**SEVEN
HEADS
DESIGN**

Strategic Brief

Carnegie Mellon University
College of Engineering Website Redesign

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Introduction
WHAT'S IN THIS DOCUMENT?

In this document, you'll find an overall strategy, design principles, and specific tactics we recommend to guide the development of a redesigned College of Engineering website. It's called a brief because it's... brief!

We've also included some key findings from our analysis of your existing site metrics, stakeholder interviews, and research conversations with stakeholders and other project participants. Thank you for collaborating with us on this excellent work!

Website Concept
WHAT'S THE BIG IDEA?

A website concept gives our work a purpose which ties together the strategic approach, design principles, and more. It also gives form to the message architecture and content strategy work.
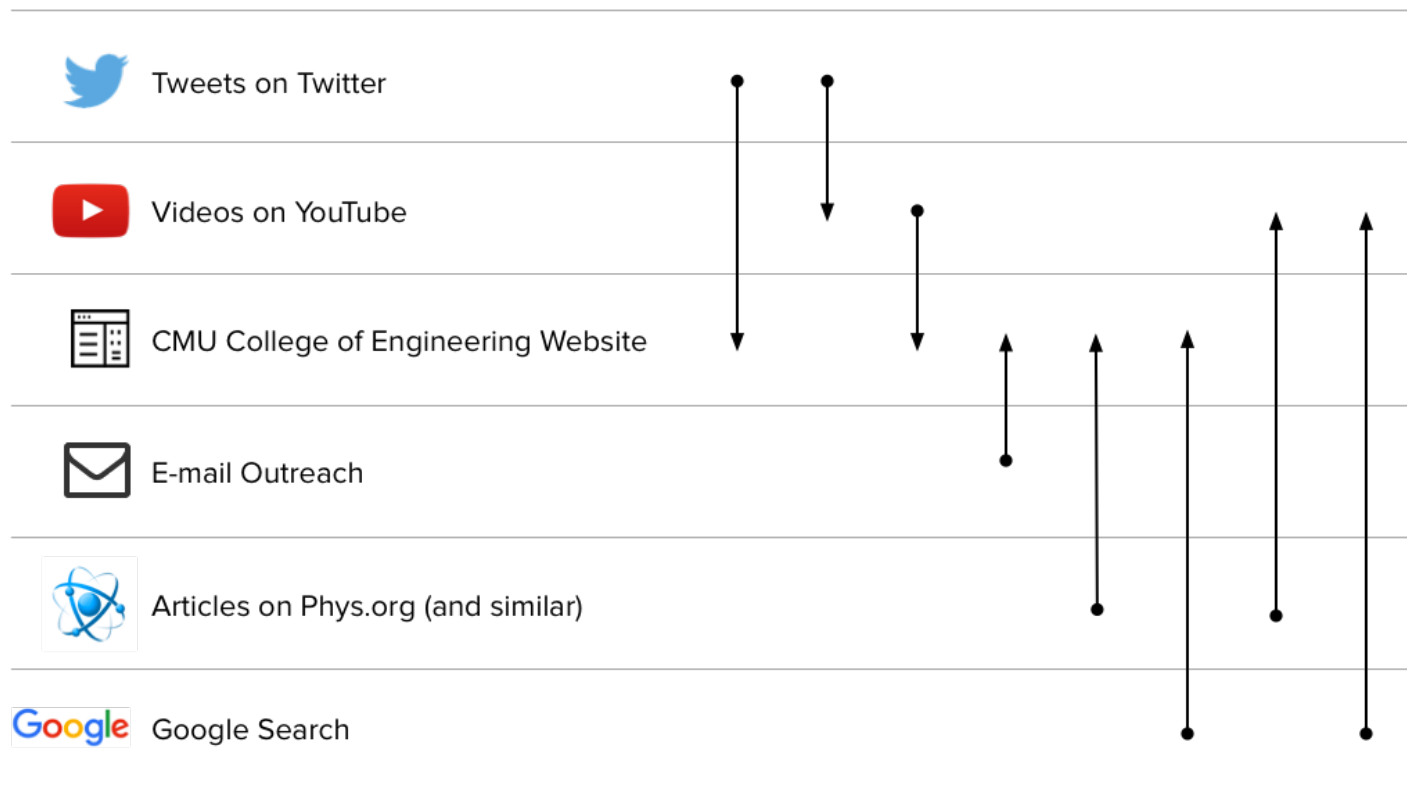
The Concept: Build Bold Connections through Stories and Support Related Nodes

As per the message architecture, impactful (applied not theoretical) research and the collaborative nature of co-disciplinary approaches are two things that distinguish the College of Engineering from its competitors. They enable stories about research to be seen as very cool, by mass media, peers in relevant fields, and the layperson. But "cool" is an ambiguous word — what does cool mean to the job at hand?

