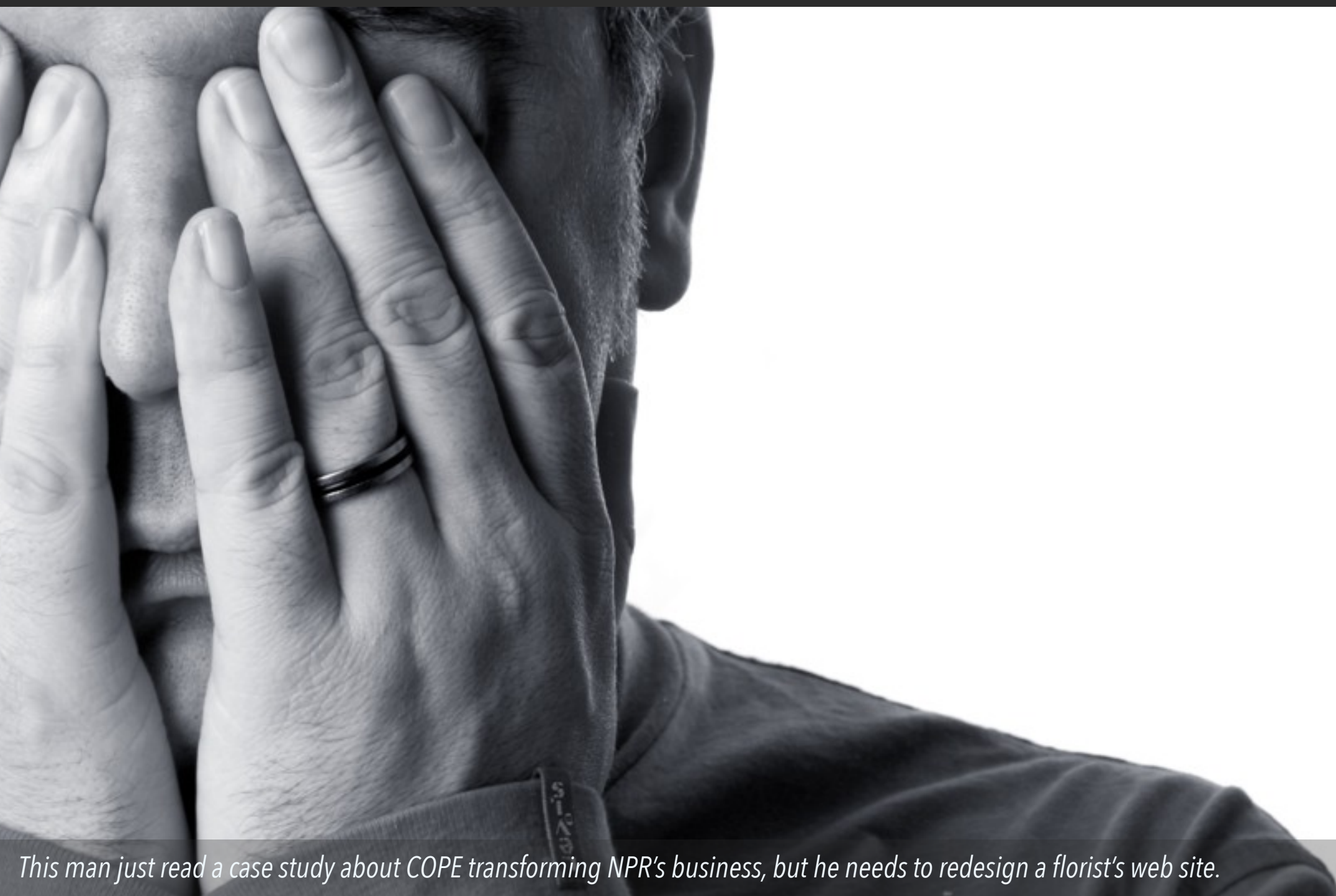
[twitter]Experimentation and innovation can happen faster, cheaper on a foundation of structured, reusable data. <http://blog.programmableweb.com/2011/04/18/what-we-did-wrong-npr-improves-its-api-architecture/> #postmobile[/twitter]

**structured, reusable  
content assets  
exposed via an API**

**doing it  
with drupal**



# So. Much. Work.



*This man just read a case study about COPE transforming NPR's business, but he needs to redesign a florist's web site.*

# 1. Model meaning, not appearance

<http://dashes.com/anil/2012/08/stop-publishing-web-pages.html>

<https://www.lullabot.com/articles/10-commandments-modern-web-design>



# what you have vs. how it's presented

- ▶ Learn from DBAs & CSS purists
- ▶ Plan for filters, sorts, and searches
- ▶ Build modes are a starting point
- ▶ Recurring markup is a red flag

# is this the scheduled WYSIWYG rant? yes.

- ▶ With multichannel, WYSIWYG isn't.
- ▶ "Dreamweaver fields" kill reuse
- ▶ Allow basic HTML, watch for abuse
- ▶ Editor plugins, if necessary

<http://www.rachelandrew.co.uk/archives/2011/07/27/your-wysiwyg-editor-sucks/>  
<http://www.lullabot.com/articles/inline-editing-and-cost-leaky-abstractions>

1. Model meaning, not appearance
2. Support content editors

# editors are the most important users

- ▶ Identify **tasks**, not just forms
- ▶ Simplify relationships & **metadata**
- ▶ Account for multi-step **workflow**
- ▶ **Tailor and refine** content tools

