Volume 4: Intranet Branding, Visual and Interaction Design

Intranet Usability Guidelines

4th Edition

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Executive Summary

THE IMPACT OF GOOD DESIGN

Weak or nonexistent intranet design leads to poor credibility, adoption, and acceptance of the tools, systems, and information employees need to do their jobs effectively. When text, graphics, or space are not used properly, pages look cluttered, with too much content and no visual hierarchy. Scanning is difficult as links, headings, and subheadings are not easily distinguishable from normal text. Employees have trouble determining which page elements are relevant, so they waste time and miss the information they need.

When done well, the intranet's branding, visual, and interaction design can positively impact employee satisfaction and productivity. The visual design of an intranet sets employees' expectations for the content they will find and the site's overall ease of use. The interaction design can either support or interfere with the findability and discoverability of tools and content, two of the key reasons employees visit an intranet.

With these goals in mind, it's important to give the intranet the look and feel it needs to meet these goals. The intranet's design should be more task-oriented and less promotional than traditional website or digital product design. The elements that make an intranet's design look polished, professional, and familiar to employees include:

- Consistent use of fonts, colors, contrast, and alignment
- Utilizing a grid, strategic layouts, whitespace, and a typographic system
- Clear hierarchy, color, and imagery to draw attention
- Cleanliness and consistency in overall visual treatments
- Smooth transitions and animations that support efficiency

The colors and fonts used in an intranet's visual design often closely match those used on the organization's public-facing website and brand guidelines. However, it's still important to ensure the intranet doesn't look *so* much like the organization's public-facing website that employees can't tell the difference between the two.

When shaping the intranet's design, consider the following factors as they impact quality and how the design comes to life:

- **Employee personas:** Consider their tasks, needs, desires, ages, context, etc.
- **Intranet technology:** Is the design confined to an intranet system that dictates the user interface design, or is the design highly flexible and applicable to other digital workplace tools?
- **Development collaboration** Are dedicated designers and engineers available to improve the intranet's design iteratively and collaboratively?

In our most recent round of research, we observed the following positive themes and areas where intranet design teams still have room to grow and improve:

Positive themes:

- Use of responsive web design
- The creation and use of design systems and style guides
- Grid-based layouts and aligning to a grid
- Using white space to break up content and images
- Some attempts at consistency across digital workplace tools

Areas of opportunity to further inspect and improve:

- Use larger fonts and better text contrast to support scannability
- Apply less emphasis on hero spaces and carousel planning; more time on user research to inform design choices
- Ensure labels accompany all icons
- Avoid unreadable text overlaid on images
- Make links look like links
- Left-align buttons in web forms
- Create more threaded consistency between the visual design of the intranet and other digital workplace tools

By using and following the guidelines in this report, teams can ensure that their branding, interaction, and visual design collectively make for a useful, usable, and pleasant intranet experience for employees.

OUR RESEARCH STUDIES

Findings in this and other reports in this series are based on four large behavioral research studies. These were planned, conducted, and funded by Nielsen Norman Group. The research included the following:

- **Fifty-seven intranets**, with 18 years between the first study and the most recent. We studied:
  - 14 intranets in 2002
  - 13 intranets in 2005
  - 15 intranets in 2011
  - 15 intranets in 2019

- **More than 285 employees** (75 in our most recent round of research). They were all employees of each organization and users of the intranet.
- **Three continents:** North America (the United States and Canada), Europe, and Asia

We conducted these studies to learn about the following:

- How employees use intranets
- What makes intranets helpful or unhelpful
- What can be done to make intranets better

METHODOLOGY

We used three basic usability methods for each round of research:

- **Usability testing** in a lab or conference room setting, with one or a few researchers watching users for 75–120 minutes as they attempted anywhere from nine to 15 realistic tasks on the intranet
- **Field studies** during which a researcher watched employees work for anywhere from one to five hours to see how and when they used the intranet in their personal work areas
- **Expert reviews** during which researchers used the design considering users, top tasks, and established design principles

ABOUT THE FOURTH EDITION

Our most recent round of intranet research followed the same study protocol as in previous rounds and involved more than **75 employees at 15 different organizations.** We usually observed **four to eight employees at each study location,** which ranged from small companies to large enterprises across the United States, Canada, and Europe.

An NN/g researcher conducted one-hour field study sessions, observing participants in their work environment as they went about their normal work. One or two NN/g researchers conducted usability testing sessions, using either company computers or the employee's own work-computer and the think-out-loud protocol. Usability testing sessions were 75-minutes and followed this structure:

- **Initial survey:** Included gender, age, tenure with the organization, job title, department, frequency of intranet use, and device(s) often used to access the intranet.
- **Typical task attempts:** Users attempted to complete between nine and 13 realistic tasks on the intranet. Most of the administered tasks were directed (meaning they had specific criteria for success), while a few were exploratory (meaning they were used to measure engagement and had no success criteria).

FINDINGS FROM ALL STUDIES

Please note that the screenshots and scenarios in this and the other reports in our intranet series represent only a moment in time. It's entirely possible that some of the intranet designs you see in these reports have changed since our research. Many teams and designers learned from our usability studies and changed their designs immediately after the testing.

In addition, some screenshots or quotes in this report were captured in prior rounds of intranet research. Where they substantiate a long-standing guideline, we've kept the older examples for discussion and instructional purposes. The commentary explains what we learned during the testing, and the design best practices we discuss remain true today and most for years to come. Find a complete list of the organizations who participated in our intranet guidelines research over the years at the end of this report.

HOW TO USE THIS REPORT

After conducting this research and reflecting on the findings and insights, we have compiled a comprehensive set of recommendations and guidelines to help you make better intranet designs.

Five Types of Recommendations

Each recommendation in this report falls into one of five categories, displayed differently depending on its type:

- Design guidelines
- Definitions, principles, and methods
- Process and strategic considerations
- Timeless design tips
- User behaviors

Following are explanations for recommendation types and examples of how they appear throughout this report: (and the entire Intranet Guidelines Report Series):

1. Design Guidelines

These include actionable advice, along with evidence, discussions, and screenshots to help designers make usable, engaging intranet designs, and are the bulk of the information in this report.

Concrete design guidelines and recommendations substantiated by behavioral evidence and years of usability expertise embodied by NN/g researchers appear as in the example below. Some of the guidelines are from previous rounds of research and remain valid today, while others are new with this round of research.

Here’s an example of a **design guideline**:

59. Avoid using an icon for search on desktop; it’s only acceptable on mobile versions of the intranet.

2. Definitions, Principles, and Methods

In these callouts, we explain the terms, principles, and methods we suggest you use in your intranet design work. They span UX design and research and are often used on intranets or at organizations in general.

We also define terms, principles, and UX research methodologies in the context of relevant guidelines and discussions. These terms will be bold.

Here’s an example of **Definitions, Principles, and Methods**:

Card sorting

Definitions, Principles, and Methods

Card sorting is a UX research method in which study participants group individual labels written on notecards according to criteria that make sense to them. This method uncovers how the target audience’s domain knowledge is structured and helps teams create an information architecture that matches users’ expectations.

3. Process and Strategic Considerations

These are larger-scale initiatives and tactical ideas, or those related to process best practices. They tend to focus less on the design itself but help enable good design. These usually require more time, involvement, and alignment from many people and teams across an organization.

Some recommendations are less about design detail and more about the process or strategic ideas behind designing an intranet. These ideas are too large or unspecific to be a design guideline, so they are categorized under this type.

Here's an example of **Process and Strategic Considerations**:

Conduct card sorting early.

Process and Strategic Considerations

Conduct card sorting early in the design process to determine the intranet's information architecture. Card sorting can be done once you know the initial content topics and navigation categories you want to offer on the site.

4. Timeless Design Tips

These are general, sometimes basic, good design practices that apply to both intranets and digital design as a whole.

Basic reminder guidelines, many of which continue to hold after decades of research, are included in this report and, in many cases, apply to the design of digital products in general, not just intranets. When one of these more basic recommendations is mentioned in the report, we will call it out like this to denote that it has withstood the test of time.

Here's an example of **Timeless Design Tips**:

Use clear link labels.

Timeless Design Tips

Front-load text and navigation links with information-carrying keywords.

5. User Behaviors

These describe the ways employees acted as they used the intranets. This doesn't mean your users will act the same way as the ones we saw, but they may behave similarly. There's no substitute for doing usability tests and watching your own employees use your intranet. But, if you're not doing much of your user research, refer to these behaviors as a best guess for how your users may act.

Here's an example of **User Behaviors**:

Cleaning up browser tabs

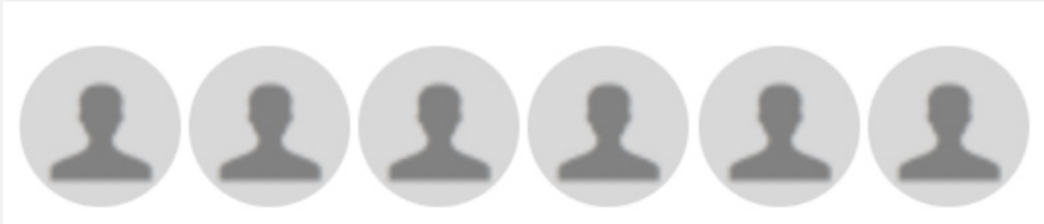
User Behaviors

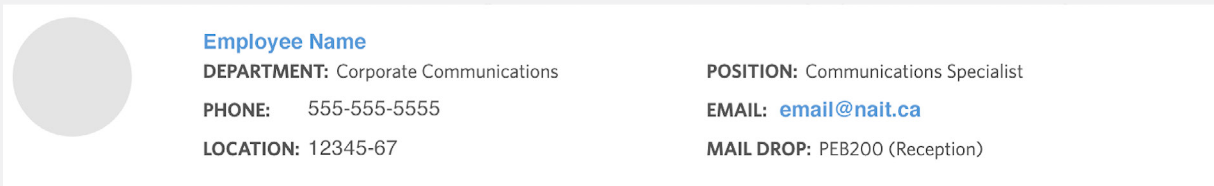
Many employees had several browser tabs open at a time while completing their work or using the intranet. When they encountered links, which opened in yet another new tab, they often wanted to stop and pause between tasks to clean up their tabs. This housekeeping behavior indicated that users felt the interface became cluttered or unmanageable.

Scrubbed Screenshots

You'll notice throughout this report; some screenshots have been scrubbed to protect the organization's proprietary information. Also, individuals' personally identifiable information, including employee names, phone numbers, office locations, profile photos, and sensitive company information, has been removed or blurred from all screenshots and replaced with placeholder images, icons, shapes, or text.

This is intentional to protect and respect the identities of the individuals and organizations who took part in our research.





Here are two examples of how we mask participants' personally identifiable information throughout the report. Where you see icons or masked text are areas where an employee's actual photo, email address, phone number, or office location would otherwise appear.

LONG-STANDING EXAMPLES

Cumulative Findings Across All Studies

Some screenshots or quotations in this report were captured in our early intranet research, and given how long we have been studying intranets, some may have been captured **almost 20 years ago**. We've kept older examples that substantiate a long-standing guideline, interesting finding, or discussion. Find a complete list of the organizations that participated in our intranet guidelines research over the years at the end of this report.

Please note that the screenshots and scenarios in this and other reports in our intranet series represent only a moment in time. The intranet designs and screenshots you see in these reports may have **changed since our research.** In fact, many teams and designers learned from our usability studies and modified their designs immediately after the testing.

Guidelines

Guideline List

Intranet Branding and Visual Design

BRANDING THE INTRANET AND DIGITAL WORKPLACE

1. Align the intranet's color palette and branding with the organization's broader brand standards.

Visual consistency creates a more learnable and trustworthy experience for employees. Using a color palette for the intranet and digital workplace that's consistent with the organization's brand standards supports cohesiveness. Limiting the intranet's color palette to just a few colors also provides design focus, as there are fewer elements to consider and, thus, fewer distractions. As a result, the intranet's design will have a stronger brand representation.

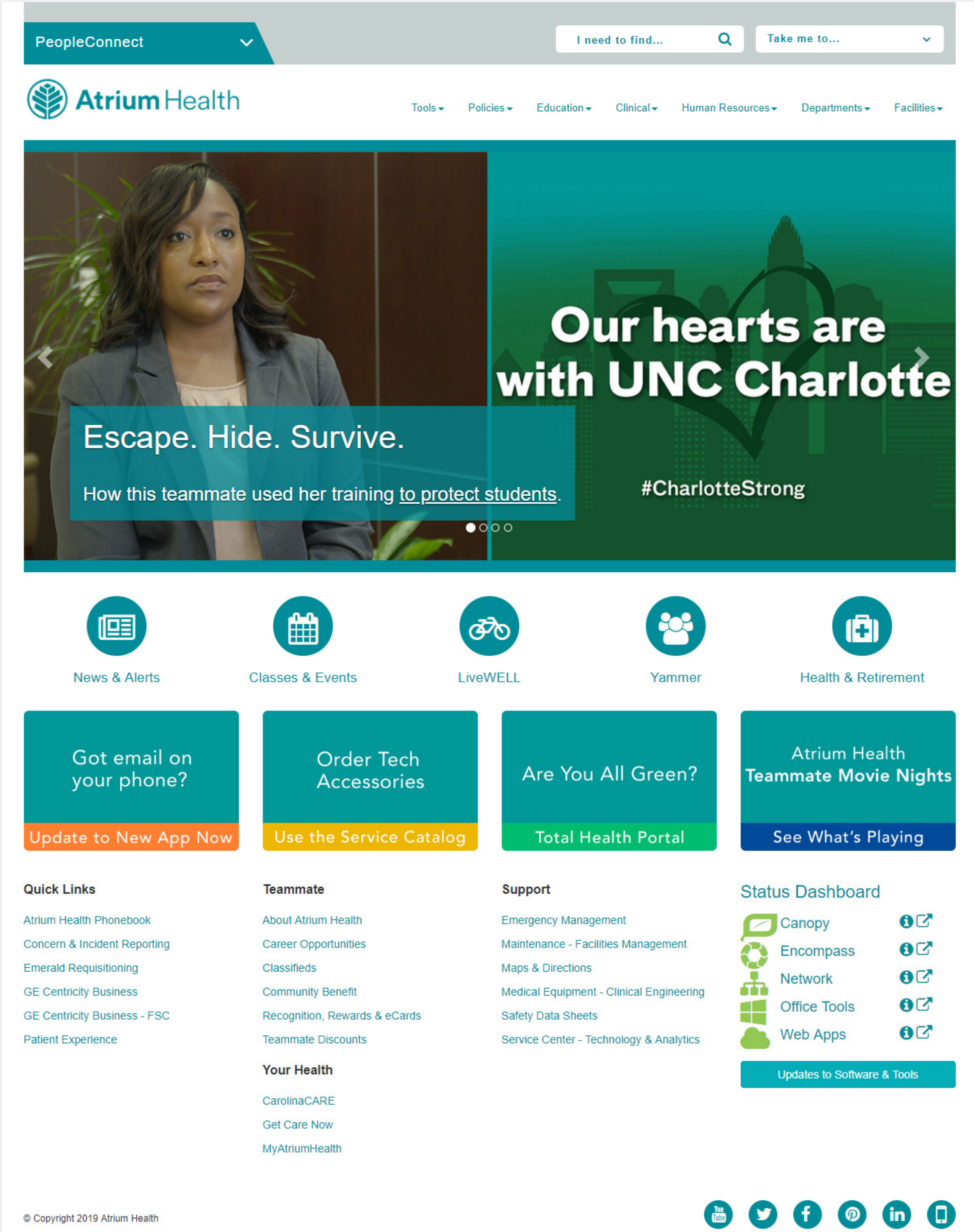
For example, at Atrium Health, the visual design of its intranet, PeopleConnect, closely matched its public-facing website, atriumhealth.org, which is favorable. The bright teal and white color scheme, along with a rich yellow secondary color, form a visually balanced combination.

Use a refined color combination for your main company branding.

