### Designing navigation for humans Principles for effective website information architecture

Dan Zollman New England Drupal Camp, November 2023

#### Hi everyone

Thanks so much for coming to this last session of the day

We're saturated with information, we're tired, ready for the end of the day.

We've spent the day talking about how to make websites beautiful, functional, informative, usable, and accessible.

# Navigate and understand

And now we're here in this session about information architecture, because we want to make sure that our websites are well organized, easy to navigate, and easy to understand.

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So that's what I'm going to talk about. I'm going to introduce some of the theories and principles that can help guide how you think about designing navigation and IA in your own work.

Hopefully I've "architected" this content to be digestible and understandable. But I will also share the slides and speaker notes, as well as a resource guide if you'd like to read more.

# Topics

- 1. Understanding *how humans navigate*
- 2. Attending to *conceptual structure*
- 3. Considerations for navigation menus

I'm going to talk about three main topics.

1. I'm going to start by really diving into idea of navigation. What does it mean to navigate something? What is the experience that a person has when navigating, and how can we design websites to support them when they are navigating?

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- 2. Then we'll shift towards the design process. How can we use concept modeling and create *conceptual structures* that make a website easy to navigate?
- 3. And then finally, once we have that underlying conceptual structure to build with, we'll briefly talk about designing navigation *systems*, things like menus. hat you can use to help think through navigation and IA problems.

I'm going to make the most of this time for the presentation, and I'll invite you to continue chatting with me afterwards.

A quick bit about me:

### Dan Zollman

Independent consultant in Cambridge, MA

Information architecture & UX strategy for digital products and services

IA in complex orgs: Government, higher ed, nonprofit, finance

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Responsible & ethical design

I'm Dan Zollman. I'm an independent consultant specializing in information architecture and UX strategy for complex digital products and services. I've also spend a long time doing IA/UX in-house at places like Vanguard, Tufts University, and the state of Massachusetts.

Apart from IA, I'm very interested in topics like theory of design, systems thinking, and responsible & ethical design. I won't be talking about those right now, but I'm happy to chat later.

Now, to get to our main topic, let's start with a user scenario.

### Getting health insurance in Massachusetts

It's super interesting scenario, it's really going to energize us...

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(Picture of Colin Robinson, a character from the TV adaptation of What We Do In The Shadows.)

### Getting health insurance in Massachusetts

(Just kidding)

If you live in Massachusetts and don't have health insurance through an employer, how would you go about getting assistance from the government?

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There are a number of options. If you or a dependent meet certain criteria, you might be eligible for free or discounted health insurance. If you're not eligible, you can still get it through the state marketplace.

But as you know, trying to access government services can be confusing and frustrating.

If you've never done it before, you might not even know *if* insurance is available, what *kind* of insurance is available, or what to *call* it.



As a thought experiment, if you're like me, you start with a Google Search for "MA health insurance".

The first results include a number of scams and private insurance websites that are trying to take you off track.

Google	ma health insurance X	<u>و</u> م	
e e e g e			
	Mass.gov     https://www.mass.gov > Health & Social Services		
	MassHealth		
	In Massachusetts, Medicaid and the Children's Health Insurance Program (CHIP) are combined		
	into one program called MassHealth. MassHealth members may be MassHealth Health Plans · Mass Health · MassHealth Plans and · Seniors		
	People also ask :		
	What is MA health insurance?	~	
	How much does health insurance cost per month in Massachusetts?	~	
	What is the maximum income to qualify for MassHealth?	~	
	How do I get healthcare in MA?	~	
		Feedback	
	Massachusetts Health Connector https://www.mahealthconnector.org		
	Massachusetts Health Connector – The right place for the right		
	The Health Connector offers health and dental coverage from the state's leading insurers and		
	provides tools for Massachusetts residents and small businesses Individuals & Families · ConnectorCare Plans · Student Health Insurance · Contact		
	S mahix.org https://www.mahix.org individual		
	Massachusetts State Health Connector-Individual & Families		
	The Massachusetts Health Connector is the state's Marketplace for health and dental insurance Before your get started, be sure to check the Help Center for	).	
	Blue Cross Blue Shield of Massachusetts https://www.bluecrossma.org :		
	Blue Cross Blue Shield of Massachusetts: MyBlue Healthcare		
	Blue Cross Blue Shield of Massachusetts brings health insurance plans, medical claims,		
	insurance coverage, penents and telenealth via MyBlue Web & App.		