You've begun to expand your outreach and storytelling into multiple digital channels, including successful content on YouTube, Twitter, Phys.org and more. (*Figure 1*) Those channels continue to be critical in extending CMU's message and get the right people through the funnel of desired behaviors: content sharing and initiating targeted relationships. Those relationships are:

- Contacting and featuring faculty in a mass media publication
- Initiating corporate and government relationships to support research
- Recruiting students (graduate, and to a lesser extent undergraduate, which is more supported by larger university efforts)

Figure 1: How people engage with content from the College web site. They don't conceive of a home page-centric and linear experience to finding or exploring content. The site's pages are part of a much larger network and need to be compelling, regardless of how they're found.
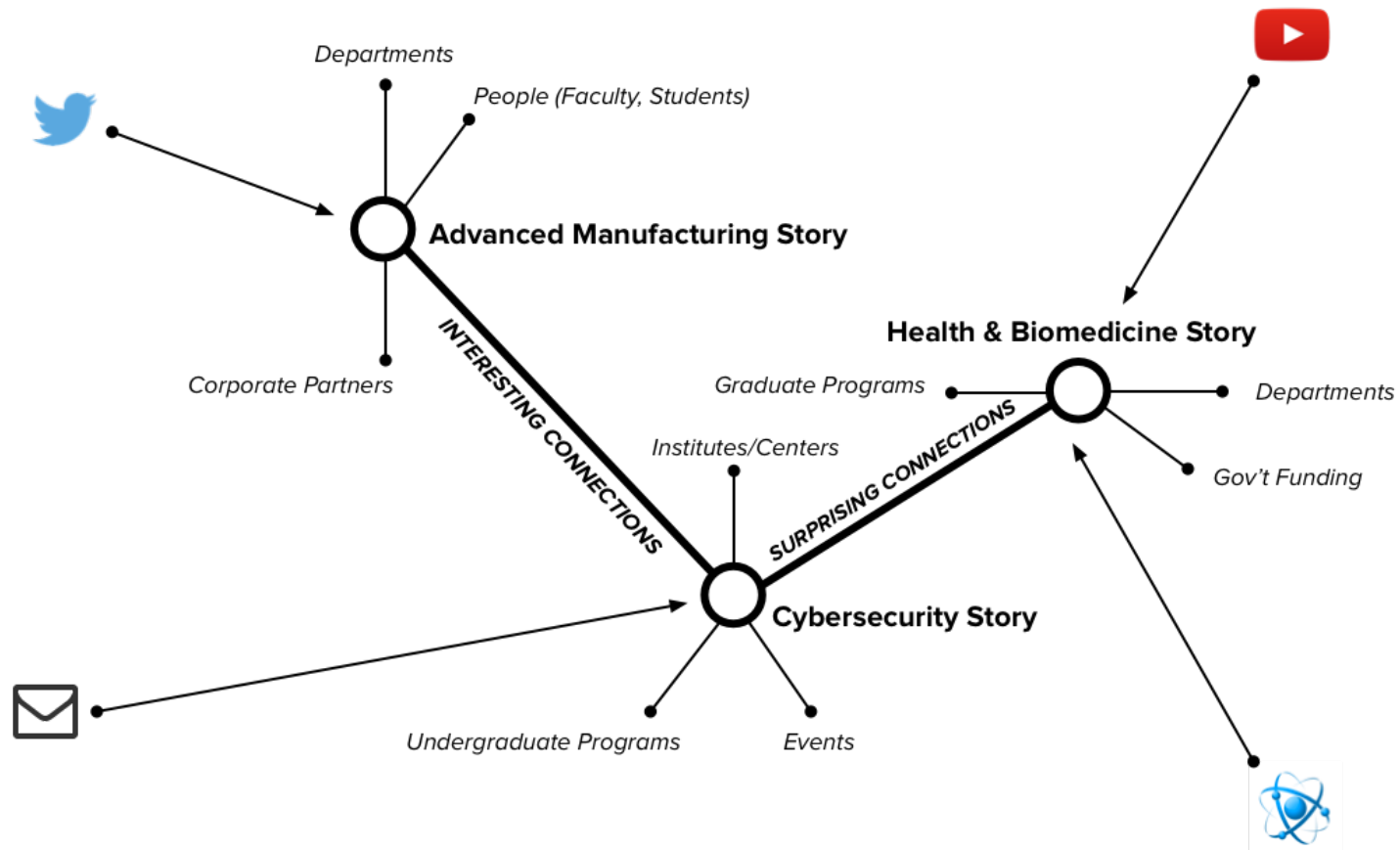
In the experience of key audiences, those channels serve as surrogate home pages for your institution. There are circumstances where your audience might engage deeply with your brand without even using the website, because a great Youtube video inspired them to pick up the phone instead of clicking on a URL. That's a missed opportunity to create the connections and explore the complex nodes that give substance to your stories, elevating them above clickbait. Without richer editorial, these things could occupy the same space as something from Buzzfeed.