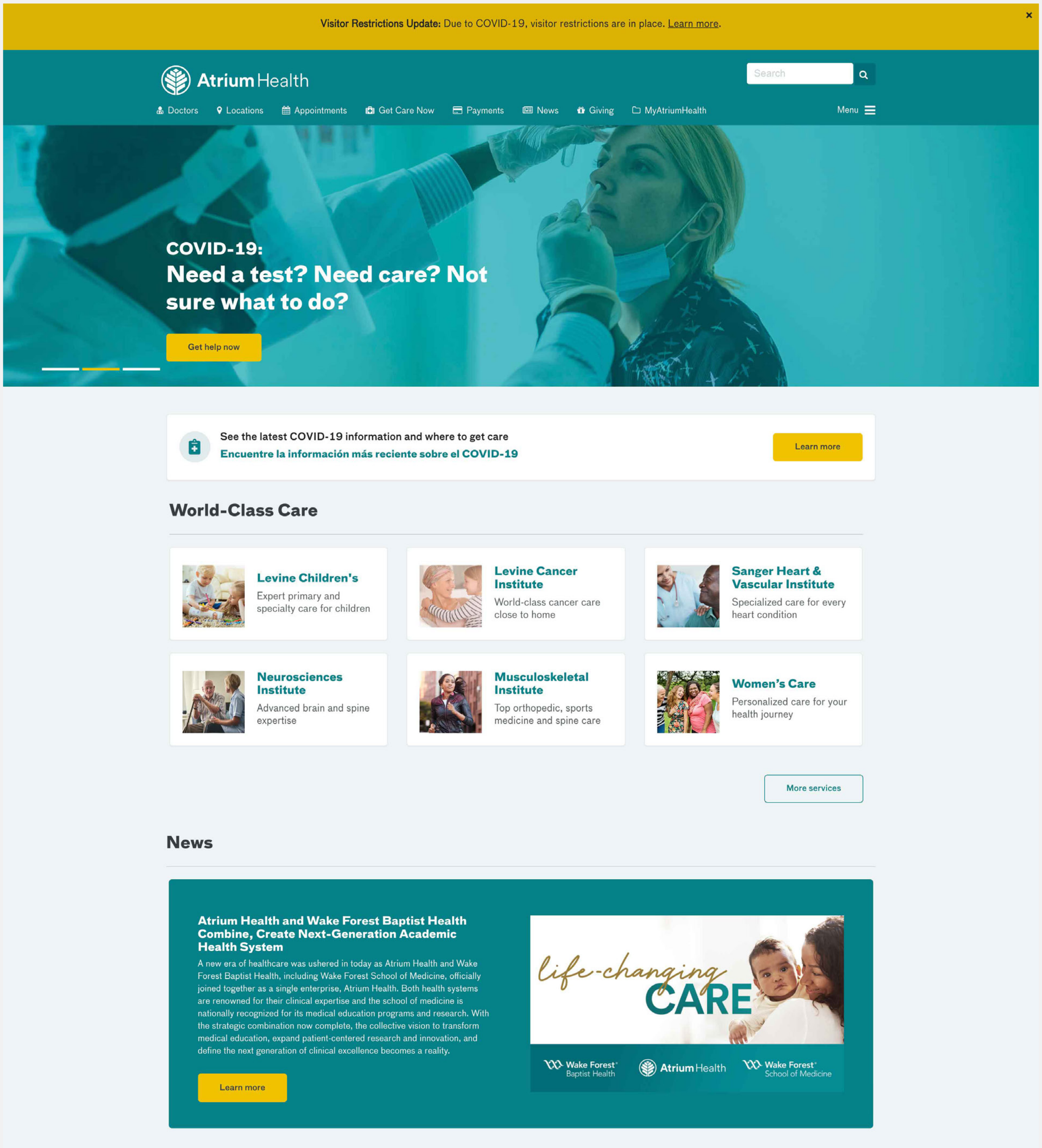
Timeless Design Tips

When choosing colors for an intranet design, create a color palette that aligns with the company's main brand identity, and iterate — switch colors in and out to see what looks good together.

Stay away from anything too similar to a bright highlighter. Adjusting the color slightly from a primary color will refine the color choice. We like to use Adobe Color for color palette inspiration.

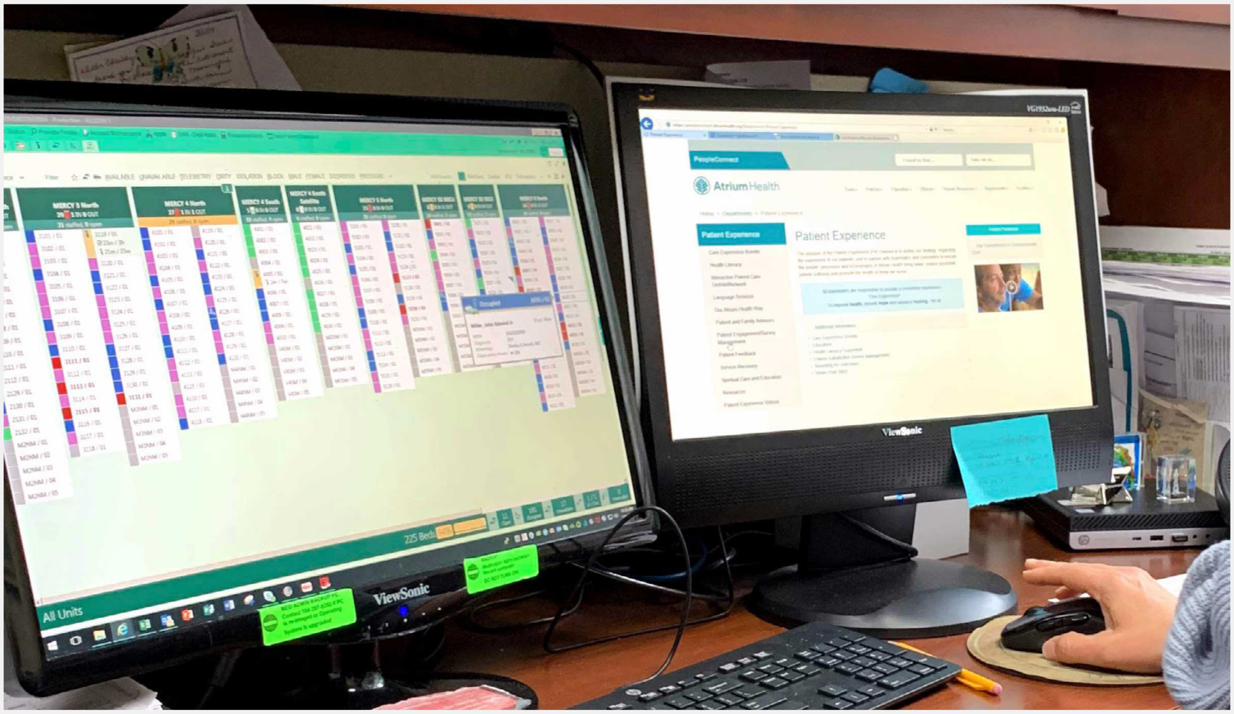


The homepage of Atrium Health's intranet, People Connect, uses the same color scheme as the company's overall brand identity.



Atrium Health's corporate website uses a bright teal primary color and rich yellow secondary color for buttons and notification bars.

Additionally, because it's a healthcare organization, many of the other systems and tools clinical staff and office workers rely on to do their jobs also incorporate the main brand's color scheme for added familiarity. This is an optimal approach, ensuring that no matter which tools or systems employees use, they know they're still within the company's digital workplace and tools.



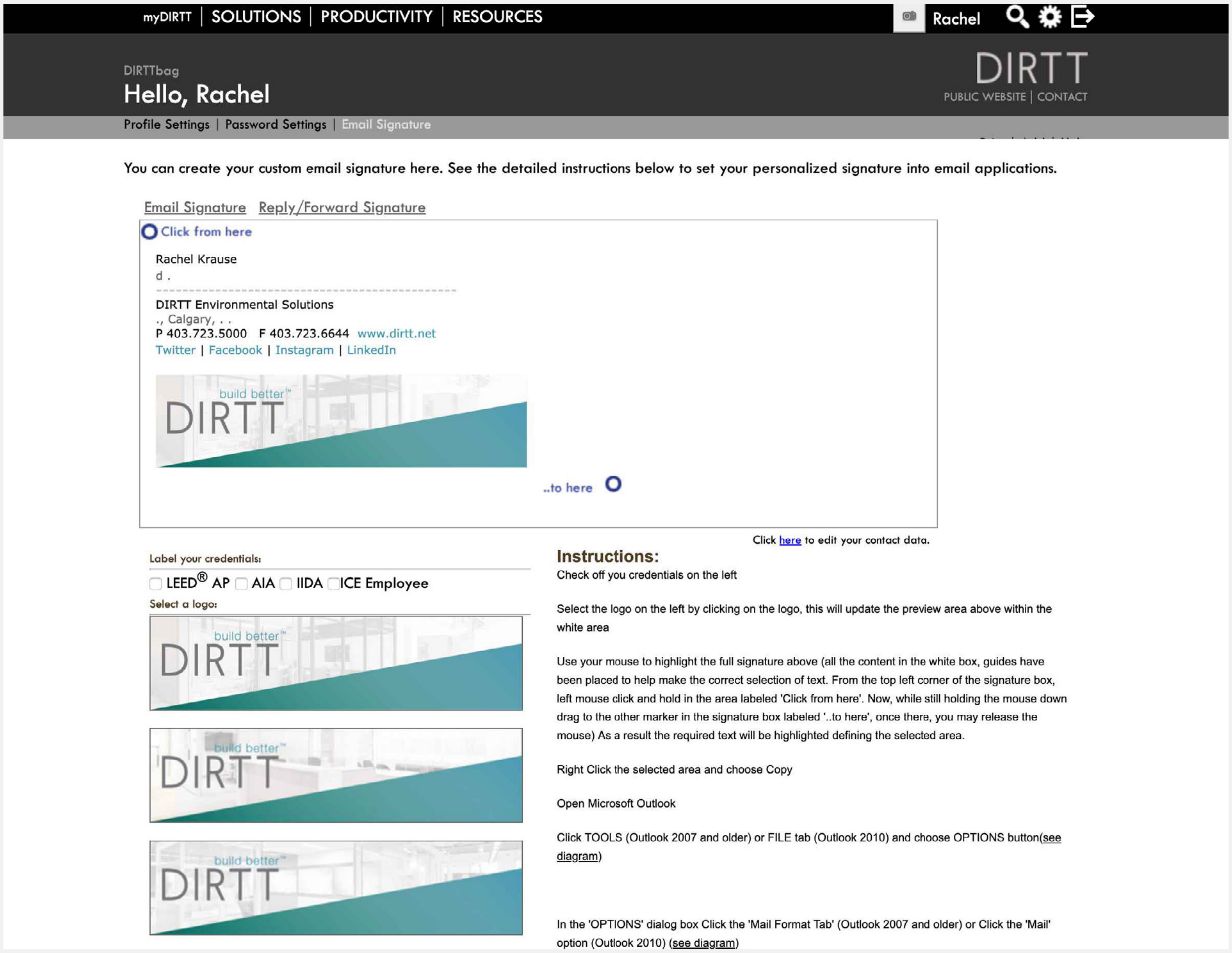
Atrium Health's intranet, PeopleConnect, also matches many of the company's other software systems to the broader company branding, which adds an additional layer of familiarity and cohesiveness across its digital workplace.

2. Include tools on the intranet to help maintain brand consistency across the organization.

For additional brand consistency, provide tools on the intranet, such as email signature creators and business card makers, to ensure brand uniformity across not only the channels encompassing the digital workplace but also physical representations of the business. The intranet is an ideal, centralized location to house such tools so that employees can reliably find them when needed, and so they can professionally represent the organization.

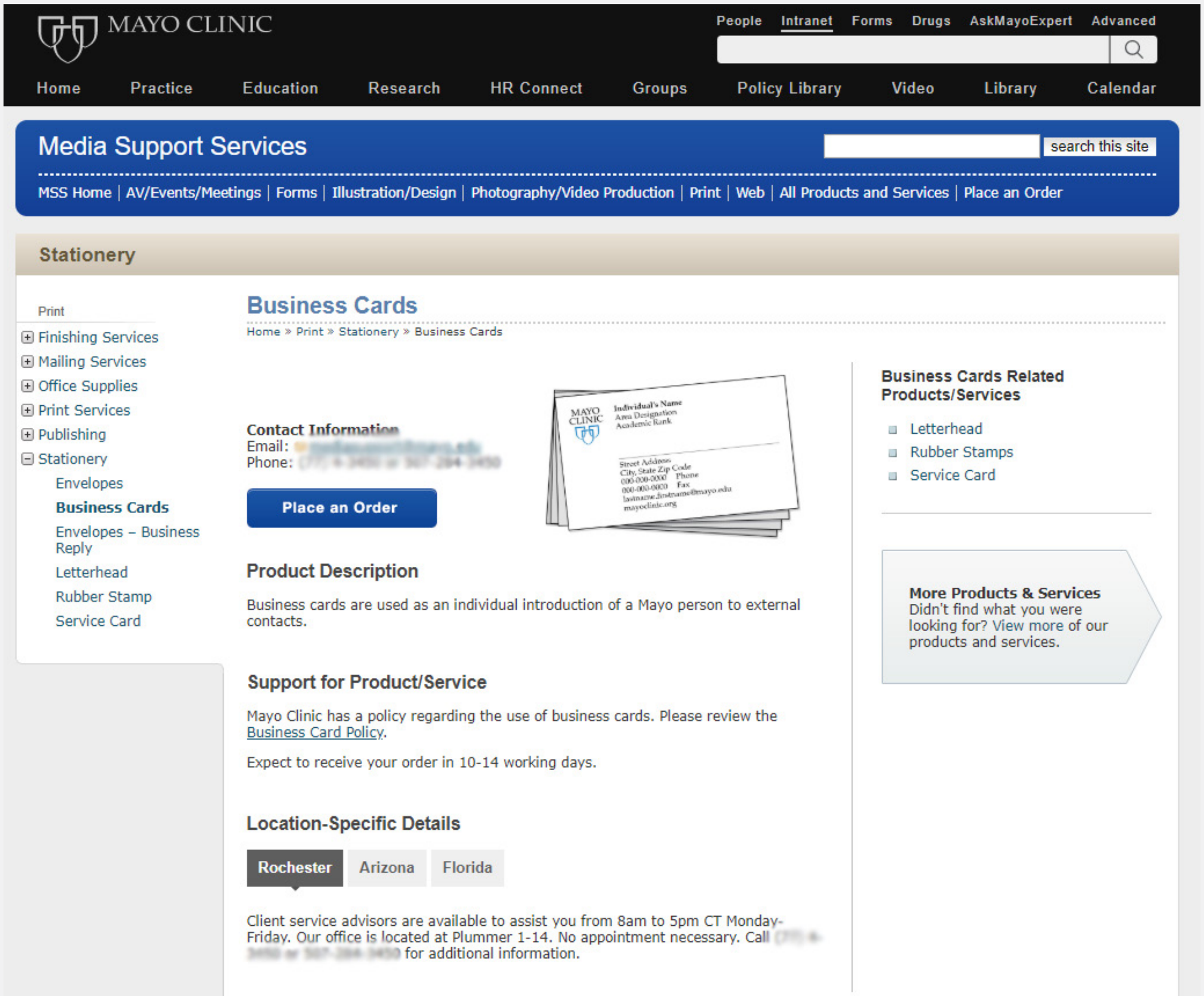
For example, DIRTT had an email signature creator on its intranet. The branded email signatures were predesigned for employees to choose from, and the detailed instructions made it easy for them to copy and paste the shiny new email signature from the intranet into Microsoft Outlook.

As an added benefit, employees could also add their professional credentials from a pre-selected list of options. This helped DIRTT maintain consistency in credential presentation across employees, which helped the company build trust and professionalism among its clients.



DIRTT's intranet included a business card maker tool where employees could choose from a predesigned logo and add their contact information to create a consistent email signature they could copy and paste into Microsoft Outlook.

At the Mayo Clinic, employees could use the intranet to initiate the creation of personalized business cards. The landing page, housing the launching point for the tool, outlined how to use the business cards and how long it would be before the employee could expect to receive the finished cards, which is favorable. This approach works well for such a large organization, like the Mayo Clinic, to maintain brand consistency from the intranet to the many other parts of the organization, including how employees represent and introduce themselves on behalf of it.



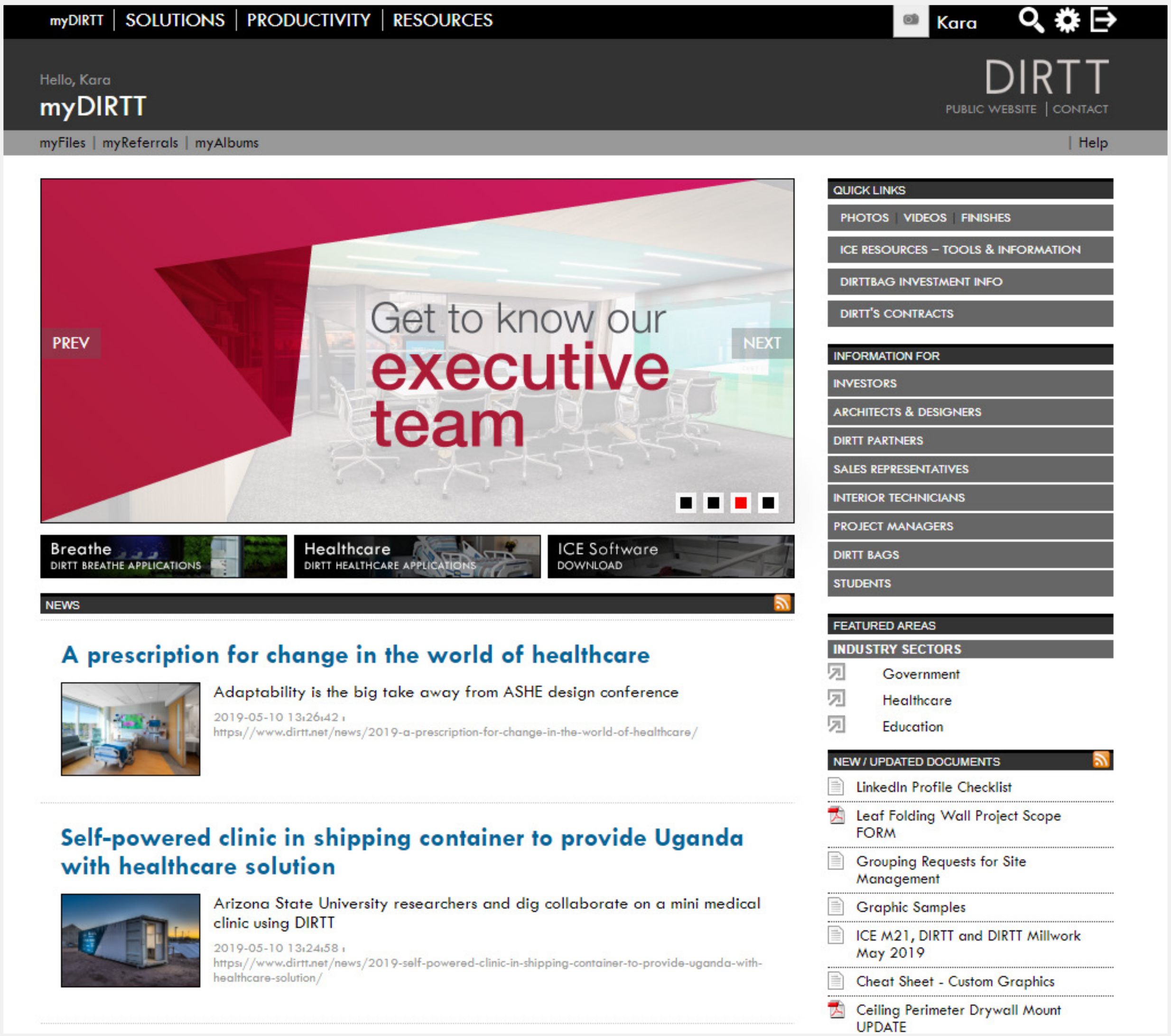
The Mayo Clinic included a section on its intranet where employees could order personalized business cards.