If you're savvy enough, which you might not be,

you'd scroll down and find three options.

The first one says MassHealth. Ah--that sounds like Massachusetts Health Insurance. That must be what I'm looking for, right?

But I also notice that there are two links both labeled Health Connector.

We're already noticing some information architecture issues with the labeling and the multiple websites.

Let's keep going. For sake of brevity, I'm just going to summarize some of the things you might see next along this journey, without going through the entire thing step by step.

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<ul> <li>an ortical website of the Commonwealth of Massachusetts <u>Here's how y</u></li> <li>Menu</li> </ul>	Nu know 🗠	🎕 State Organizations	➡ Log In to
🕐 Mass.gov	Search Mass.gov		SEARCH Q
A ➤ Health & Social Services			
MassHealth n Massachusetts, Medicaid and the Children's Hi combined into one program called MassHealth. 1 o get doctors visits, prescription drugs, hospital iervices.	ealth Insurance Program (CHI AassHealth members may be stays, and many other impor	P) are able aant	
LL MASSHEALTH MEMBERS NEED TO RENEW THEIR COV 023. WE MAY CONTACT YOU VIA TEXT OR EMAIL ABOUT THER IMPORTANT INFORMATION. WE WILL NEVER THR OUR CREDIT CARD INFORMATION.	ERAGE STARTING IN APRIL YOUR RENEWAL OR WITH EATEN YOU OR ASK FOR		
Information for MassHealth Applicants >			
Coronavirus Disease (COVID-19) and MassHealth >			
Information for MassHealth Members	+		
MassHealth Health Plans	+		
MassHealth Health Plans MassHealth Initiatives	++		
MassHealth Health Plans MassHealth Initiatives MassHealth Provider Information	+ + +		
MassHealth Health Plans MassHealth Initiatives MassHealth Provider Information MassHealth Publications	+ + +		

First, if you click through to the MassHealth content on Mass.gov, there is a LOT of information to wade through. And yet, there doesn't seem to be anything here for someone who's new.

https://www.mass.gov/topics/masshealth



There's a page about renewing your insurance.

https://www.mass.gov/masshealtheligibility-redeterminations

■ Menu	🗲 🌐 Select Language 🗸 🌲 State Organizations	➡ Log In to
Wass.gov	Search Mass.gov	SEARCH <b>Q</b>
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A page that tells you how to enroll in a health plan, but only after you've already applied and been approved.

https://www.mass.gov/masshealthplans-and-enrollment-guide

= menu	🥃 🌐 Select Languagi	e 🗸 ـ State Organizations	➡ Log In to
🕐 Mass.go	V Search Mass.gov		SEARCH Q
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A page that tells you how to apply...getting warmer, but I'm not sure if I'm in the right place.

https://www.mass.gov/how-to/apply-formasshealth-the-health-safety-net-or-thechildrens-medical-security-plan



And finally, there's a page that tells me about eligibility, which is what I really want to know.

However, it tells me to actually apply in order to know if you're eligible, what that means is, I don't know if I'm actually applying to the right program.

And this whole time, there's no mention that this is only a subset of the available insurance options. There are others, and at minimum, you're always going to be eligible for *something*. That's pretty important thing to know.

https://www.mass.gov/service-details/eligibility-forhealth-care-benefits-for-masshealth-the-health-safetynet-and-childrens-medical-security-plan



The second link from that Google Search goes to a website called the Massachusetts Health Connector. This mentions a handful of programs, but it still doesn't clearly outline what is available to whom.

And then the "Apply" button takes me to that third site...

https://www.mahealthconnector.org/



which is *also* called the Health Connector. This site is confusing in its own way, but I'll stop here.

Suffice it to say that getting health insurance in Massachusetts is not really an easy experience if you're not already familiar with how the system works.

https://www.mahix.org/individual/

Let's say you do manage to get registered for a health connector plan, but you get stuck later on in the process. So you call for help. But after you've waited on hold, the customer service rep can't help you. They can't find your account in the system. They don't know what happened to it.