<http://www.lullabot.com/articles/baby-got-backend>

<https://speakerdeck.com/eaton/baby-got-backend-the-sequel>

1. Model meaning, not appearance
2. Support content editors
3. Expose and use feeds

# content APIs don't have to be crazy

- ▶ RSS, JSON, etc. (*Views RSS, Views Datasource*)
- ▶ Web Services (*Services, ContentAPI...*)
- ▶ Consume, too! (*Feeds, Client-side scripts...*)
- ▶ Drupal 8 (*Web Services Initiative, Twig...*)

<http://sydney2013.drupal.org/drupal-8-web-services>

<http://www.eldeto.com/building-mobile-app-api-using-drupal-nodejs-and-mongodb>

**design-neutral content,  
structured data feeds,  
good editorial tools**

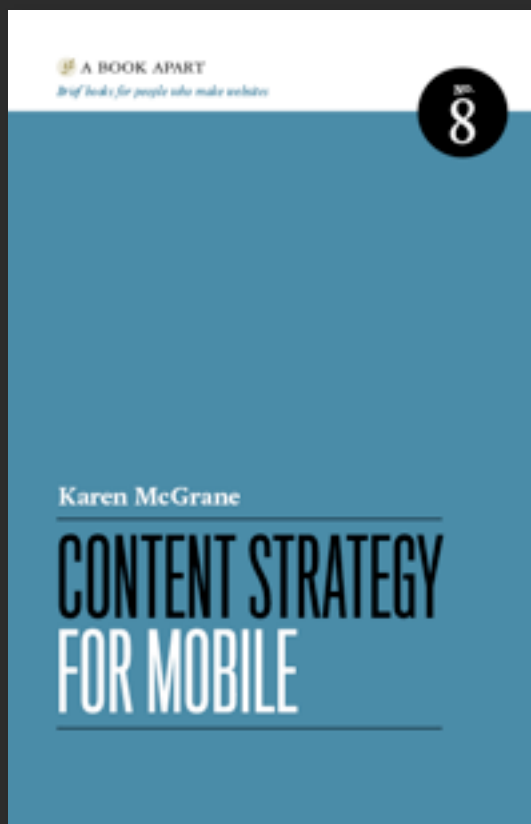
# **building for a post-mobile world**

- ▶ **Reuse, don't fork, your content**
- ▶ **Put purpose and structure first**
- ▶ **Tailor your editing workflow**
- ▶ **Expose feeds to simplify experimentation**

[twitter]Prioritize content reuse; put purpose & structure first; tailor your editing tools; & expose feeds to simplify experimentation. #postmobile[/twitter]



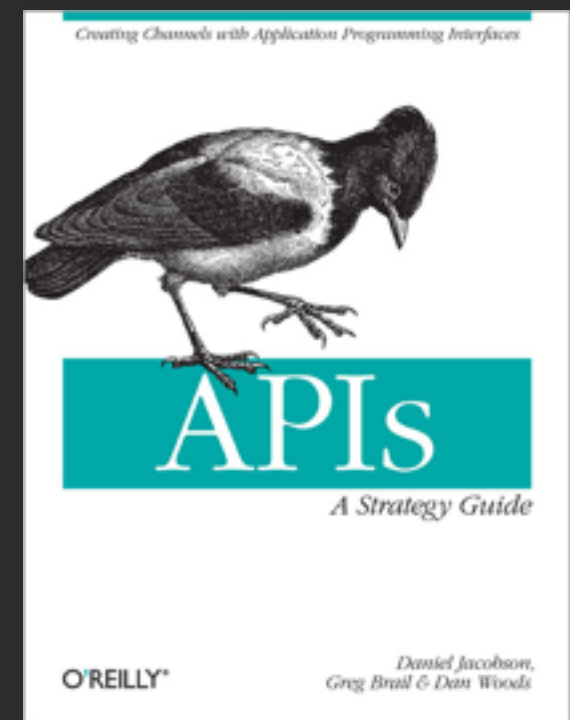
# read these books now.



*Content Strategy for Mobile*



*Content Everywhere*



*APIs, A Strategy Guide*

[twitter]Great books for #postmobile strategy and tactics: <http://www.abookapart.com/products/content-strategy-for-mobile>, <http://rosenfeldmedia.com/books/content-everywhere/>, <http://shop.oreilly.com/product/0636920021223.do>[/twitter]

# read these links, too.

Luke W	<a href="http://www.lukew.com/ff/"><u>www.lukew.com/ff/</u></a>
Karen McGrane	<a href="http://karenmcgrane.com/"><u>karenmcgrane.com/</u></a>
MIT Technology Review	<a href="http://www.technologyreview.com/businessreport/mobile-computing-in-question/"><u>www.technologyreview.com/businessreport/mobile-computing-in-question/</u></a>
Subcompact Publishing	<a href="http://craigmod.com/journal/subcompact_publishing/"><u>craigmod.com/journal/subcompact_publishing/</u></a>
Future Friendly Design	<a href="http://speakerdeck.com/lukebrooker/future-friendly-design"><u>speakerdeck.com/lukebrooker/future-friendly-design</u></a>
Baby Got Backend	<a href="http://speakerdeck.com/eaton/baby-got-backend-the-sequel"><u>speakerdeck.com/eaton/baby-got-backend-the-sequel</u></a>
10 Commandments of mobile design	<a href="http://www.lullabot.com/articles/10-commandments-modern-web-design"><u>www.lullabot.com/articles/10-commandments-modern-web-design</u></a>
These slides	<a href="http://lb.cm/post-mobile"><u>lb.cm/post-mobile</u></a>