3. Design consistent, modern, and aesthetically pleasing interfaces for the intranet.

A design will look unprofessional and lack polish when visual elements are used inconsistently or sporadically. In your intranet designs, aim to create a visual and typographic system and apply it consistently across different areas of the experience and digital workplace. For example, make the spacing between elements and around page elements the same, or a multiple of the same unit (e.g., if the base spacing between heading and body is 5px, two base-spacing units could be used to separate different sections, and so on).

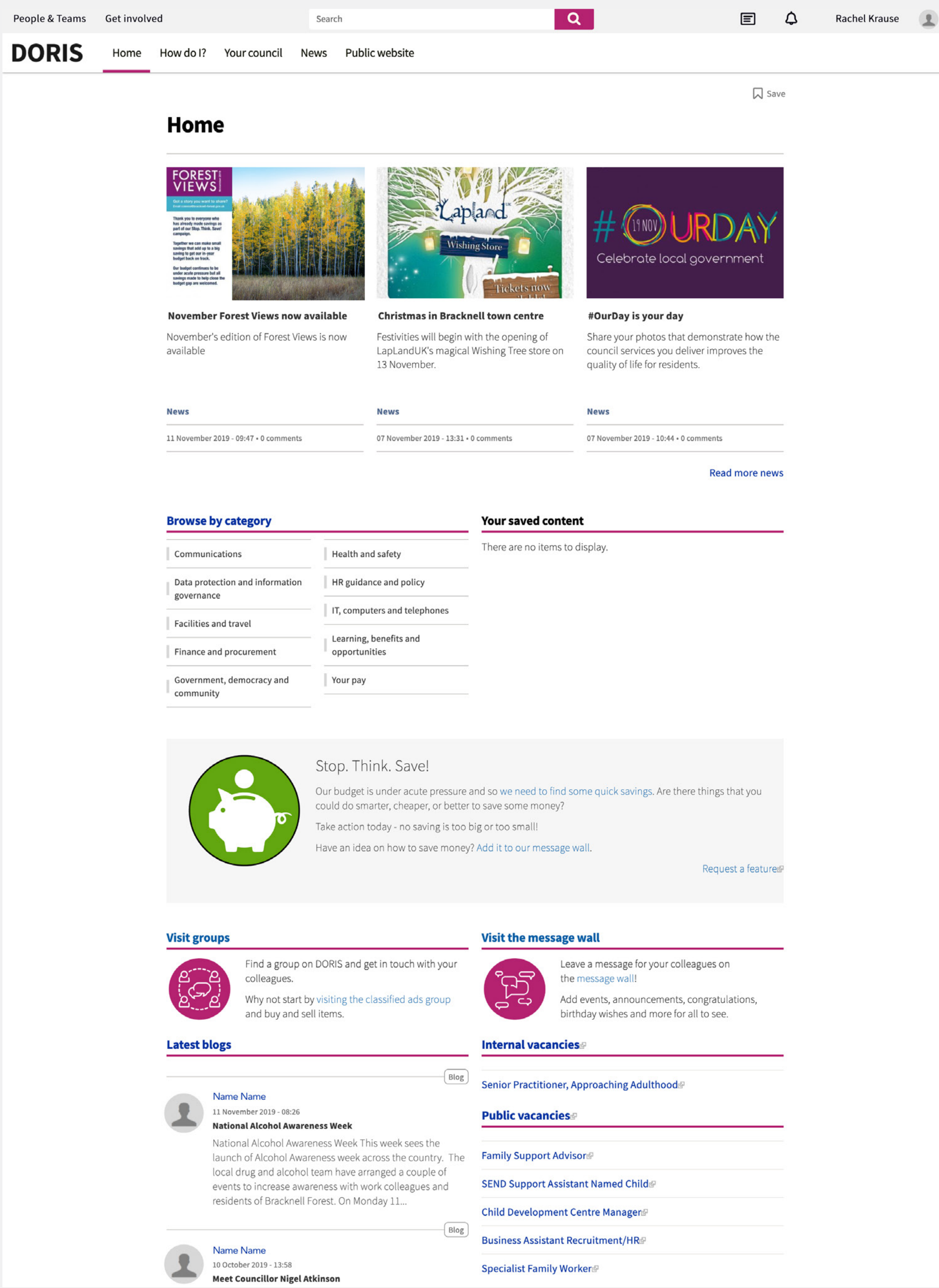
Use proximity or the spacing around elements to help establish groups and use similar typographic treatments for specific purposes throughout. When creating groupings in your design, use less space between the header and its content and more space between groups. When attention isn't paid to these small details, the intranet and digital workplace can look cluttered and outdated.

For example, at DIRTT, the visual design of the intranet looked rather dated. In contrast, giving employees a modern and aesthetically pleasing interface builds trust and credibility for the intranet and compels employees to use and rely on it. One employee mentioned that she felt that the look and feel of the intranet could use a change because "It hasn't been updated in a while. I've been here since 2015, and it hasn't really changed since. It looks like kind of an older format."



Employees noticed that the visual design treatments used on the intranet at DIRTT seemed outdated. Freshening this design by creating more space between elements and using more modern, clean-looking fonts would help.

At Bracknell Forest Council, the visual design of its intranet, DORIS, was simple, modern, and straightforward. The clean design enabled users to find content easily. The design used recognizable patterns and consistent details such as fonts, colors, spacing, and alignment to create a modern-looking, usable experience and express its brand traits of friendliness and reliability.



Bracknell Forest Council's intranet was clean and simple. The use of consistent fonts, white space, color, imagery, and iconography supported a modern look and feel.

Enlist people with design experience to create the intranet's design.

Process and Strategic Considerations

A challenge intranet teams sometimes face is a lack of design skills on the core team supporting it. Often, teams are forced to configure out-of-the-box software or have limited options when designing and customizing the intranet and other tools.

If design isn't your team's strong suit, hire an agency, consultancy, or freelance designer with intranet experience to help design the digital workplace.

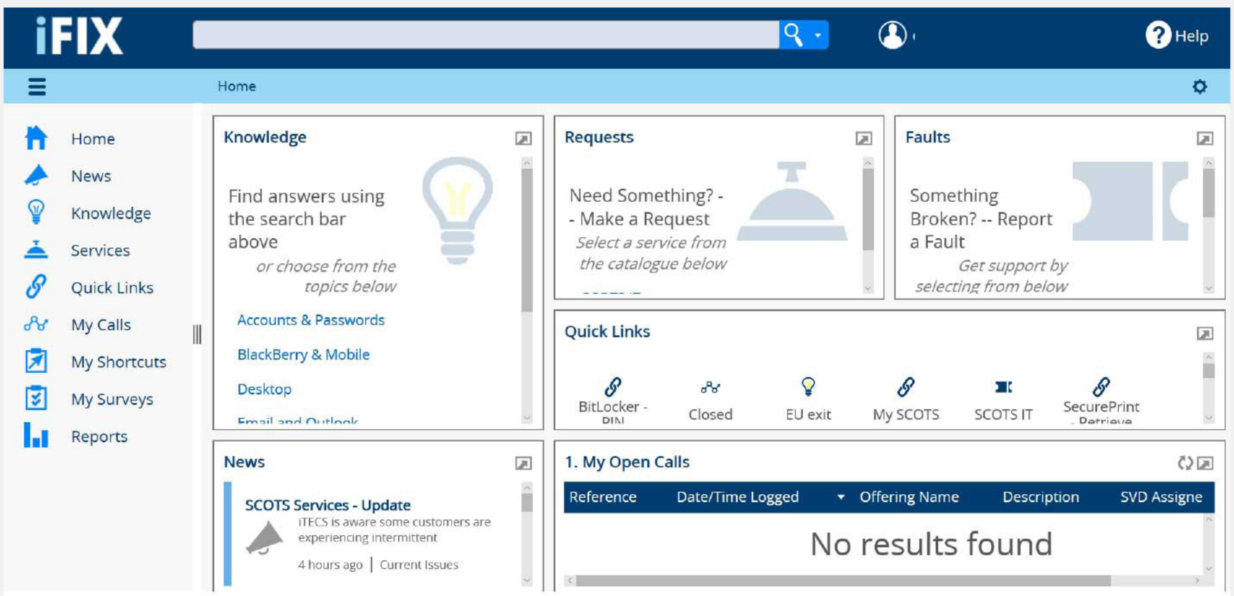
4. Use consistent design elements, such as colors and fonts, on digital workplace tools outside the intranet.

When the intranet and digital workplace tools look different, it reinforces the idea that the intranet and related tools were not created strategically or considered a unified set of sites. When lacking a consistent look and feel, the tools can seem like a disjointed set of tools and subsites held together mainly by links. Employees must interact with many different systems and tools to do their jobs, so when they all look different, employees start to question whether they're using the right tools for their tasks.

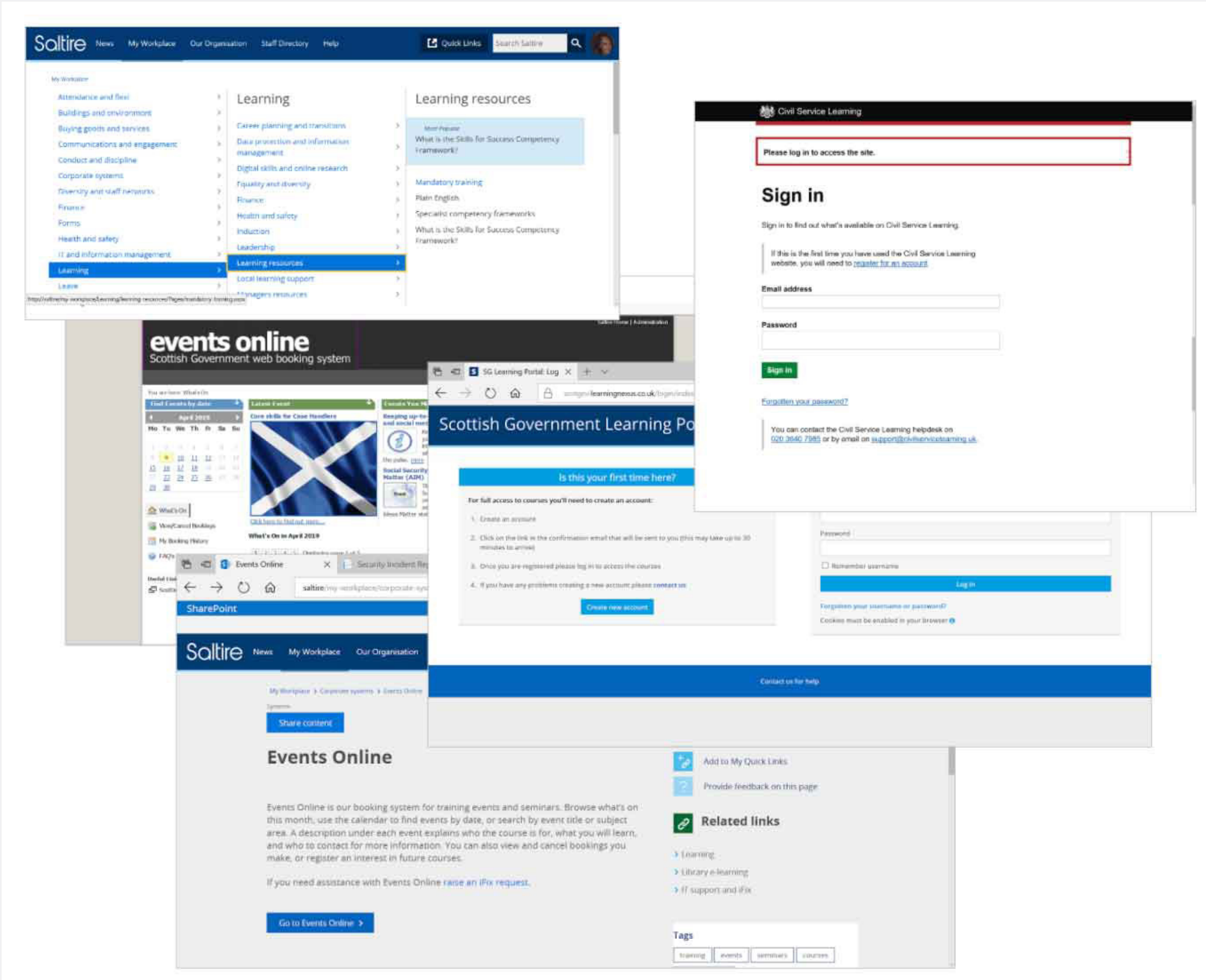
Different visual designs also communicate different offerings, making it harder for employees to remember what certain tools look like and where to find them. This opens employees up to risk: wasting their time looking for the right tool when they all look so different or the risk that they'll complete what they need to do with the wrong tool. When possible, apply consistent design choices to digital workplace tools outside the intranet.

The Scottish Government had minor visual design inconsistencies between its human resources tools, *OneHR* and *eHR*. Many employees referred to both HR systems as *eHR*, but many logos on forms in both HR systems displayed branding for *OneHR*. Despite this minor inconsistency, most of the Scottish Government's digital workplace tools used a similar blue palette and clean, modern fonts.

The Scottish Government's HR tools shared a familiar blue color palette with the intranet and other digital workplace systems that employees frequently used.



The Scottish Government's IT support system also shared similar design patterns and elements with those on the intranet, including the hues of blue and modern fonts.



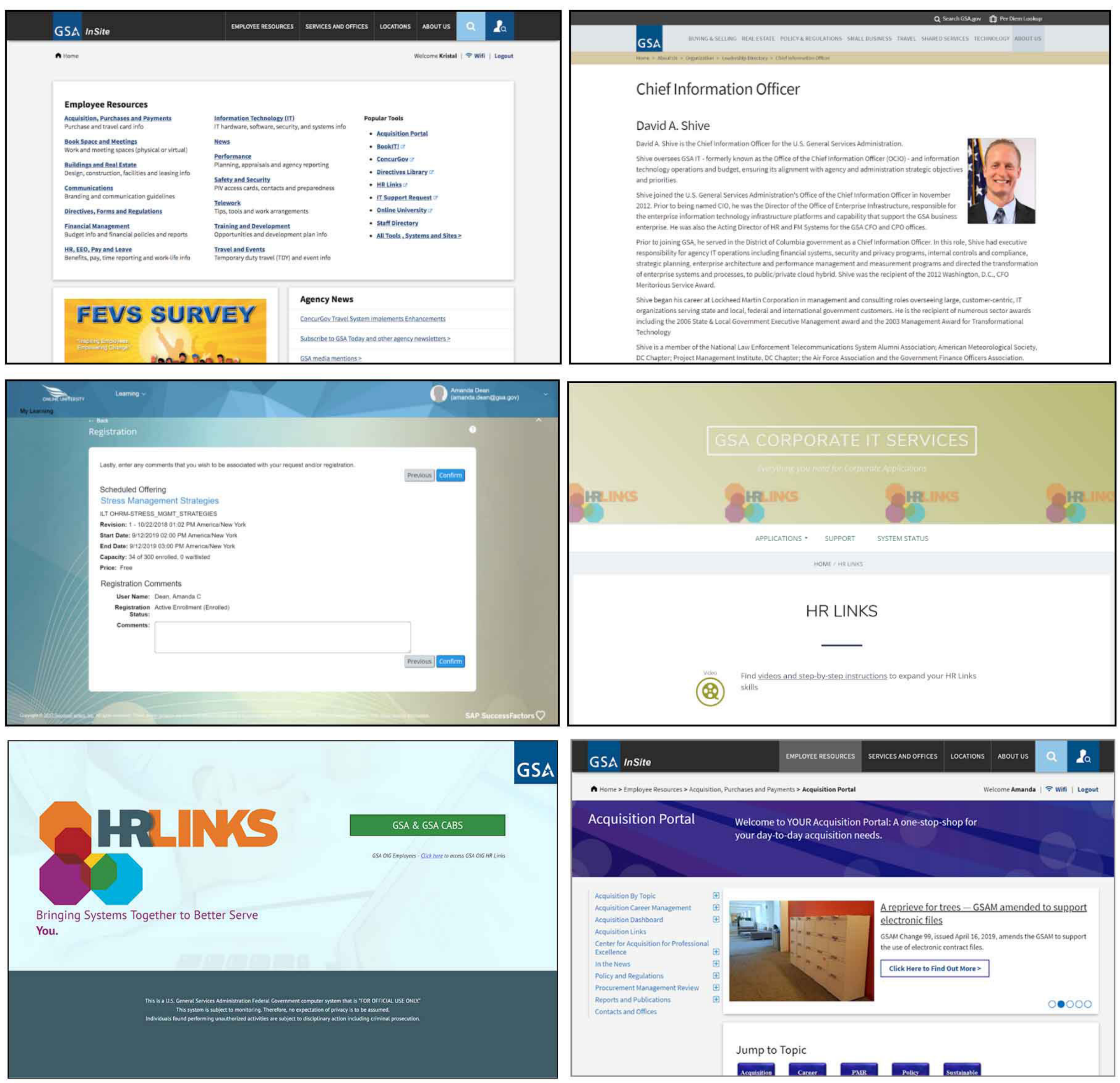
The visual consistency and familiarity across the Scottish Government's digital workplace toolset made it easy for employees to remember which tools to use to complete certain tasks.