The reason is that there are different phone numbers for the Health Connector and for MassHealth, but both sets of contact information are displayed on the same website. It's a reasonable conclusion to think that the name MassHealth describes the insurance you have, and then call that number, but that may not be correct.



The point of this is not just to go on a rant about the usability of government services, although I do think we should demand better from our state government.

The point is that this is instructive from an IA perspective.

One takeaway is that there was a failure to account for user needs.



At the beginning of this scenario, I hadn't made a decision yet.

I just wanted to know what was available to me.

But

User task: What health insurance is available to me? Much of the content I encountered required me to *already know* which government program I was interested in.

Much of the content I encountered required me to *already know* which government program I was interested in.



But beyond that, there was a conceptual breakdown. My mental model was that I was looking for *health insurance*. What I found was organized in terms of programs or perhaps different government departments--MassHealth in one place and Health Connector in another place. Start with the program, and you get to the insurance later.

But even that is ambiguous.



# Are MassHealth and Health Connector the only two programs?



#### What about all these other ones?



Is the Health Connector a kind of insurance, or is it just a container for all the others?



# Is it a container for everything except MassHealth?



What about insurance from the marketplace? Is there a health connector inside the health connector?

The structure is never clear.

I want to stress that this isn't just an issue of labeling and writing a description of each program. It's a structural issue that's pervasive throughout the online experience.



Here's another example. I have an application and an enrollment. Why are they two things?



Are they steps in a process?



### Does the application contain the enrollment?



Once I've finished enrolling, why do I still have an application?

Again, this is not just about labeling. This goes deep into the data models and functionality of these systems.



Whatever the right conceptual models is, it isn't *clear*, and it isn't applied *consistently* throughout the experience.



There's a lot that Mass.gov does really well.

It happens to be built on Drupal.

It has an extremely high quality of design, usability, technical infrastructure, and a toolkit of thoughtfully built content types and templates.

#### THE DETAILS

How to apply	To apply, you <b>may</b> need to provide the following information and	
Next steps	documents:	
More info	<ul> <li>Social Security numbers, if you have them, for every household member who is applying</li> </ul>	
Downloads	• Federal tax returns, if you file	
Contact	<ul> <li>Information about citizenship or national status or immigration status</li> </ul>	
	<ul> <li>Employer and income information for everyone in your household (for example, from paystubs or wage statements)</li> </ul>	
	<ul> <li>Information about any job-related or other health insurance that you are currently enrolled in or have access to</li> </ul>	
	Who can use this application	

Content is written in plain, step by step language that most Massachusetts residents will be able to follow.

But you can have great UI design, great software, and you can make sure the content is perfectly written on every individual page...and the system still isn't usable without effective navigation and a strong conceptual structure.

### IA is not easy.

- Not as visible as other design & dev work
- Reduced to menus
- Determined by guessing
- Determined by org structure & politics

This is not easy.

It's easy to get tied up in more visible aspects of UX design and development, and lose sight of how things fits together.

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When we do talk about IA, it gets reduced to navigation menus.

We might end up making guesses. Or we let organizational politics define IA.

And we know that's a problem because users don't think about your organization the way you think about it internally. **They don't know enough about you to understand how you're organized.** 

### We build environments in which people live and work

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It's important to recognize that we are not just building interfaces. We build environments in which people live and work and interact every day. We live in information. The architecture matters.

(For an exploration of this, see the book *Living in Information* by Jorge Arango.)

### Part I: How humans navigate

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So let's think about the navigation experience I just went through.


In web design, when we talk about navigation, we're often talking about parts of a website things like menus, links, and search.

Many different elements of the website support information seeking.

All of these are part of the website's navigation system.

But let's shift that mindset for a moment. I'm going to borrow a bit from another IA theorist, Andrew Hinton. He said:



You are navigating when you're looking for information on the website. But you're also navigating when you're just scrolling on social media, when you read about something, when you ask someone else to explain something to you, when you call up customer service for help getting health insurance. "My health insurer's website just had a big update that made it a lot more navigable...that's great!