Your content strategy also recommends organizing your content around five key categories:

- Advanced Manufacturing
- Cybersecurity
- Cyberphysical Systems
- Energy & Environment
- Health & Biomedicine

CMU Engineering "punches above its weight" with research in these areas because your cultural defaults are set to 'collaboration' and 'real world application.' That's fantastic! An approach to the college site experience built on emphasizing interesting (big) connections and local (smaller) content relationships will tell your stories in the most relatable and compelling ways to external audiences (media, prospects, funding agencies, corporations, peers). Think of it this way: the story is the fundamental node that creates the interest. The audience then might spend more time around that node, or potentially want to make a significant leap to another node all together (see *Figure 2*).

Figure 2: Content, as the user wants to experience it. A story is the center of gravity. Related content is going to vary based on the audience, but we want to emphasize interesting lateral connections while still accommodating smaller, related metadata.

The site should make the most interesting, surprising, and bold connections beautiful and simple to find. Connections include the larger ones between key topics deemed essential to your brand by the content strategy but also secondary connections between those subjects and research and departments, across departments, between corporate partners and departments, and more. Real meaning lives in those connections, but it doesn't live in the traditional approach to navigating a traditional higher ed web site. Therefore, we propose a non-traditional approach.

Strategic Approach
GIVING THE CONCEPT FORM & FUNCTION

How does a concept turn into a real website? The following strategic approach translates the concept into real decisions governing design, art direction, animation style, and development.

The Strategy:

Stories on the new CMU engineering site will emphasize connections across larger concepts that create intellectual and emotional "pull." These connections surprise and fascinate, compel users to learn more, reveal human applications, and shatter assumptions about "engineering for engineering's sake."

This is the coolness that gets visitors to tweet, share, and advocate. As a secondary function, stories will also facilitate movement to related research and the people (faculty, students, programs, departments, institutes, partners) behind the story before expressing an explicit call-to-action. The best versions of the best stories should be collected and experienced on the site

in logical but disparate, compelling, curated collections.

For example, the way you used the human body as an organizing principle in the magazine was the connective tissue—pun intended—between many departments, centers, people, and programs. You'll experience those connections online as a curated series of stories. This is that strong break from being "another higher ed" site and will require people to get away from expecting traditional homepages, big navigation bars, and boxy listings of stories. Users will be excited to find out what's next and hungry to draw connections with what they just read.

The Call to Action

We have heard loud and clear that external audiences are the primary target for this site, and internal audiences are secondary. We also understand that you view mass media as a lens with which you can frame other external audience

experiences. If we approach audiences this way, we may need to be a little more general with calls to action that relate to the content. For example, it wouldn't make sense to ask a prospective grad student to "invest" or a reporter from Wired magazine to "visit." We'll have to be more general and humanist with verbs, such as "talk to (dept./person/center)" and provide a pathway for discerning which action the user is most interested in taking.

How do internal audiences fit into this strategy?

Internal audiences should be reading, sharing, and engaging the same as external audiences do, but they have additional business processes that need to be supported and specific content that only they require such as academic policies and grant application administrative support. The proposed sitemap "de-emphasizes" internally focused content by segregating it into a separate, secondary navigation structure. While we agree with this recommendation, it is a temporary measure in postponing the inevitable: creating new products—websites, mobile applications, e-mail newsletters, and more—to support this very

different set of audience and business requirements.

If internal business processes and content aren't given the same design effort to perform well, they become an afterthought. They will feel like an afterthought to the audience. Your current metrics reflect this afterthought hypothesis, with internal traffic often hovering around 1% of your total unique visitors. Internal audiences also don't view more pages per visit on the site than external visitors do, so it's possible they are looking at some of the same stories, and not so much at the internal content.

How do prospective students fit into this strategy?

Inspiring advocacy will deepen interest in choosing to study at CMU engineering. For undergraduates, a lot of that heavy lifting is happening outside of the college site. And for graduates, it's happening on the department specific sites. The "best of the best" stories about research in critical topics should live on the college site. It will drive prospective graduate students to the related department via the connections we've discussed. Furthermore, early

analysis of department level metrics (specifically for mechanical engineering) indicate that longer stories don't get nearly as much engagement at the department level.

Strategic Principles
LOOK & FEEL

Establishing solid strategic principles now will help guide our discussion about design directions and tactics. As we create screens and elements on the page, we can measure the quality of what we make against these principles in our conversations. Strategic principles are the most successful when they can quickly help us:

- Say, "No, that's not right" in a critique
- Separate you from your competitors
- Remain broad enough that their meaning can be revisited in different contexts. "Cool" might be too ambiguous, but "exactly like Coca Cola using polar bears to indicate coolness" is way too specific.