At the General Services Administration, the branding and visual design were inconsistent across its digital workplace tools. Each site seemed to be self-contained and visually disconnected from one another. Rather than having different designs for every tool, a better approach would be for the GSA to use brand colors and typefaces across all GSA sites consistently. Where possible, maintaining the GSA logo across sites so employees know they are still on a GSA system would also help.

Don’t try to replicate other intranet designs.

Process and Strategic Considerations

Research and test with your user groups and employees to determine a layout and information architecture that will best serve their needs.



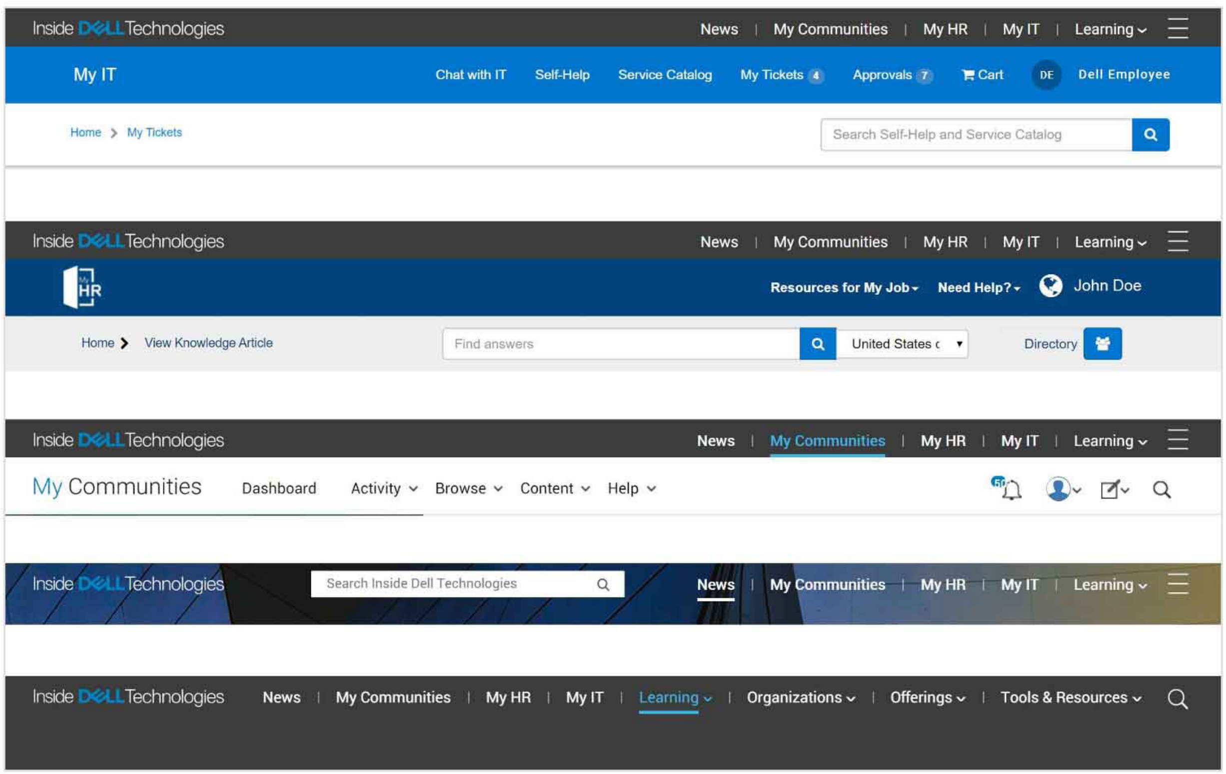
GSA’s intranet branding was somewhat similar to the external GSA.gov site. All other internal GSA sites, such as the agency’s Online University and Corporate IT Services site, lacked visual consistency with the GSA Brand.

5. Include the intranet's logo in the upper left corner of each page.

Consistent logo placement in the top left corner of the intranet is one of the most common design patterns of all time. The logo serves as a landmark that orients employees when they first land on a page and helps them identify the digital workplace tool they are visiting. Often, a good logo for an intranet simply includes the intranet's name with no other fanfare. Many intranets use the company logo along with the intranet name. This practice effectively differentiates the intranet from the public-facing website while still supporting the organization's brand.

Much research indicates that speakers of languages that are read and written left-to-right look at the left side of the page first, and often, the logo is the first page element they notice. These people also tend to spend more time looking at the left side of the page overall. As such, it's important to consistently place the intranet's logo in the upper left corner of the global header on both desktop and mobile views. Linking the logo to the intranet's homepage is also a favorable practice so employees can reliably return home on click or tap of the logo.

At Dell, the InsideDELLTechnologies logo (the intranet's logo), was visible in the upper left corner of all pages. The logo was large enough to click easily and helped employees navigate back to the homepage. Though the intranet's logo appeared in the upper left corner, sometimes a secondary logo would appear below it. This contributed to the feeling that the intranet was a mesh of different sites, to which employees alluded. In this case, a better approach would be for Dell to ensure the top header banners are as consistent as possible across all tools. Improving the look, feel, and interaction design of the body of pages across the various platforms would also help build a cohesive intranet.



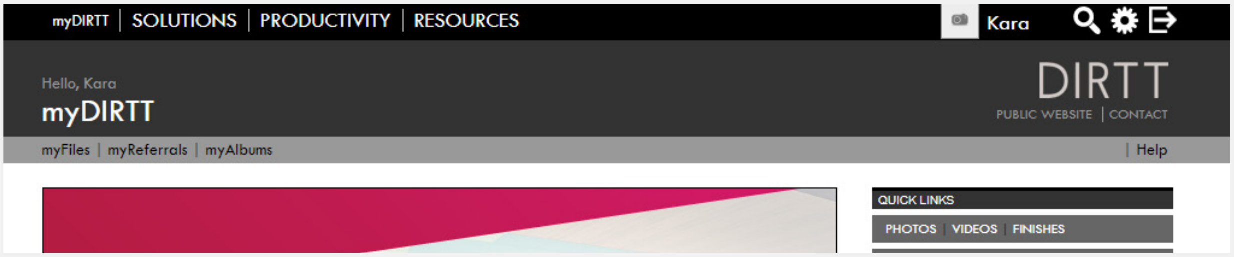
Most participants used the Inside Dell Technologies logo to return to the intranet's homepage throughout most tasks. The secondary logos, which sometimes appeared on digital workplace tools, tended to confuse employees and made them question where they were.

Employees returned to the intranet's homepage before attempting a new task.

User Behaviors

One behavior we observed during our research, which was symptomatic of an unmanageable intranet, was that employees would often want to restart by returning to the homepage before attempting another task. They would click on the logo to get back to the homepage. This helped them start from a familiar location, with a fresh perspective, knowing they may get lost along the way and unable to begin the next task from where they left off on the previous one.

Most users clicked the *myDIRTT* link in the upper left to go back to the homepage before they started a new task or after they had been looking and couldn't find something and wanted to regroup mentally. One user clicked 'myDIRTT' and said, "I always like to start from the main page." Another user said, "I'll jump back home," before beginning a new task.



Employees at DIRTT relied on the myDIRTT logo in the upper left corner to navigate back to the homepage between tasks.

6. Design promotions and announcements to match the intranet's style and color scheme.

Interface elements and different pieces of content often compete for employees' attention on an intranet. To complete their tasks efficiently, employees have learned to pay attention to elements that are typically helpful (e.g., navigation bars, search boxes, headlines, and links to important digital workplace tools), and they ignore elements that are usually void of information. Ads or ad-looking components are the most prominent member of this last category. Hence, **banner blindness**.

Banner blindness

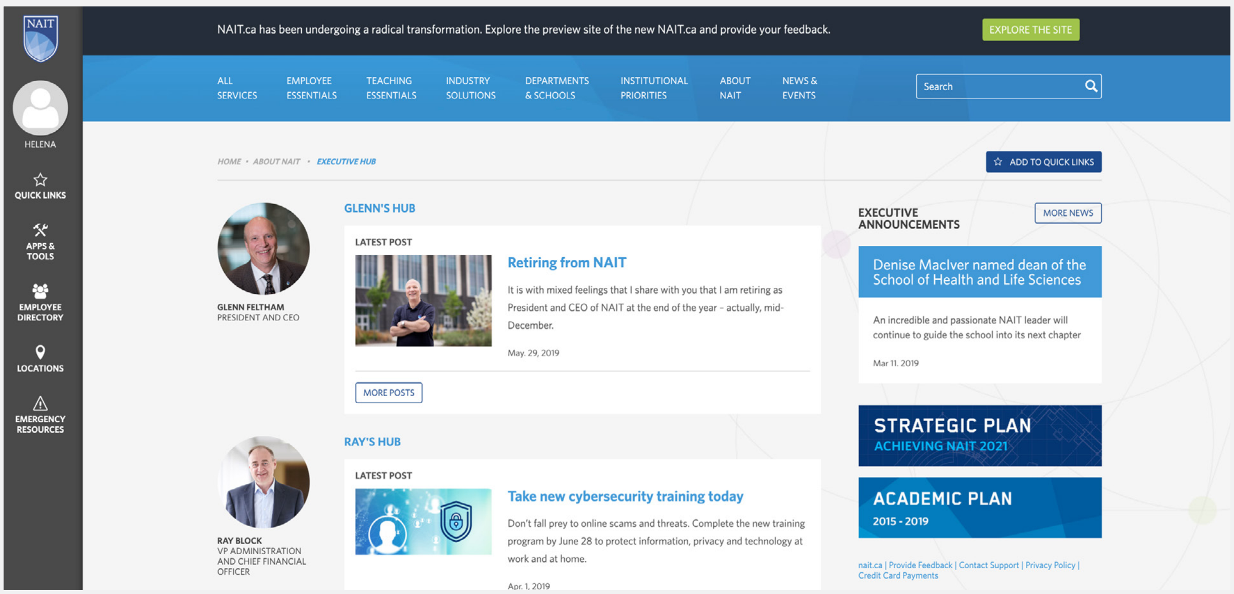
Definitions, Principles, and Methods

Banner blindness is a well-known web user behavior that describes people's tendency to ignore page elements that they perceive (correctly or incorrectly) to be ads.

On an intranet, employees might mistake promotions or announcements for meaningless messages if they look too much like ads. Legitimate content elements that have certain ad-like characteristics are ignored. Here are the traits that signal an ad:

1. **Ad-specific placement**, such as at the top of the page or the right rail
2. **Ad-like visual treatment**, such as animation
3. **Proximity to actual ads** or promotions

The Northern Alberta Institute of Technology team thoughtfully designed its promotional announcements and messaging to ensure they aligned with the intranet's overall visual style and didn't resemble ads. The designs favored using clear, highly visible text rather than images. The color palette for the announcements also nicely matched the rest of the intranet's design. Even though these elements lived in the right rail of the page, their appearance communicated importance as supplementary information relevant to the page's primary subject matter, not that they were placed there just to fill space. They also appeared in a consistent size with adequate spacing around each element. Also, the design remained clean and coherent because it adhered to a grid.

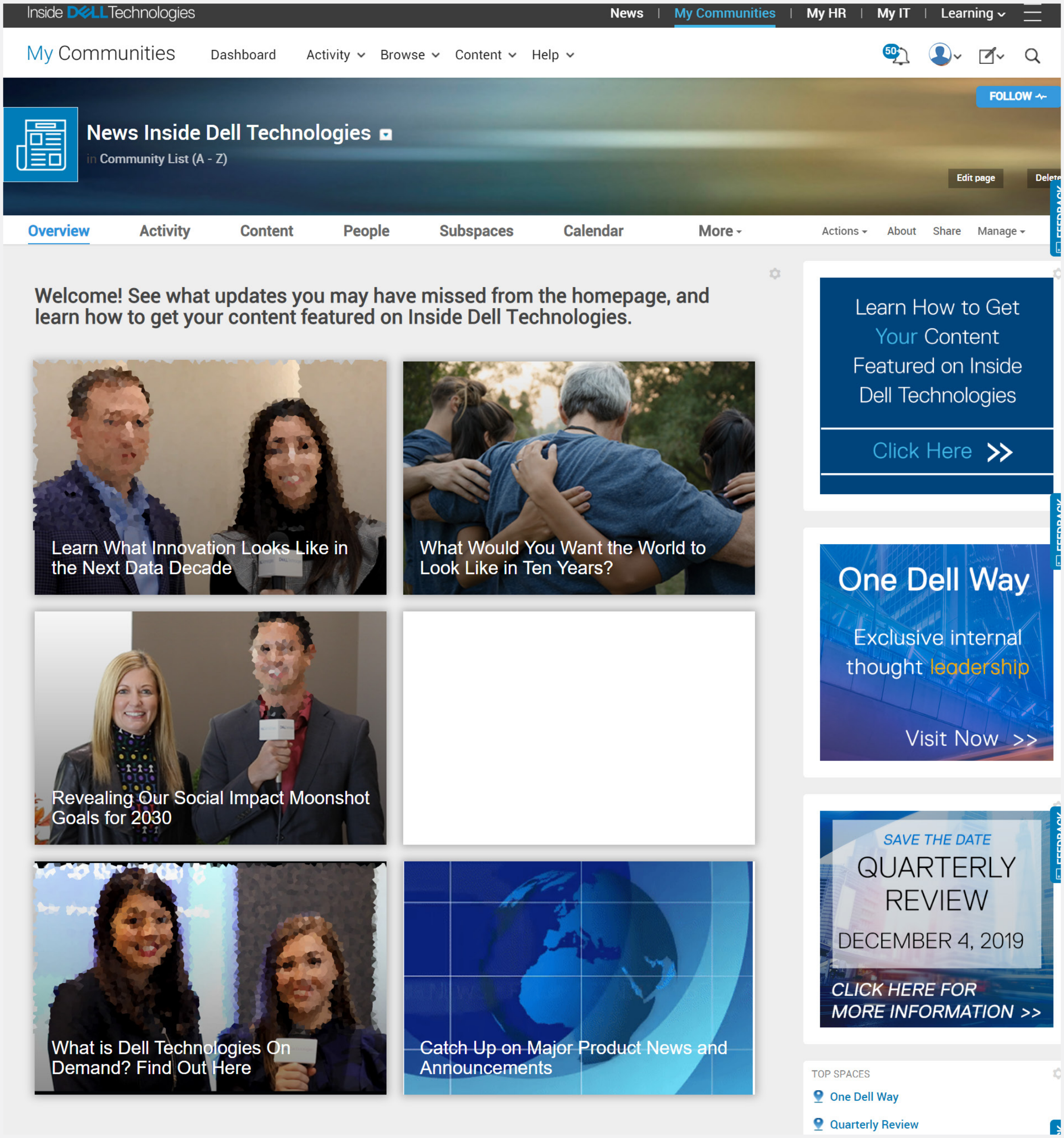


Although the Northern Alberta Institute of Technology's promotional messaging and announcements appeared in the right rail of the intranet, they were designed not to resemble ads. The design treatment ensured they would be recognized as important information supporting the page's main topic.

On Dell's intranet, even though the promotional messaging in the right rail was consistent with the intranet design's fonts and colors, the visual presentation of the messages resembled banner ads and was too easily ignored by employees. The text treatments in the announcements lacked appropriate styling and hierarchy. ALL CAPS text treatments can be effective for short, descriptive text phrases or provide further context for a main headline. However, that wasn't the design choice here as ALL CAPS text was used for full calls-to-action, such as:

> CLICK HERE FOR MORE INFORMATION ››

A better approach would be for Dell's intranet team to align the bottom two banners with the top one's look, feel, and communication style and write a much clearer call-to-action, such as *Contribute Content*, instead of, *Click Here*. Using different font sizes, weights, and type treatments would also help polish up these right-rail announcements' visual design.



The promotional messages on Dell's intranet may have matched the intranet's overall visual design, but the design, styling, and placement in the right rail too strongly resembled banner ads, which employees ignored.

Avoid using *Click Here* as link text.

Timeless Design Tips

We tend to call link labels such as, *Learn More* and *Click Here* lazy link labels as they don't help to set employees' expectations for what will happen next after clicking. As much as possible, use more descriptive link labels to inform employees what benefit they'll receive from clicking.