But what it does NOT do is help me navigate the broader system more effectively - it

doesn't help me find my way, translate between divergent meanings, or interact with other entities very well."

– Andrew Hinton<sup>1</sup>

 Andrew Hinton, "What We Talk About When We Talk About Navigation", IA Summit 2019. Used with permission.



Andrew says "navigation is a handy label for humans perceiving and acting in an environment so as to understand what it is, how it works, and where to acquire the resources each human needs." [same source]

People use all of the resources in their environment to help them navigate.



Source: Andrew Hinton, "What We Talk About When We Talk About Navigation", IA Summit 2019.

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AH describes how navigation means being involved as a human being in a particular situation, with particular needs, seeking the resources to meet those needs. (diagram)

We can build better ecosystems by understanding what those situations are, what the needs are, and what resources should be available.



So to summarize, navigation is about using the resources around you to understand the system you're working within.

But, let's take that a step further.

Just having the information doesn't mean people will find it.

We can't just add a search field, or even a chatbot, and call it done.



Human information seeking behaviors have been a topic of study in relation to computer systems since the 1960s.

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Marcia J. Bates is one important scholar whose work has been highly influential in the world of information system design over the past five decades, starting with her early research on how people search in library catalogs.



One of Bates's best known ideas is the berrypicking model of information seeking.

Earlier theories stated that a user starts with a certain goal, and simply keeps searching until they find the information they want.



In the berrypicking model, a user starts with an initial query and they get an initial result. They might save a little bit of that information, but it wasn't exactly the result they wanted, so they try again with a different query. Then a new thought or idea comes to mind, which sends them in a different direction. They continue on this semi-improvised pathway, gleaning different pieces of information along the way.

The berrypicking model shows that people don't just start with a goal in mind and then satisfy it. They use a wide variety of techniques at different points in time, with an evolving goal, and all of these techniques work together to help people navigate successfully.



Navigation ranges from exploration without a concrete goal in mind, to known-item searches where you know you are looking for a very specific thing.

### Modes of information seeking (Donna Spencer) $^{1}$

- 1. Exploratory
- 2. Known-item
- 3. Don't know what you need to know
- 4. Re-finding

 Donna Spencer, "Four Modes of Seeking Information and How to Design for Them", in Boxes and Arrows. March 14, 2006. https://boxesandarrows.com/four-modes-ofseeking-information-and-how-to-design-for-them/

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Donna Spencer describes how sometimes you just don't know what you need to know.

Think about someone visiting your organization's website. What would their experience be if they don't know what they need to know?

There are also situations when you need to find something you've seen before (refinding). Maybe you don't remember exactly what it is or how to get back to it. What clues would you be looking for to help you remember?



Think about how a website can have a mix of functionality and UI patterns that help in situations where you're looking for a specific item, or you're just exploring, or you're trying to pick up where you left off yesterday.

So it's helpful to apply these categories of behavior to website design - to take the time to think about what exploration, discovery, and finding means for the specific audiences and the specific content you're working with.



Dan Ramsden, information architect and creative director at the BBC, describes how behaviors range in the level of intentionality or motivation. Browsing around a used bookstore just to see what piques your interest is a lot different than looking for a cookbook that has a specific recipe.

People also vary in the amount of context and knowledge they have about the topic. This affects the strategies they use, and the language they will use to express what they want.

# Modes of information seeking (Dan Ramsden) $\frac{1}{2}$

- 1. Motivated movement
- 2. Delightful discovery
- 3. Foggy finding
- 4. Not necessarily navigation

 Dan Ramsden, "A model for navigation and information-seeking". See https://danramsden.com/2017/01/27/model-navigation-information-seeking/ and the four linked pages.

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Dan Ramsden creatively defines his own four modes, which are subdivided into 12 behaviors.

I'd encourage you to check out these resource on his website. I especially like the metaphor of "foggy finding" to describe how sometimes you don't always understand what you're doing when you're navigating unfamiliar territory.

Again, each of these is supported by different features and design patterns in the user interface.



The UI affects what strategies you can or can't use.

The information you see along the way changes what you do by telling you what's available.