We think these principles fit the bill:

1. **Exude creativity.** Take unconventional but deeply considered approaches to real problems. "How can we make it better?" is the first and last question we ask across areas of practice in whatever way best serves the solution.
2. **Challenge assumptions to surprise and build interest.** Be bold, and support boldness with straightforward detail that is quick to get to the point. No need to be frivolous to draw people in. The value will be self evident from the meaning of the stories.
3. **Create interest for readers and build pathways to continue exploring effortlessly.** Write about fascinating subjects—and display it as such: easy to read and simple to find but hard to put down. Don't overwhelm readers with myriad options, but deepen the appeal by exposing the next step at the right time.

Objectives & Key Results
WHY AND HOW

Companies such as Intel and Google use a framework known as Objectives & Key Results—or OKRs for short—to create an effective connection between site results and organizational goals. OKRs help teams to focus and prioritize around a specific outcome.

Objectives are the qualitative part of the equation. They should be ambitious but vague—and occasionally uncomfortable—because they force you to reflect on your own opinions.

To help teams realize those Objectives, they are paired with quantitative Key Results. Good key results are hard to reach but not unrealistic. They are graded on a score from 0 to 1, where a 1 means you hit 100% of the goal. A good score is between 0.6 and 0.8. Scoring a 1 means it wasn't tough enough, but scoring a 0 means it might have been too ambitious.

CMU College of Engineering Objectives & Key Results

Provide a platform for amplification of great stories.

We want people to read until they are compelled to act: to share, to contact, and to advocate. Current visitors are only reading 2 pages per visit on average, and there is no measure in place what percentage of people reading a thing are likely to share a thing. Anecdotal evaluation using **http://linktally.com/** seems to indicate that recent stories are not being shared very much if at all.

Key Results

1. Grow to 3 pages per visit on average within 6 months after launch.

Grow media interest from the mass and other (social) media.

The new site needs to be successful in engaging the media, which includes getting Wired or Scientific American to talk to faculty, getting traction on Twitter and Facebook. We believe these are indicators you should be keeping an eye on.

Key Results

1. 20% increase in traditional media inquiries initiated by the website. This assumes you have a baseline of more than zero, of course. Whatever the baseline is, we think the site should give you a bump of 2 for every 10 you currently get.
2. Incoming social media traffic should increase, not decrease. Expect growth in referral metrics from Facebook, Twitter, and LInkedIn as well as other channels you invest in (e.g. YouTube). Monthly, you see around 1,000 referrals from Facebook, and referrals from Twitter and LinkedIn in the hundreds (100 to 300 referrals for each). Let's shoot for a 50% increase, to 1,500 for Facebook and 150 to 450 for Twitter and LinkedIn (individually).
3. Measure site-sourced sharing as a part of article performance, where 10% of an article's audience should engage in a measurable amplification behavior. This calculation should include address bar sharing analytics, which

you can read about at http://7headsreads.co/m/1f.

Define baseline targets and strategy for internally focused content.

Current internal traffic, which is traffic originating from a CMU IP address, hovers around 1% of the total. But we know you spend a lot more than 1/100 of your time on content that is only designated for this audience. As a part of this site launch, let's begin treating this audience more appropriately by establishing some baselines by which you can argue for appropriately leveled effort.

Key Results

1. Grow internal usage as a function of total audience size. We estimate around 2,200 students, faculty, and staff within the College of Engineering, based on the the most recent Carnegie Mellon Factbook. Current traffic is around 500 users per month. This puts you at around 15% to 20% engagement. Let's shoot for 40%, and grow monthly users to 800 or more.

Template Recommendations
NEXT STEPS

We've seen better results in going deep rather than broad, and since you've already responded positively to our early design sketch, we want to push that further. The best work—and the best results—comes from iterating multiple times over the same thing, as opposed to doing a few variations and then throwing out all except one.

We can provide choices in smaller chunks but more frequently as part of exploring one design direction, extending and iterating on that initial sketch. For example, we may do the same general design concept but with variations in color scheme, as opposed to two completely separate directions where we'll throw one out at the end.

Our immediate next effort will be to apply these principles and the direction established in that sketch a set of four specific points in the site. That will allow us to iterate on the design direction until we meet the strategic principles set forth in this brief.

The four templates that we propose starting with are

- Research Story
- Education Landing (including events)
- Research Landing
- Academic Policies

We've added academic policies for a reason. Our goal is to provide the most consistent and usable experience possible while recognizing that external and internal audiences have different needs that need to be balanced within a single design system. We want to make sure that anything we do to create a great external user experience doesn't fall apart when applied to internal documentation.

After resolving these four templates, we can decide which templates come next in subsequent rounds and what effort would be required to support departments, centers and institutes, and other types of internally-focused content.