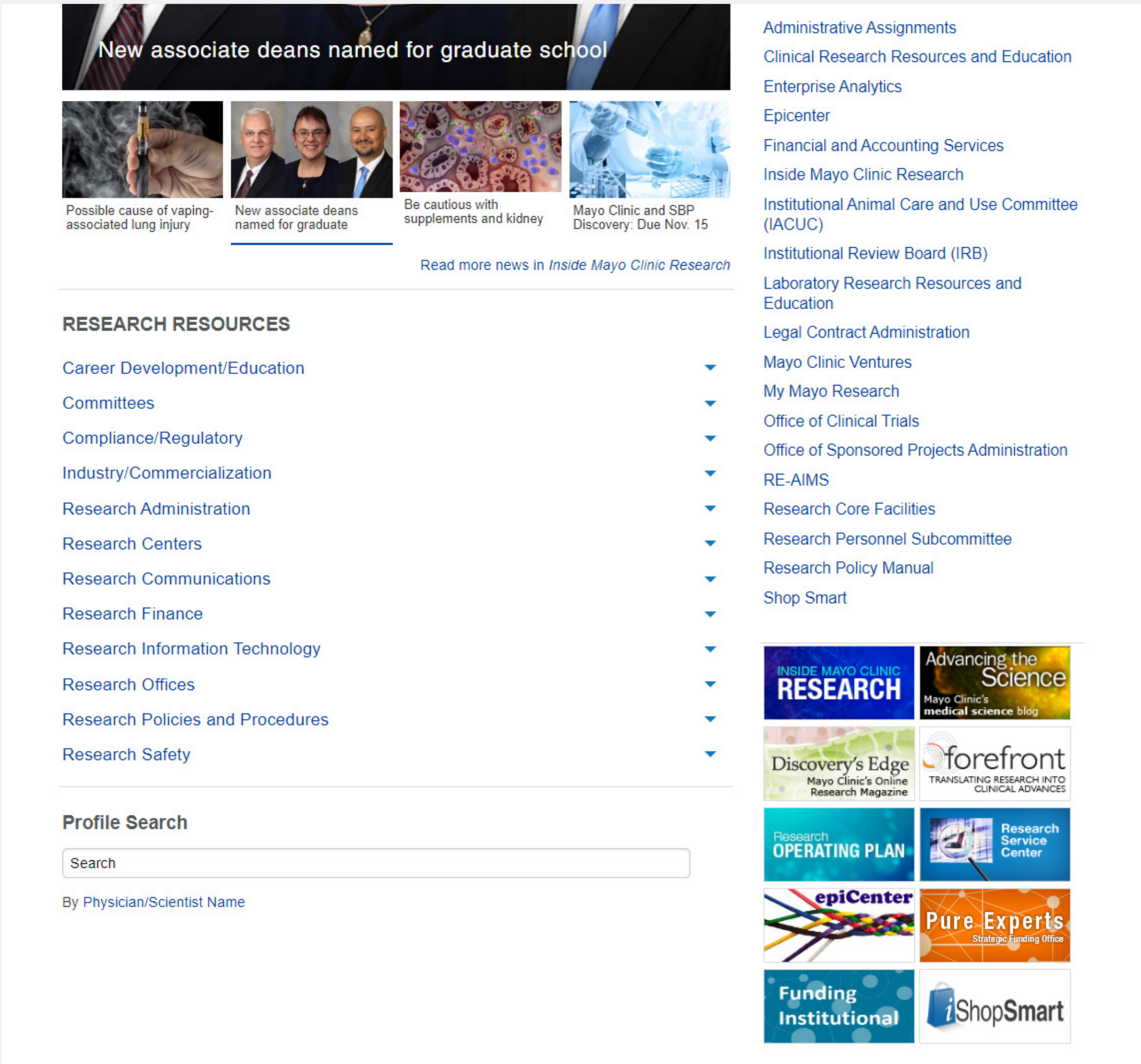
This practice is also much more favorable for employees who rely on assistive technologies, such as screen readers. Hearing a screen reader say, *Learn More, Learn More, Learn More,* repeatedly as it describes each link is not helpful for users trying to decipher links from one another.

Intranet designers should be thoughtful about how they present announcements and supporting messages:

1. Don't make content look like ads. Choose colors, type treatments, backgrounds, and overall content style carefully.
2. Run usability tests to ensure users see important content in the top banner or right rail.
3. Do not mix content and ads in the same visual section.

For example, the Mayo Clinic had 10 small spaces on its intranet in the lower corner of the right rail for promotional messages. Unfortunately, because each tiny banner used a different background, type treatments, and color schemes, they all looked like vastly inconsistent ads worth ignoring.

Though designers may think making a secondary message look different from the rest of the intranet will increase its salience, doing this often has the opposite effect. In this case, a better approach would be for the Mayo Clinic to reduce the number of messages appearing here, which would help feature only a few important messages or announcements. The freed-up space would also enable the intranet design team to design these messages in a more meaningful and noticeable way that doesn't so strongly resemble advertising.



On the Mayo Clinic's intranet, tiny messages that looked like ads appeared in the lower right corner. A better approach would be to simply include links to these areas on the intranet rather than presenting them as inconsistent-looking banners.

LAYOUT, IMAGERY, AND ICONOGRAPHY

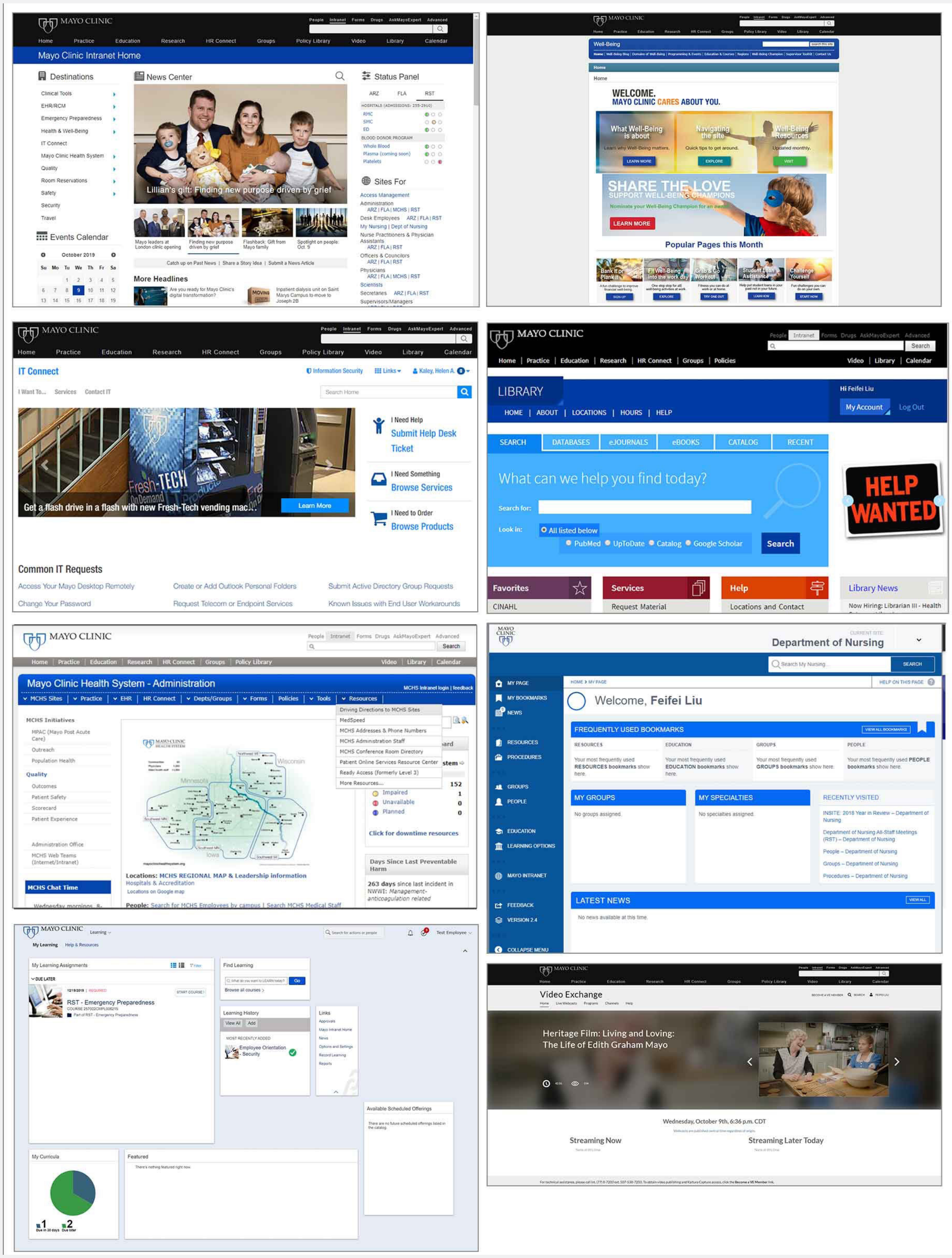
7. Create templates and reusable components to ensure design consistency across all intranet pages.

Many of the intranets we studied had a very different look and feel from one section to another, rather than using a consistent design system, pattern library, or set of page templates to establish a common visual language and page structure. When pages all had a different look and feel, employees began to question whether they were still on the intranet, where they were in the digital workplace, and how to get back. Employees also struggled to familiarize themselves with how content was structured when areas of the intranet looked so different. Seeing different designs took more cognitive effort and increased employees' time on simple tasks when they had to stop and consider whether they were in the right place before starting the activity. As much as possible, work to consolidate the look and feel of all web pages on the intranet. One employee said, "The intranet should feel more like a set of cohesive and related web pages . . . If you make it more user friendly in that way, you wouldn't have to navigate through all these different pages."

At the Mayo Clinic, a lack of consistent, full-page templates and reusable components meant the design looked incredibly different as employees moved from the main homepage to department subsections and digital workplace tools. This contributed to employees getting lost and was a missed opportunity to build a coherent system of components that could be used effectively across the entire intranet. This would help employees quickly identify the interface elements to look for when completing key tasks.

The look and feel of the radiology department's subsite changed when employees went to different campuses. The nursing department had a separate intranet, which looked completely different from the main Mayo Clinic intranet. One nurse said, "The system looks good in some places but is not usable. It's so inconsistent."

Internally oriented service teams at the Mayo Clinic, such as Human Resources, tried to use templates for employee-facing pages. However, after the intranet's initial launch and this attempted use of templates, teams were too freely allowed to modify their parts of the intranet. For example, many deleted all the overview-type information that was supposed to appear across all pages consistently and instead used their landing pages to list internally shared documents, which were generally only useful to other team members. This approach was counter to the intended use and purpose of the templates and quickly led to the intranet's design growing inconsistent and disorganized.



The Mayo Clinic lacked a common visual system and standards for the intranet.

The existence of a design system, uniform page templates, and purposeful components alone won't entirely solve the problem of an inconsistent-looking intranet. You can't simply hand off a set of templates or design system components and then walk away, expecting the intranet to stay looking visually uniform and consistent over time. Ongoing training and accountability for content managers and publishers — the people who build pages and post content to the intranet, are also necessary. This way, these individuals know when and how to use the right components, text treatments, and visual styles and are responsible for following specific design standards. Training and accountabilities also ensure content managers avoid problematic behaviors that tend to cause inconsistent-looking pages, such as freely tinkering with the HTML and CSS.

While observing a content manager at the Mayo Clinic, they said:

> "I couldn't remember the four-column nuances. It finally worked when I made a single column with a manual column width. I learn so much from WordPress' reference guide. I haven't been trained in this, but I learned so many different things. Like the custom piece of the banner from the beginning; I didn't know how to do it to get everything referenced in here, but I really figured it out."

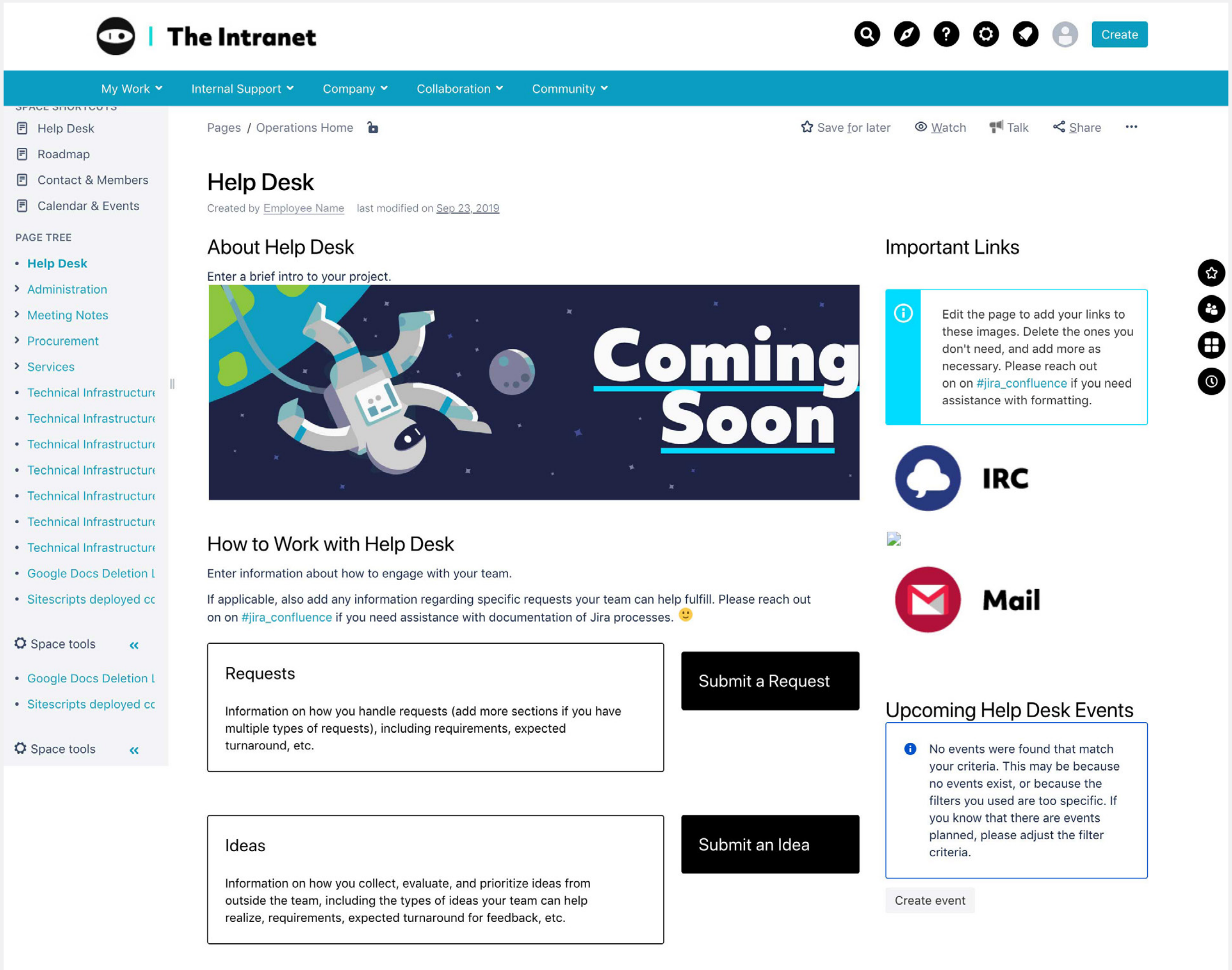
Ensure content managers and page creators are trained and understand design standards.

Process and Strategic Considerations

Individuals within a particular department may have difficulty seeing beyond their own needs. To make the intranet useful for everyone, organizations that allow different departments to create and maintain their own parts of the intranet must provide specific requirements about what must appear on the main department pages and explain the reason for these requirements.

Eyeo's intranet team created page templates for different departments and teams to use on its intranet. This helped ensure a consistent layout, which was especially important for the sections where multiple employees contributed content. Its content managers underwent much training to understand how to use the templates and components to build pages. The intranet team lead said:

> "At the captain level, we try to create content and forms that are going to get people coming to the intranet and excited. We have a standard template we try to keep consistent, especially on landing pages. They all start like this; they usually have five tiles in the top major areas. We used to call them bingo boxes; people loved this because they were hyperlinks to other relevant and important content."