It make you aware of something you didn't know you were looking for.

Seeing a menu of options to choose from is easier than trying to remember the a specific phrase to search for. (That's the psychological principle of recognition over recall.)



The idea of information scent comes from a model called information foraging theory.



The idea behind information scent is that if you're looking at a set of options, you look for the cues that look like they will get you *closest* to the thing you actually need.

It's okay that DrupalCon isn't one of the links in the main menu, because "Events" carries the information scent of a conference.



This is specific to the audience, because words carry different connotations for different people.

This is something to think about in the way you categorize content and the way you label it.

Information scent can help people find information, but it can also mislead someone and send them down the wrong path.

MassHealth had the right information scent even though I really needed the Health Connector.

(More about information scent:

https://www.nngroup.com/articles/information-scent/)

Now, we've talked bit about how people seek information and use the resources they encounter to help them move from one step to the next.

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I want to go back to the idea that all of this takes place in an *environment*.

Perceiving and acting

Remember Andrew's statement that navigation involves both perceiving and acting.

Moving through an environment.

Sometimes we need to be aware of that environment in order to move through it.

If you're at the art museum, you go from one painting to the next, reading the signs to help you along. But sometimes you'll stop and say, which room am I in? Am I in medieval art? How do I get to modern art?

Note: This view on navigation in an environment, as represented by Andrew Hinton, is derived from the field of ecological psychology (e.g. JJ Gibson).

#### Wayfinding

- How people orient themselves and navigate from place to place
- Systems in the built environment (e.g. signage) that enable wayfinding

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Wayfinding refers to...

We may use maps from time to time to orient ourselves and to plan our route. But when we start moving, we're experiencing ourselves in relationship to the environment around us, making decisions about where to go from one moment to the next. *Oh, I remember that the registration desk is that way.* We may take a different route than the one we plotted on the map. That's wayfinding.

Similarly, to navigate a website, you don't normally look at a sitemap. You look at the page you're on and the cues that tell you where you are and what kinds of spaces are available to you.



We look for answers to these questions in everything we see on a web page: page titles, headings, navigation menus, breadcrumbs, calls to action, imagery, colors, and so on.

# Part I Recap: How humans navigate

- Navigation => Understanding
- Provide support for a mix of information seeking behaviors, including situations where people *do* and *don't* know what they're looking for
- Support wayfinding by making the structure visible

 Navigation is about understanding. That includes using all of the resources available in the environment.

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- We want to design for a *range* of information seeking behaviors.
- We want to design for wayfinding by providing cues that help people through the spatial digital environment.

## Part II: Designing with conceptual structures

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We've talked about some of the human needs that need to be met. How do we actually design an environment that works for people?



As we've seen, menus, breadcrumbs, and many other elements are all part of a website's navigation systems. They help to meet the needs we just talked about.

But the underlying conceptual structure of a system goes deeper than menus.



As an analogy, a subway map tells you where you are, where you can go, and which subway stops are connected to which stops. But it doesn't tell you everything you need to know about navigating the city. If your goal is to take the T to see some historic architecture, you need to know something about the neighborhoods you're traveling through. And at also doesn't tell you that it's a five minute walk from Downtown Crossing to State, but a 12 minute walk from Mass Ave to Back Bay, because the map intentionally has a distorted scale.

The subway map is a navigation system with a specific purpose that helps you travel within a complex territory.

Image: Map of the MBTA transit system.



Jesse James Garrett illustrated how there's a similar relationship on a website.

All of the menus and navigation elements in the UI are part of the surface and skeleton, but there's still a need to design the underlying conceptual structure.

Image: Diagram showing 5 stacked planes. From top to bottom: surface, skeleton, structure, scope, and strategy.

Source: Jesse James Garrett, "the simple planes poster". http://jjg.net/elements/



What is the underlying structure of the NEDCamp website?

The menu system is part of the structure, but not all of it.

Looking through the navigation menu, the home page, and some of the other pages, we can uncover some of the core concepts that are important to NEDCamp.



Thinks like the conference schedule, sessions, and speakers. But also larger concepts like higher ed, and the Drupal overall community.