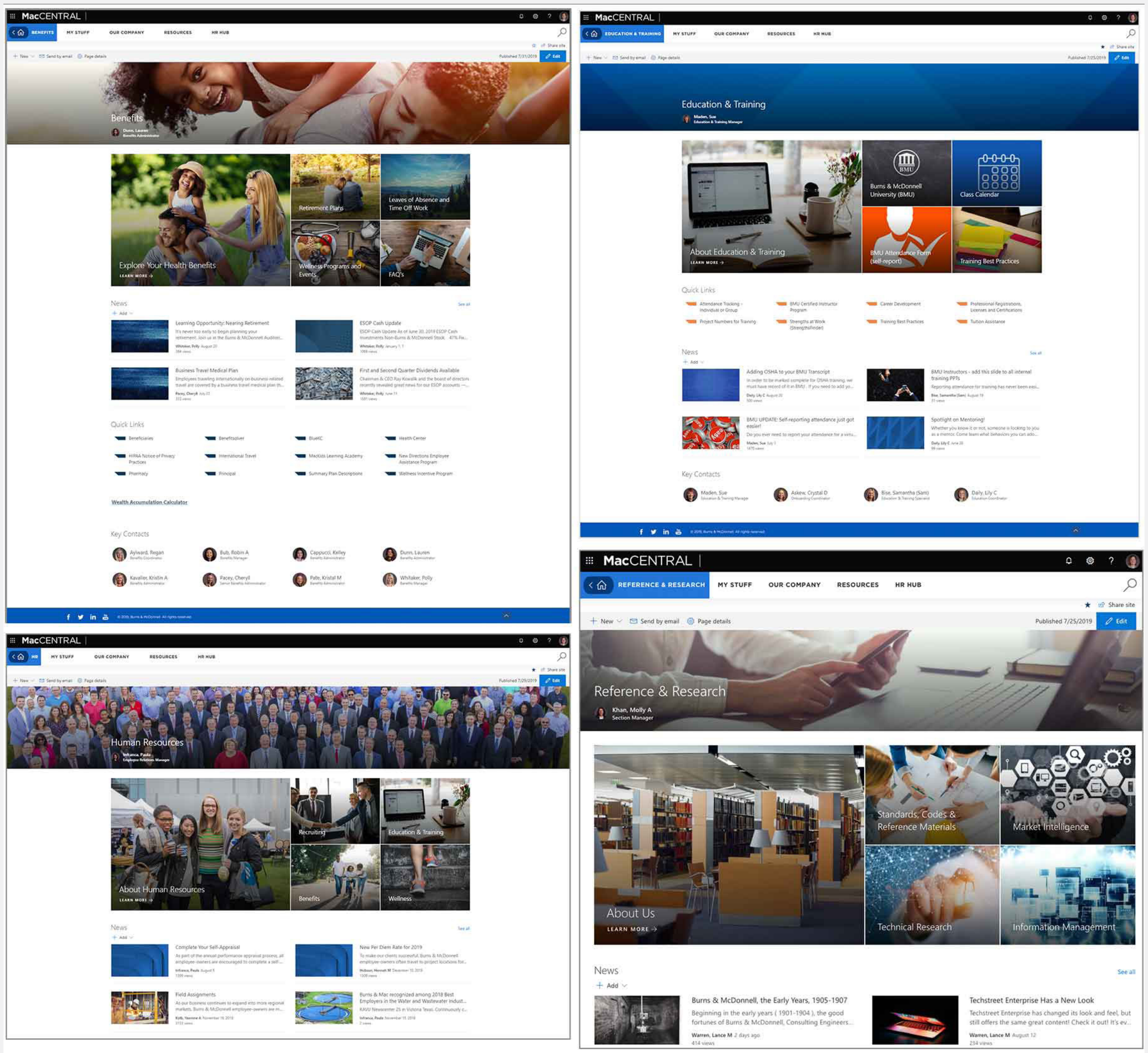
Eyeo's team used consistent landing page templates across its intranet. This helped to maintain the clean and modern-looking visual design and safeguarded the intranet from appearing disjointed and disorganized.

Of the intranets we studied, Burns & McDonnell's was one of the most visually pleasing and consistently designed. This was mainly because of the organization's strict templates and detailed standards for the intranet page design and content. The use of white space, color, padding, and typography was consistent. One of the content managers said:

> "Our templates are useful. Being able to a make page and news templates helps a ton. I don't have to be like, ok, in what order did I set things up? Before we had the templates, I'd have to create a copy of another page to create a new one."

When we discussed how they achieved this consistency, the company's intranet team lead shared:

> "There are containers on the page, and then content admins can just fill in pages with information after they've been properly trained. A benefit for our employees with this approach is that from one department to another, if they're familiar with their own department's pages, using the same terms, the same locations, the structure is all consistent, and people know where to find things."

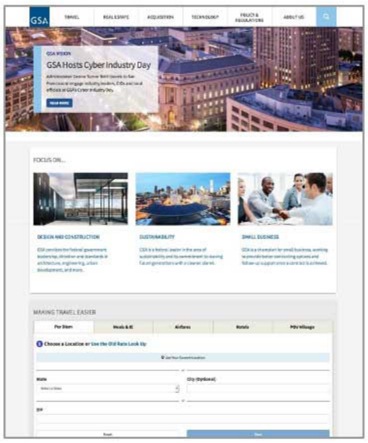


Burns & McDonnell's intranet templates were arranged and designed consistently. This made it fast and easy for employees to find what they needed and eased content management for publishers.

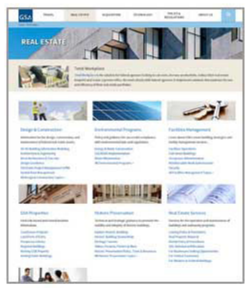
For both its intranet and main government website, the General Services Administration used a comprehensive 37-page style guide to outline and clarify visual design details such as colors, typography and hierarchy, the styling of buttons and links, image sizing, and more. An entire section included information on how to use and when to apply various templates available in its content management platform. This helped content managers, distributed across the organization, understand how to achieve and maintain the consistent visual design GSA intended for its website and intranet.

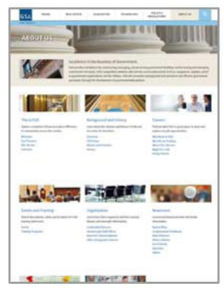
Overview of Templates

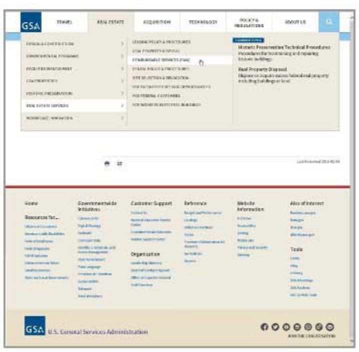
Each template introduced below is linked to a later section in this Visual Style guide containing more detailed descriptions and links to sample pages.



Top Level Pages consist of the Homepage and the six-primary topic "Tab pages". They act as gateways, introducing content and directing users to further information.

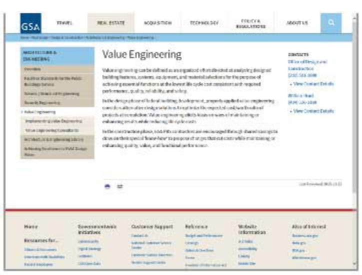






The **"Mega Menu"** is an important component of all GSA.gov templates. It is globally accessible across the site and contains dropdowns allowing a visitor to drill down two levels within the site from any page of the site. It also hosts Featured Topics, highlighted content that is relevant to each navigational tab.

The **"Footer"** presents utility links, resources, and access to GSA's social platforms.



Standard Pages form the vast majority of the site. This template is flexible and modular and provides many opportunities for variation. Left navigation places the content in the context of other pages. The right column provides contacts and related information to supplement the primary content.

The General Services Administration explained each page template available for its main government website and intranet through a detailed style guide. The style guide prioritized the right types of details for publishers.

RESPONSIVE DESIGN

8. Use responsive design to support cross-channel intranet access and desktop multitasking.

Providing employees with a mobile responsive intranet enables them to access the platform whenever they need it, from wherever they may be — in the office, working from home, or out in the field. When an intranet's interface gracefully scales to maintain a visually appealing and organized design on smaller viewports, employees can maintain maximum flow and productivity, especially as they resize their browsers on larger screens or access the intranet via a mobile phone or tablet in the field. For these reasons, if you're contemplating whether to utilize a **responsive design** for your intranet, the answer is yes!

Responsive web design

Definitions, Principles, and Methods

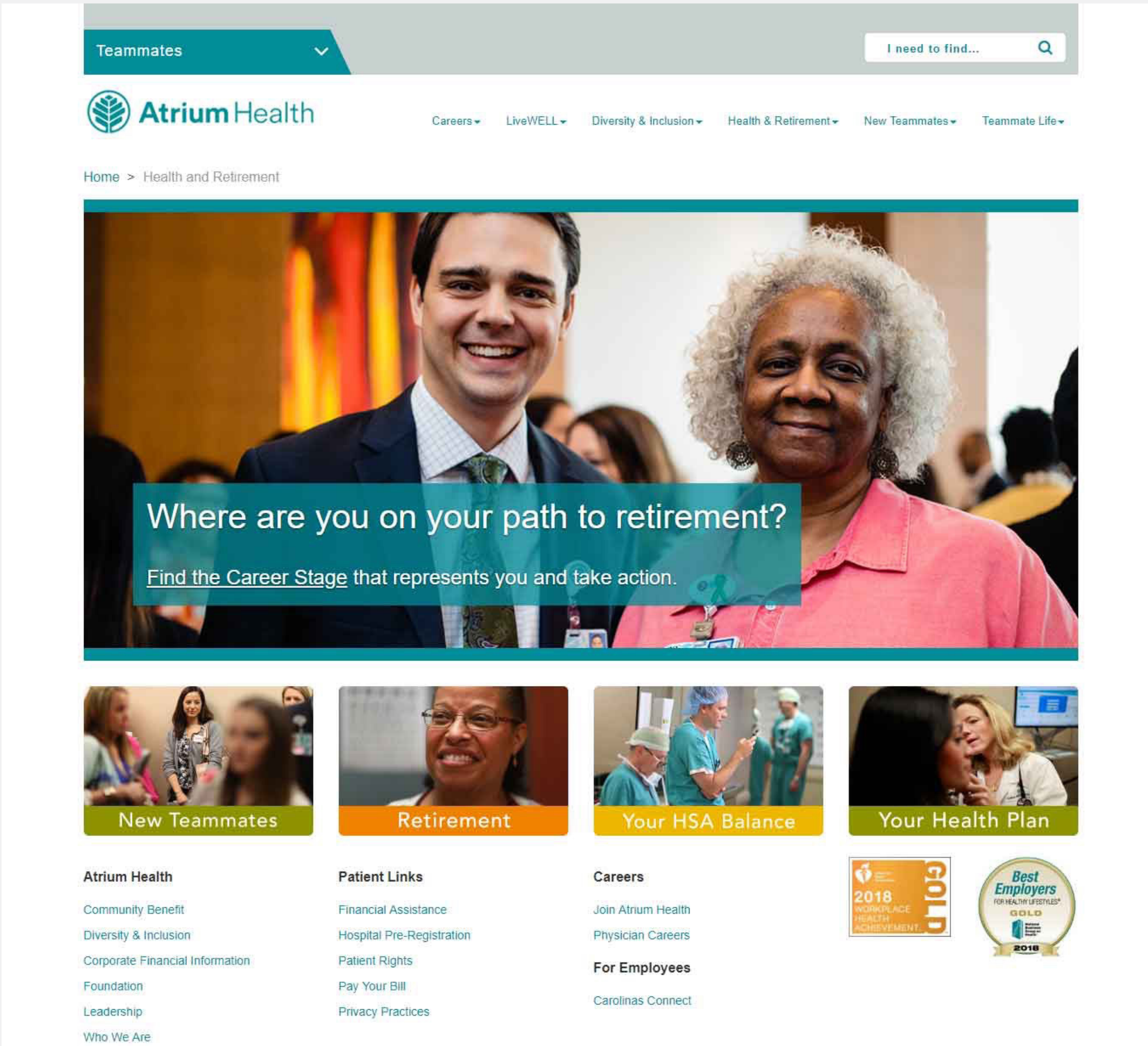
Responsive web design uses HTML and CSS to automatically resize, hide, shrink, or enlarge a website, to make it look good on all devices, including desktops, tablets, and phones.

Employees use multiple browser windows of varying sizes while they work.

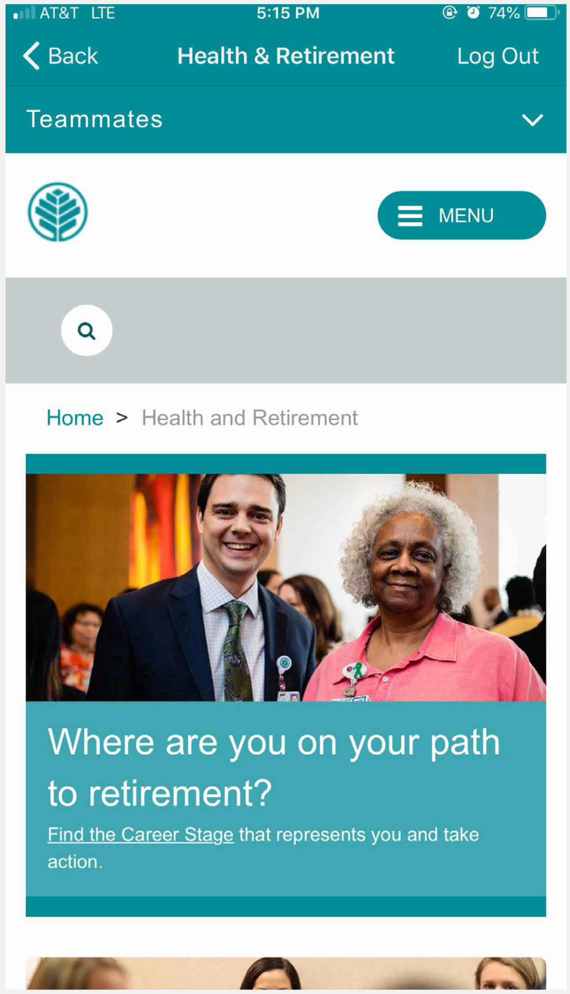
User Behaviors

In addition, as we observed, employees often had many browser windows open on their desktop or laptop computers simultaneously. As such, employees would resize the windows and move them around to achieve an optimal view to complete their work and various activities across tools and systems.

For example, Atrium Health prioritized a good cross-channel employee experience and used a clean, responsive design for its intranet. As screen size decreased, elements within the interface stacked sequentially into two columns on tablet in portrait view (768 pixels wide) and a single column on mobile. Sufficient white space between each component ensured the intranet remained breathable, scannable, and coherent. Typography and text treatments also decreased in size, however, not to the point where they were rendered unreadable.



Atrium Health's intranet design used a reliable grid system, making it easy to scale across viewport sizes.



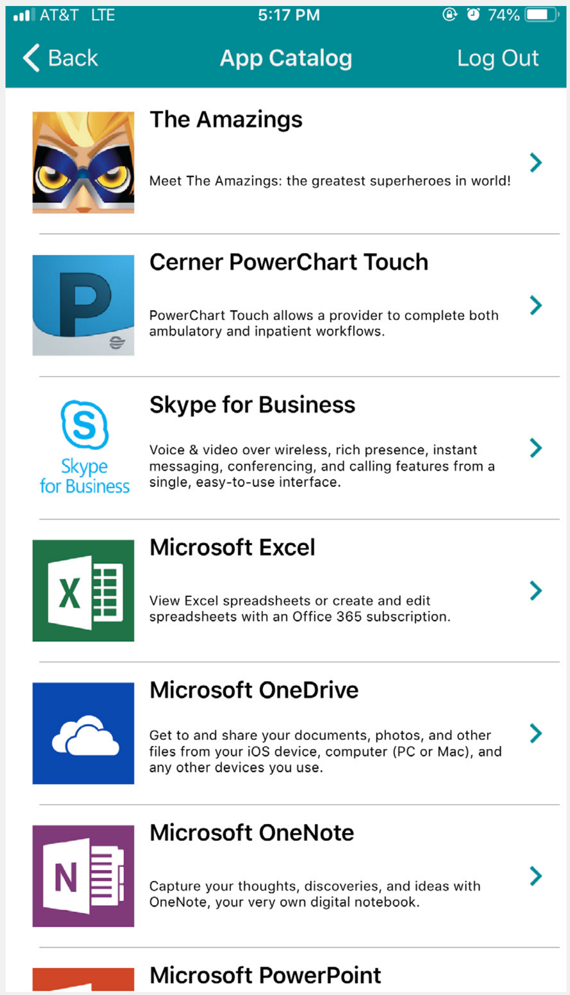
On mobile, Atrium Health's intranet stacked into a single-column grid. Slight modifications to the design in the smaller viewports, such as using a solid teal background for readable text over the hero image, ensured employees could still skim and scan the content on each page to find what they needed.

In addition to using a responsive web design for its intranet, Atrium Health also offered a lightweight version of the intranet on a mobile application. This additional channel option was especially helpful for executives, corporate staff, and medical providers, who often traveled to different campuses and facilities within the healthcare network. Since they were on the go, they could reliably reach for their mobile device and the app version of the intranet to access other tools and systems. The app used inherent device capabilities such as push notifications, maps, and biometrics for signing into apps and tools. The mobile app version of the intranet provided many **accelerators** to help employees stay productive on the go.

Accelerators

Definitions, Principles, and Methods

An **accelerator** is a UI feature that speeds up an interaction or process.



Atrium Health's mobile app supported employees on the go with a familiar app design, push notifications, biometrics, and access to important company tools.

Employees were hesitant to download a mobile app to access the intranet.