We can start adding relationships between the concepts. Sessions have speakers, sessions appear on the schedule, the schedule is divided into 4 programs that each have their own agenda.

We could keep going and add more concepts and more detail, but this is already turning into a rough concept model representing NEDCamp as a system.

The most important takeaway for this section of the presentations is the idea that you should be doing concept modeling like this when you build a website. Having a concept model helps in a few different ways.

Modeling helps to make sure we understand the underlying conceptual structure of whatever we're building.

When we do modeling *as a group*, it helps to build alignment across the team. It helps to identify connections that might not be obvious--for example, thinking about conference's relationship to the wider Drupal community and how that impacts what we put on the website.

It helps to resolve ambiguity. For example, the conference as a whole has a location. Individual sessions also have locations within the overall conference location. So there's a little bit more going on, which needs to be teased apart.

Then, this becomes a foundation for designing and building the website. It's a foundation to think through how the site will be organization. It's a foundation for creating content and linking it together. And for those of you building content models and content types in Drupal, this is a foundation for that as well.

I'm going to tie this back to navigation menus in a few minutes. But before we can do that...

# How do we arrive at a good conceptual structure?

How does it fit into our process?



When you're working on a big project, I'm going to assume the process looks some combination of these things. In the early stages, you're gathering all of the information you're going to use to plan out the website.



Lou Rosenfeld, Peter Morville, and Jorge Arango describe information architecture as an intersection of content, context, and users.

In your projects, you're probably doing research and gathering information in all three of these areas.

For Content, you're auditing the existing content, content types, metadata, you're looking at how content is categorized, and you're identifying what content is missing.

The Context includes the business. What's the organization's mission, their goals and success criteria. You want to understand their messaging--what are they trying to communicate to their audiences? Context also includes the broader environment. During the Pandemic, the context changed for many organizations.

And Users includes everything you typically look at in UX research: who are the audience, what are the scenarios and situations in which they interact with this organization, what are their goals, and what user needs are not being met.



From a user perspective...

Understanding a user's mental model is especially important for information architecture. (see Indi Young's book, Mental Models)



So, during the research phase, you're looking at elements of all three areas in that Venn diagram.

But then you get to the point where you need to take all the information you've gathered and translate that to solutions.



You might reach a moment of confusion or loss of clarity, where you feel overwhelmed, struggling to understand the information that's coming to you.

You need to establish our own perspective how you're going to solve the design problem.



In design and design thinking, we have the concept of ideation, synthesis, or reframing in the middle of the process, where you come to a new understanding of the problem you're solving, which leads you to new ways of thinking about the solution.


This process involves multiple iterations of divergence, transformation, and convergence.

- Divergence is breaking the problem down into pieces.
- Transformation is putting the pieces together in a new way.
- Convergence is testing to discover the consequences of the new arrangement.

This builds upon the information we've gathered about the user, content, and context.

Divergence, transformation, convergence: John Chris Jones (1970, 1980, 1992), *Design Methods*.

Image adapted from Hugh Dubberly (2005, 2008), *How do you design? A Compendium of Models.* https://www.dubberly.com/articles/how-do-you-design.html

## Modeling

That's where modeling comes in.

Information architects like Abby Covert and Joe Elmendorf talk about how diagramming and modeling are powerful tools to get through these moments.

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Abby says that "Diagrams are particularly helpful in grounding us when we feel anxious because we can use diagrams to fly through time and space and consume a fuller picture. We can zoom out on problems and see different solutions. We can find secure footing in an unsure environment."

From Abby Covert (2022), Stuck? Diagrams Help.

I've had times when a client is talking about everything their organization does, and I'm thinking, wow, that's a lot, it feels like they're all over the place. My next step is probably to draw a picture to make sense of it.

#### Modeling is useful for...

### understanding:

- Getting through situations of ambiguity
- Synthesizing research
- Mapping what exists & how things work
- Communicating the things you're trying to understand

Modeling is useful for...

### meaning-making:

- Define the concepts and relationships we discover
- Explore new arrangements
- Build alignment
- Creating a conceptual foundation before (and during) UX design, content modeling, or data modeling



Here's a basic process to create a concept model. This can be done for any topic where you want to understand, or disambiguate the concepts involved in a certain domain. The concepts or objects are nouns, and the relationships are verbs.