User Behaviors

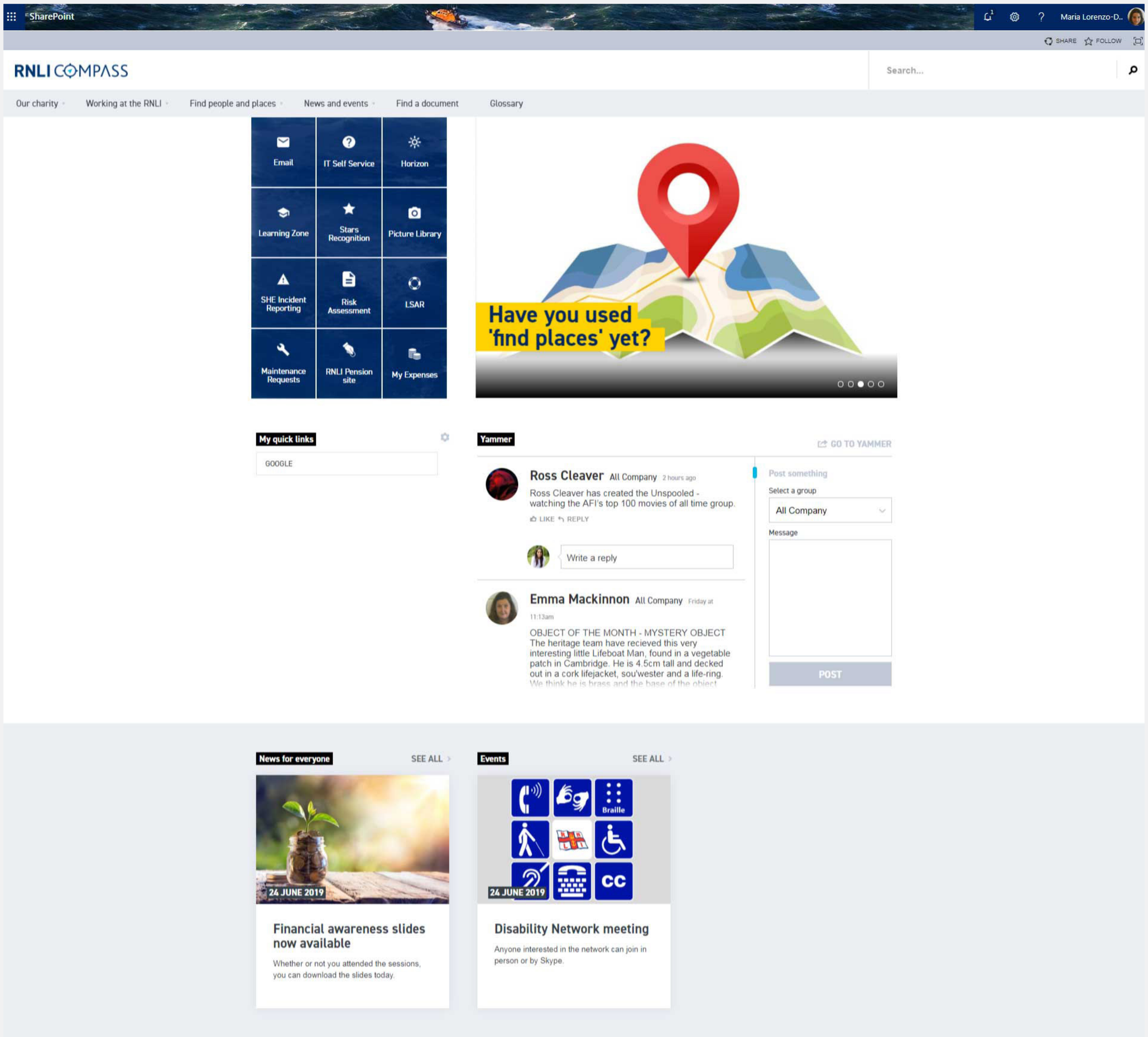
Before adding a mobile app version of the intranet to your digital workplace toolset, interview employees and IT teams. This way, you'll learn about employees' attitudes, preferences, and opinions about whether they feel they need and would use a mobile app version of the intranet. IT team members will be able to discuss whether a mobile app is a viable option and if it's safe and secure to have such an application on employees' personal phones. Or if the application should only be installed on corporate-approved devices.

In our research, some employees were slightly apprehensive about downloading an app version of the intranet on their mobile phones. A few feared the organization would be able to track their behavior or gather data from their mobile device about their whereabouts outside of the workday or week.

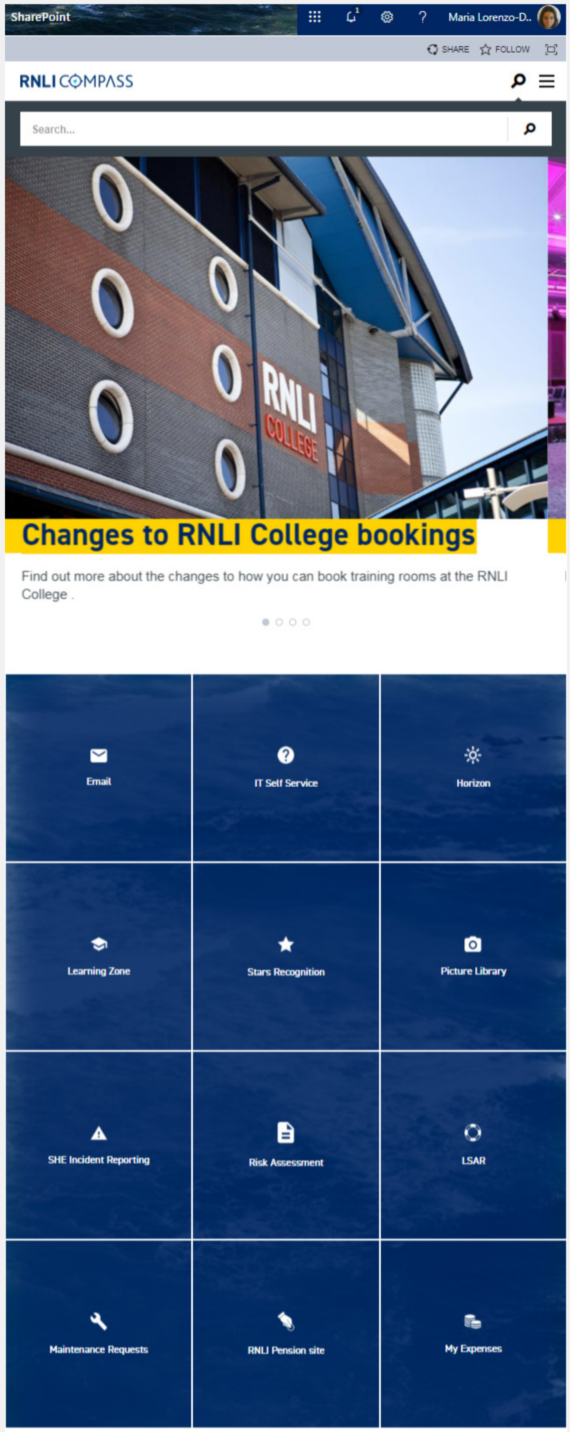
People also expressed that if they were required to download an app on their personal device, they expected their company to sponsor or contribute to the costs associated with their mobile phones and monthly cellular plans.

The Royal National Lifeboat Institution (RNLI) also used responsive design for its intranet. While the intranet rendered on a mobile device, unfortunately, the SharePoint navigation and other page elements were not fully optimized for smaller screens. Instead, the page design felt like a desktop version of the intranet smashed into a smaller viewport. Iconography and corresponding touch targets were far too small (less than 44x44 pixels) to support mobile tapping. Additionally, the mobile view text was so small that employees had to pinch and zoom to read and scan effectively.

In this case, a better approach would have been for RNLI to design a specific view of the intranet's mobile navigation rather than using the same desktop treatment, only fitting into a mobile view. Increasing font sizes and touch targets, as well as providing ample whitespace and even padding in between components as the intranet scaled down from desktop to mobile, would also help to improve the intranet's responsive design further.

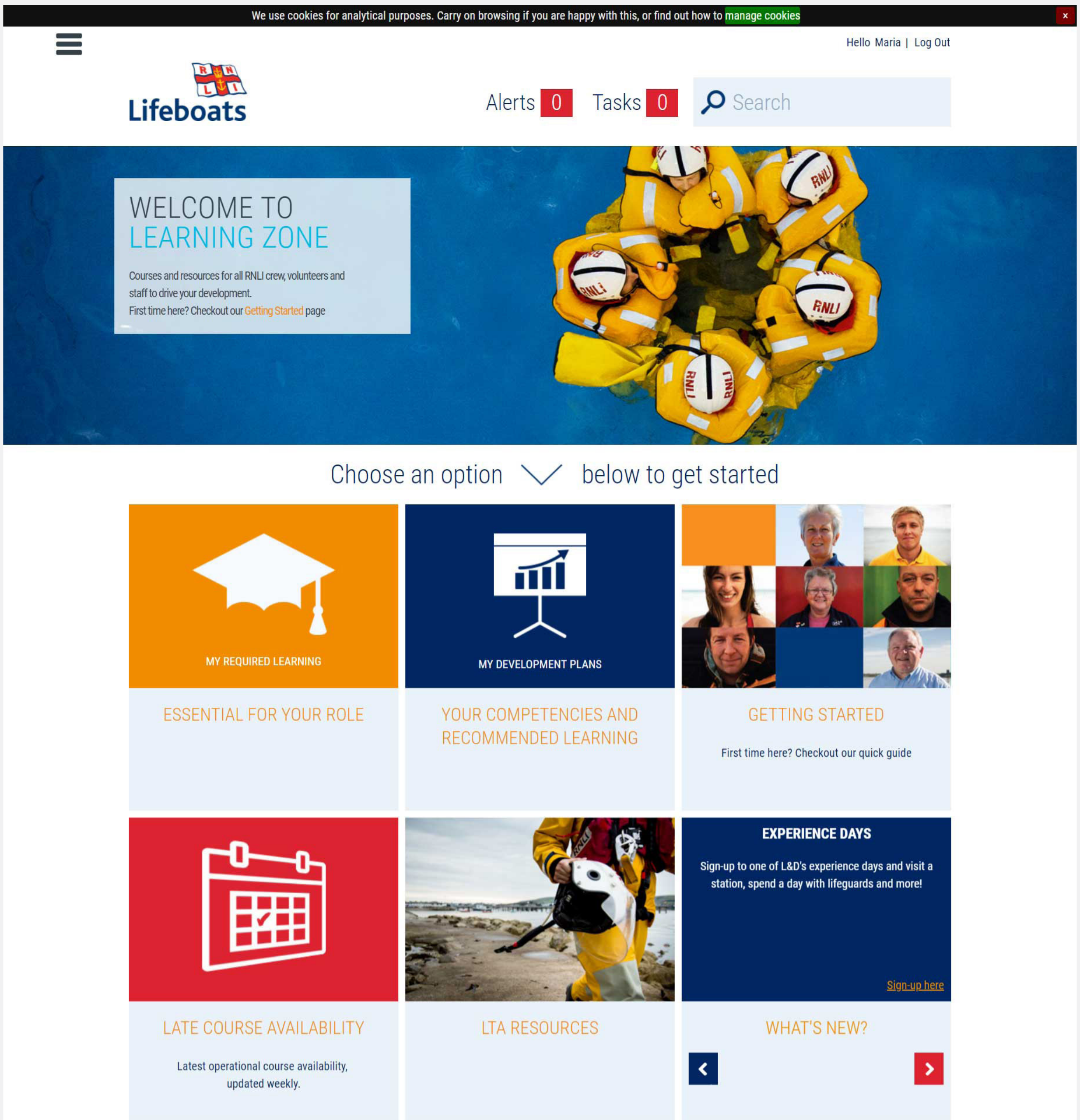


The Royal National Lifeboat Institution's desktop intranet design was favorable. It used ample white space, a nice grid of clean components, and prioritized tools and tasks employees needed to complete often.

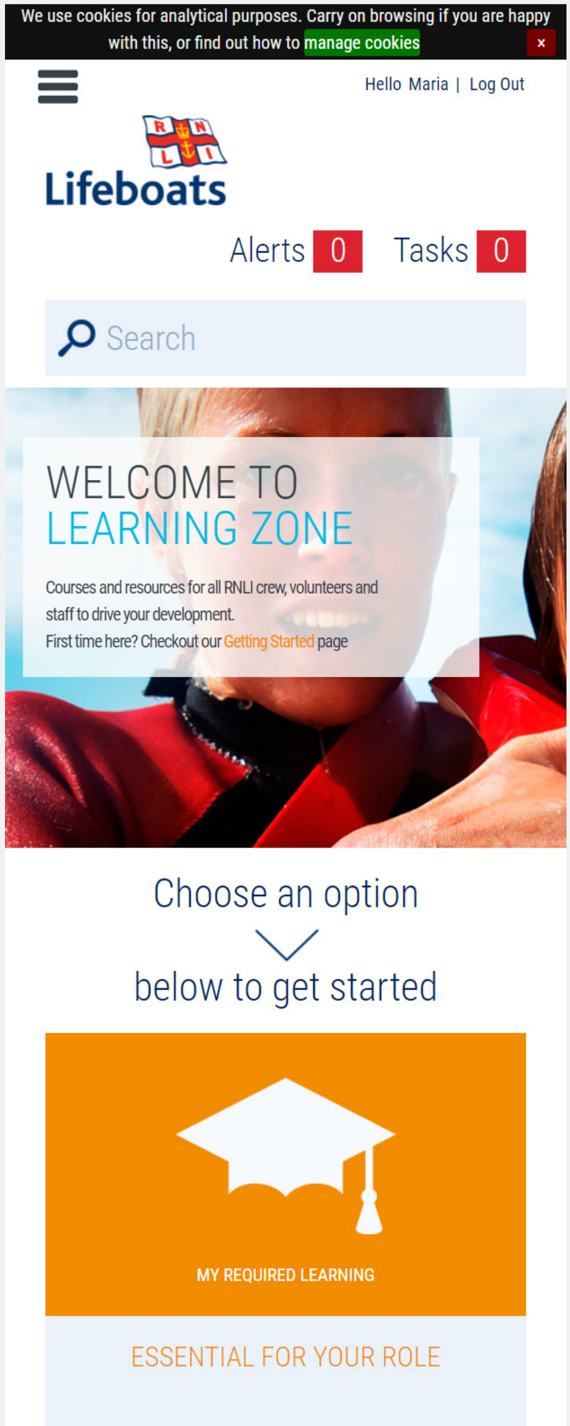


The mobile-responsive version of the RNLI intranet was less optimal as the design did not directly stack and translate. Fonts and touch targets were too small, and the navigation was simply a desktop rendering on mobile.

Two other areas of the RNLI's digital workplace did represent good examples of responsive design. Its learning and training tools and IT self-service portal were fully responsive and looked polished and professional from desktop down to mobile. The grid systems used in both tools, along with the thoughtful consideration paid to font sizes, color choices, component layout, and mobile navigation, meant employees could reliably access both of these systems and find what they needed while out at sea or in their office seat.

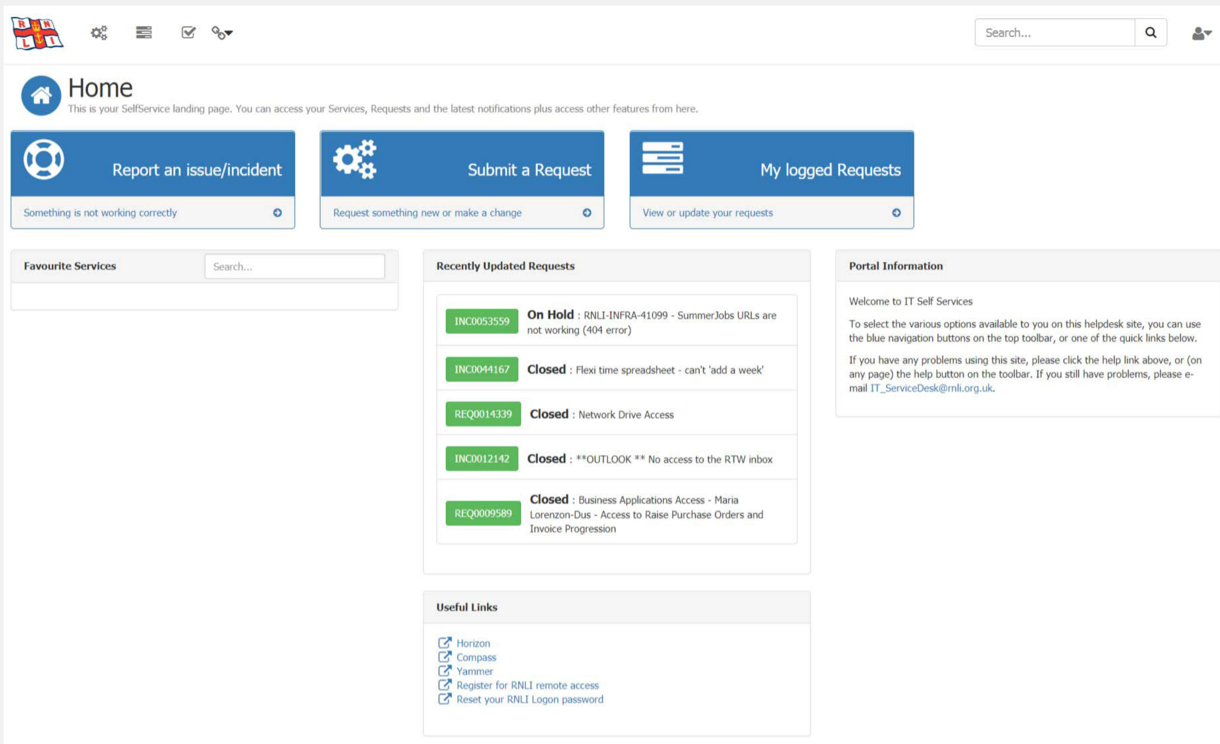


RNLI's learning and training tool featured a colorful, grid-based design that supported employees' ongoing education and career-building activities well.