Going back to this example, having a concept model like this NEDCamp example helps us to ask questions.

At the conceptual level, we have questions like what is a session?

What are the characteristics of a session?

What do we mean by location?

At the content level, we can ask questions about how the content will be organized. Speakers and Sessions are probably going to be node types in Drupal. While the concept of the Drupal community might impact what content will be written, or what external sites we'll link to.



Finally, having the concept model helps us ask questions about navigation and sitemap structure.

Why does "Event info" contain these five pages--isn't the entire site "Event info"?

Why do the Summit and Contribution Day have their own pages in the menu, but Training and the Saturday sessions don't?

Why is the Saturday schedule titled "Sessions"?

Will a website visitor understand how we've organized this?

I'm not saying there's a right or wrong answer. just that these are questions to ask.

### Part II Recap

- Effective IA is built upon a cohesive underlying conceptual structure
- Use "Users/Content/Context" to explore the conceptual structure of the design situation
- Use concept modeling to synthesize, resolve ambiguity, and build alignment upstream of content modeling & UI design

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# Part III: From concepts to navigation design

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Now let's see how this comes together and translates to navigation design.



These are three different things.

Think of subway map or the NEDCamp website. They're all part of the website's information architecture, but they focus on different things.

The navigation menus reveal specific aspects of the site's structure without telling you everything at once.

On a more complex website, there could be multiple concept models that address different issues, or different sitemaps for different areas, as well as multiple menus for different purposes.



I'm going to demonstrate with one more example of a project.

This is a "before" picture from a website redesign for a large nonprofit in Phoenix, Arizona.

Supported by large, highly engaged community of volunteers and donors, SVdP offers services related to housing, food, clothing, healthcare, recovery, and other forms of support for people in need throughout the region.

Let's go through each of the three categories in the Venn diagram.

https://web.archive.org/web/20220212201639/https://www.stvincentdepaul.net/programs/dining-rooms



Let's go through the three categories in the Venn diagram one by one. I'm just going to highlight a couple details from each.

Looking at the existing content, we see that this organization offers a variety of programs across a number of physical locations in the Phoenix area, and the website is promoting volunteer opportunities. But most of that information is flattened together into a single page type, the Program page.



Thinking about it from a business perspective, we learned about the organization's mission and goals. Of course, they want to increase donations and volunteering.

But it was also important to understand how volunteering is not just a transactional relationship, but part of a culture of meaningful service and community building.

In addition, the organization has built sustainable models for addressing issues like homelessness, which has made them a major force in the region.



From a user perspective, website serves a highly diverse audience.

We used activities like journey mapping as one tool to explore the kinds of information that each of these groups might need.



One interesting takeaway is that different audiences have different information needs even when they are reading about the same topic. The dining rooms are an important program because they are hubs where many different kinds of services are delivered. Donors might want information about dining rooms as a program overall, but a family traveling to a dining room needs information about the services they can access. So Program and Services are actually different kinds of information.



Meanwhile, this is some of the sketching I was doing to try to capture the concepts that I thought would be important to the website. At this point I'm not worried about specific content - I'm just trying to map the system of how the organization works and how a community member is a part of that.



Later on, this is a rough draft for a more refined diagram narrowed down to concepts that would specifically appear on the website.

Each of these boxes represents a type of content.

The organization is organized around programs, and each program is associated with services, locations, and volunteer opportunities. We also added the idea of an Issue, like homelessness or food insecurity, that contains educational content relevant to the programs.

The key thing to realize is that each audience needs different information as they traverse this structure. So locations appear in different ways throughout the website. Volunteer opportunities appear in different ways.

Another benefit is that it was scalable. We were able to build searching and filtering capabilities around volunteer opportunities. We anticipated that the organization might need to build additional functionality around that in the future. Or they might need to build out more service content that had never been considered before.

This model doesn't include all of the website's content. It just cover some of the core elements.



The sitemap shows how all of that fits together.

We arrived at some very distinct clusters of content. Someone who's making a donation needs very specific information about the organization's programs, impact, financials, and tax implications of donating. Someone thinking about volunteering needs to know why they should volunteer, what it's like to volunteer, and the process for volunteering. Same for a company who's thinking about forming a partnership. And so on.

So each of these things became a section of the website. The yellow elements show how those core content types are used throughout.

The main navigation menu shows that the website was ultimately organized within for main sections: Get Help is for people seeking services, Give for donations and other types of contributions, Volunteer for volunteering, and Our Work discusses the organization's programs and operations.

The secondary navigation points to more focused types of content that someone might need in order to engage with the organization or travel to one of its locations.



That leads me to the four main purposes of a site's navigation menu. I'll go through these one by one.

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I will share the slides so don't worry too much about remembering all of the details.



A navigation menu provides a path to anything a user might be looking for, even if they don't know how to get there.

# 1. Provide pathways to all/most content

Things to think about:

- Build upon users' mental models
- Derive categories through content classification

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 Choose labels that provide information scent

This is where you want to build upon mental models.

#### 1. Provide pathways to all/most content

Ways of classifying content:

- By customer need
- By user activity/task
- By stage in the customer lifecycle
- By subject/topic
- By content type or metadata
- mixed

# 2. Provide quick, direct access to specific items/tasks

# 2. Provide quick, direct access to specific items/tasks

Things to think about:

- User scenarios
- Top tasks (cf. Gerry McGovern)
- Known-item seeking may call for different labels



early 2010s - along with the wave of responsive & mobile first design, there was a narrative going around my workplace that users don't use navigation menus, they navigate via links in content. that idea was used to bring a lot of care and attention to having really good, well thought-out content. but that was also used to justify hidden (or no) navigation menus, and an overreliance on search.

## 3. Inform users what's available on the site

Things to think about:

- "Don't know what you need to know" and Exploratory info seeking
- Principle of recognition over recall
- Business goals, products, lines of business
- What is shown vs. hidden initially?

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(This is a huge area where you don't get as much value out of an off-screen menu.)



Stuart Maxwell tells a great story about how REI, in 2014, did an A/B test where they removed the word "Climb" from the main navigation because it wasn't performing as well as other links. "Soon after, they changed it back. Customers were upset. It sent an unintentional message that Climbing wasn't as important to REI anymore."

### 4. Explain the brand

Things to think about:

- Brand tone, voice, personality, key words
- Business goals (e.g. what needs to be promoted)
- Ensure clarity, understandability, and information scent are not lost

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Mass.gov is a great example of navigation that conveys a brand. It's very welcoming. Testing also showed that it was successful from a usability perspective as long as the user knows what they're looking for. Where it fails is that it doesn't really educate you about what you can do on the website.



Venture Cafe Cambridge is another example where the words Connect, Learn, and Share make me feel really good, but if I want to know what events are coming up, I have no idea what to click on. Obviously, they've compensated for this by adding not one, but *three different UI elements* right next to each other to make sure users are able to find event information.

## Checks/tests for main navigation taxonomy

- Use user scenarios & user tasks as a checklist
- Consider different info seeking behaviors (known item, exploratory, don't know what you need to know, etc.)
- Test: "Where would you expect to find...?"
- Ask: "What would you expect to find under [label]?"

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# Purposes of a site's main navigation menu

- 1. Provide pathways to all/most content
- 2. Provide quick, direct access to specific items/tasks
- 3. Inform visitors what's available on the site
- 4. Explain the brand

And: Promote features/content, orient users, inspire users, inform search engines  $\frac{1}{2}$ 

 Jenny Benevento and Abby Covert, "Put A Label On It: Navigation As Brand", IA Summit 2018

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On any given website, some of these may be more important than others.

## Thank you!

#### Slides & resource guide

danzollman.com/navigation

#### Contact

danzollman.com

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Misc comments: Why do concept modeling if the structure is obvious?

- Even though it might seem obvious, taking the time to model concepts will help you build clarity. It might lead you to nuance that you would not have noticed otherwise.
- Involving other people helps to build alignment and shared understanding. When you have different team members working on different parts of a product, and your team doesn't have a shared understanding, you can end up with a disjointed user experience. That's where diagramming can be really powerful, even when it's simple.