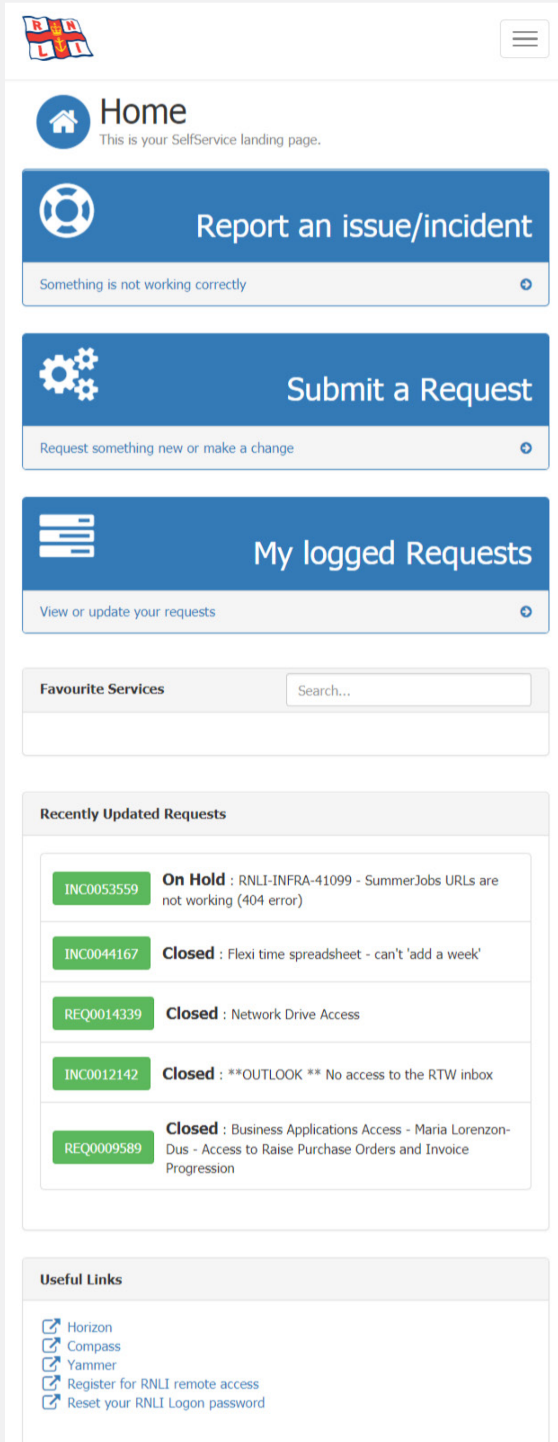


RNLI's learning zone stacked to a single-column design, which made it easy for employees to scroll down on their mobile devices to find the training or educational content they needed.

At RNLI, the team considered what employees use the IT self-service tool for most often and ensured the elements that supported those core activities were front and center at the top of the page with no distracting images or other filler components in the way. This allowed for a clean, usable design and provided direct access to those critical tasks from both desktop and mobile to help employees save time. As the site scaled down from desktop to mobile, the three blue boxes containing the launch points for reporting issues, submitting requests, and reviewing open requests remained at the top and highly visible.



The RNLI's IT self-service tool prioritized access to key tasks at the top of the page's design on desktop and mobile.



The even spacing, simplicity, and cleanliness of the component-based design helped employees stay efficient while quickly reviewing the requests they made from desktop and mobile.

Outline responsive design considerations in your design system or style guide

Process and Strategic Considerations

Help intranet content managers understand the details they must pay attention to in responsive design. However, remember they shouldn't need to know every technical detail if the intranet's content management system handles most of the legwork.

As much as possible, it's important to outline what steps content managers need to take or be aware of with the responsive nature of the intranet's design. This will ensure it looks good across channels.

Some important details to define and include in training, style guides, design systems, and content management systems include:

- The grid, including the number of columns
- Breakpoints and pixel dimensions for screen widths
- Widths of different page elements per breakpoints
- If any UI elements change across breakpoints
- The order in which content appears or stacks on smaller breakpoints
- Image options, minimum pixel widths, and resolutions
- Images' proportional relationship with the content container in which they are displayed
- How to preview and test pages in each breakpoint before pushing them live to the intranet

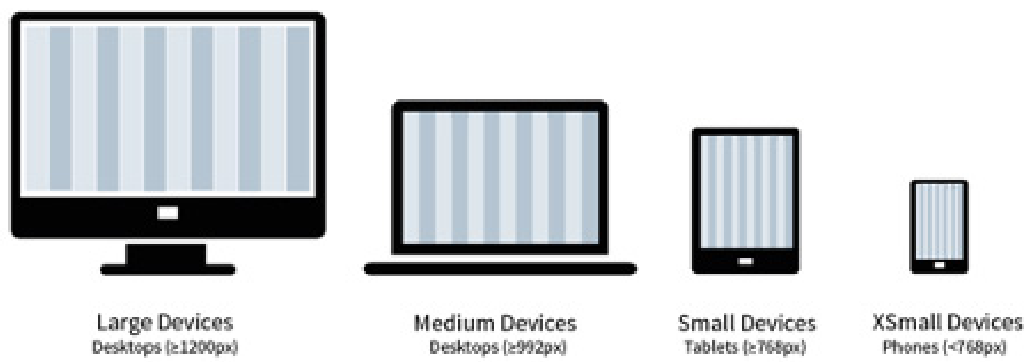
The Responsive Framework

GSA uses a free, open-source collection of tools using HTML, Cascading Style Sheets, and JavaScript called Bootstrap. This collection of front-end tools or "framework" is designed to support the efficient creation of responsive websites and web applications.

How GSA.gov Uses Bootstrap

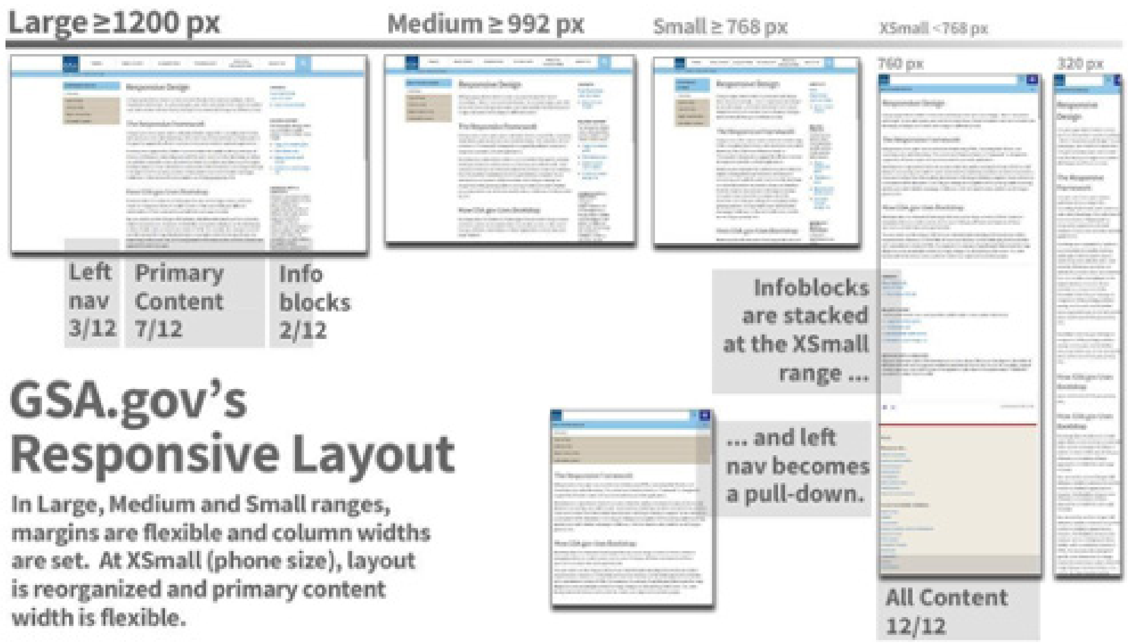
You can readily use the content management platform without a detailed understanding of the mechanics behind responsiveness. However, the flexibility of responsive displays can be challenging to those whose notions of web design are based solely on conventional HTML. For example, the concept of specifying pixel dimensions for image display becomes meaningless when the image changes size depending on the screen. So, some background on Bootstrap can be useful to reorient your approach to planning pages and particularly images.

Instead of fixed pixel dimensions, Bootstrap is based on a system of 12 invisible columns and a series of "breakpoints." The breakpoints represent thresholds for screen width at which different display rules can be written into the user-interface. GSA's responsive design makes extensive use of breakpoints.



The breakpoints used by GSA.gov are illustrated above. They are referred to simply as "Large" (lg), "Medium" (md), "Small" (sm), and "Extra Small" (xs). Page display for the first three breakpoints on GSA.gov holds the page at a fixed width and allows the margins to flex and fill the screen. Within the range of extra small screens, content layout is reorganized, and the content fills the screen with no margins.

The General Services Administration outlined exactly what intranet content managers needed to be aware of in terms of the responsive nature of the intranet. This example shows the 12-column grid system and standard breakpoints the design accommodates.



GSA's implementation of the breakpoints is shown above. Within each breakpoint, the widths of different elements of the page are created as multiples of the twelve columns. So, for example, a typical content page may have a left column of navigation, a right column of supplementary "info-blocks", and primary content in the middle. In this template at the three larger break points, the left navigation takes up three of the 12 columns, the right column takes up two, and the primary content takes the remaining seven. At mobile phone size (bootstrap's XSmall breakpoint), the left column disappears and is replaced by pull-down navigation, the right column content floats below the content, and the primary content takes up the full twelve columns.

Using Images within Responsive Design

Bootstrap's 12 column scheme provides a great deal of flexibility for creating containers that are automatically sized to different widths at different screen sizes. This flexibility is multiplied by the fact that any Bootstrap container can itself also divided into twelve columns. So, an image placed inside the primary content can be configured as a multiple of 1/12ths of that container width.

Now, consider that the content container width itself can vary depending on the configuration of the template it is being displayed in and things under the hood get complicated fast. But again, as a content manager, you can employ the CMP without worrying about these technical details – unless you want to.

On the GSA's intranet, visual examples of pages at various breakpoints and detailed explanations of proper image use and sizing helped content managers maintain the intranet's responsiveness and appearance across different devices.

DESIGN FOR PAGE COMPONENTS

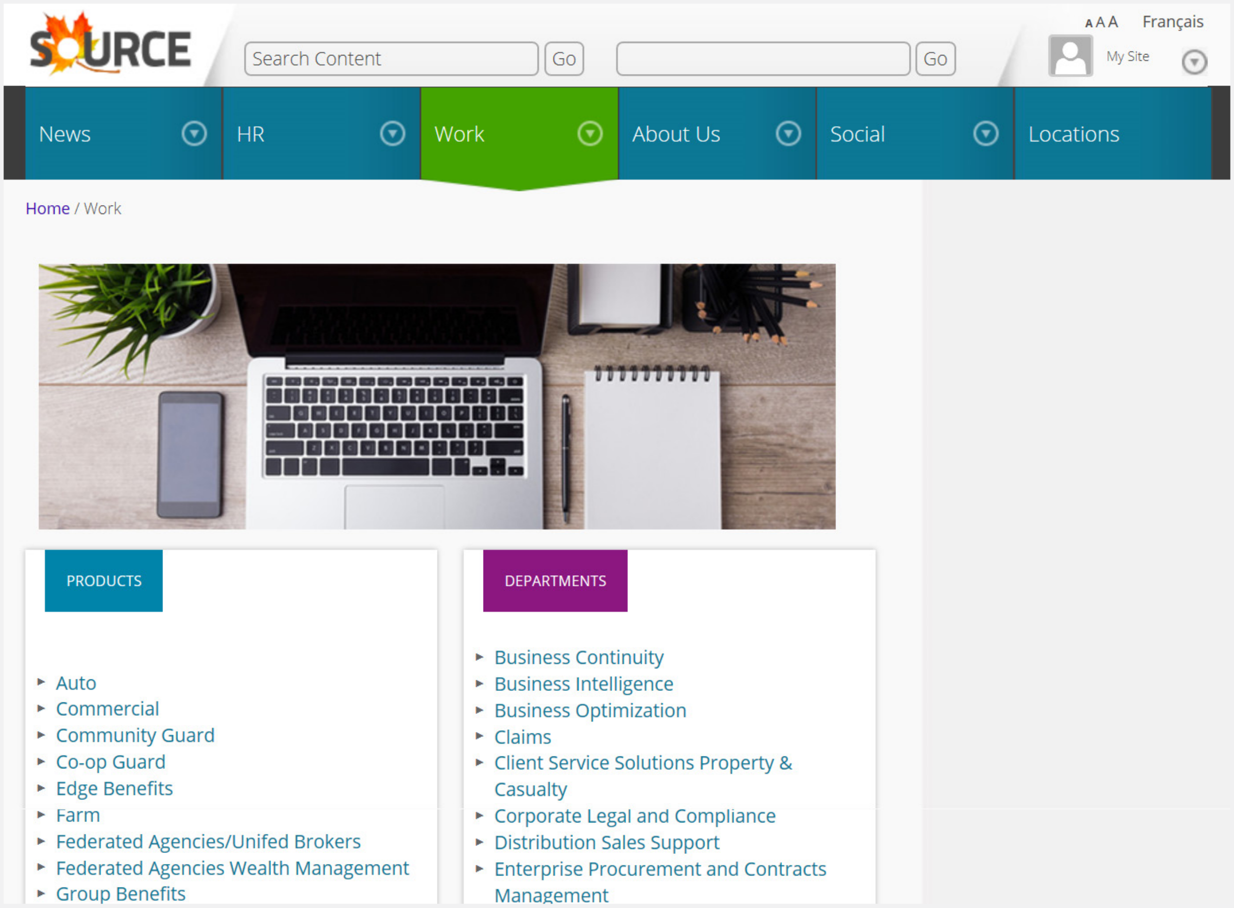
9. Ensure the intranet's design, templates, and components scale across all offices and languages.

Many intranets aim to support employees at various company locations worldwide, not just those who reside in a single office location or at the company headquarters. Some intranets take the favorable approach of balancing both global and localized content to meet employee needs at all locations. Others may provide fully translated versions of the intranet in multiple languages, where employees can customize the language they view.

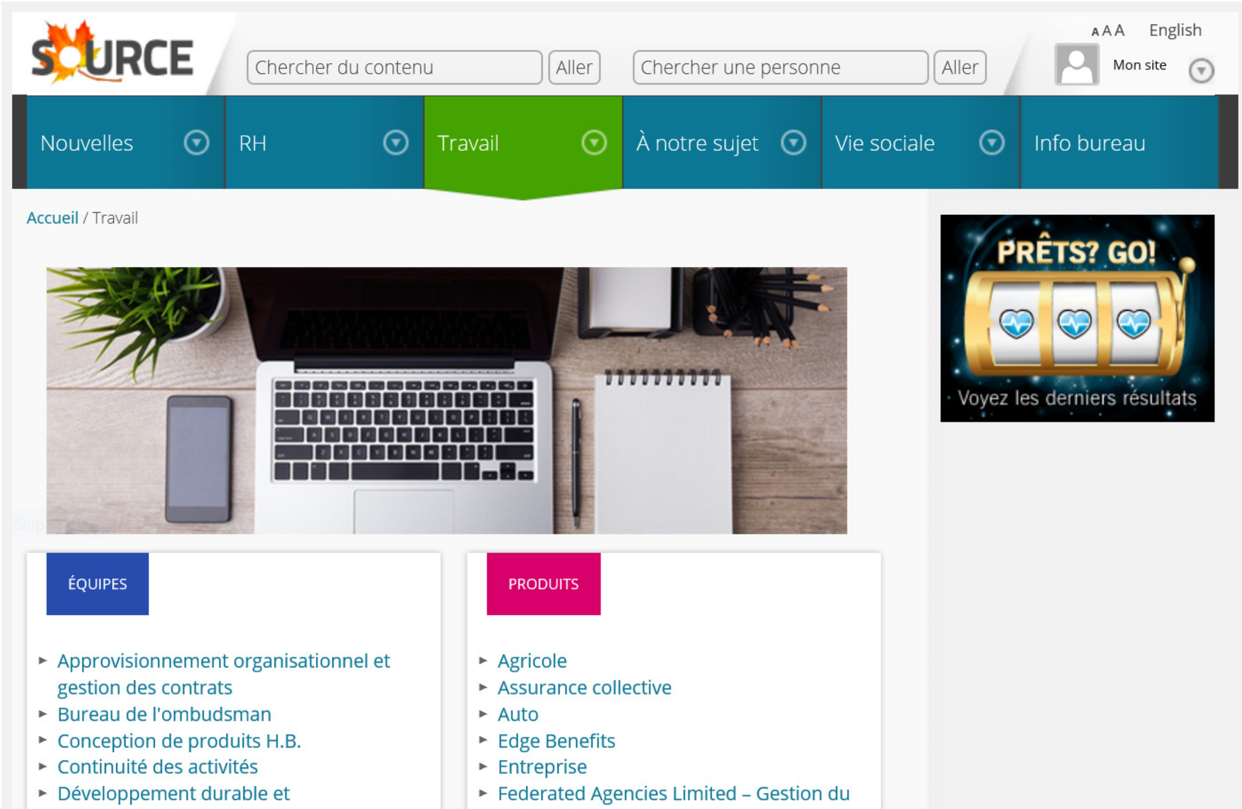
In either case, the intranet's design must scale and support content presentation and components that are culturally appropriate for employees at specific locations around the world. Review your intranet's design with the following considerations in mind:

- Does the typography, font choices, leading, and kerning afford comfortable readability in all the languages the intranet supports?
- When translated, are navigation, button, and link labels preserved within the design, lending clean and scannable navigation and subsequent levels of sub-navigation?
- Do page layouts embrace left-to-right as well as right-to-left reading? This consideration is especially important for organizations with translated versions of the intranet in which employees may read right-to-left, such as Arabic.
- Are the colors and images chosen culturally appropriate and acceptable for all office locations?
- Can employees easily change the language or office location they're viewing on the intranet?

For example, The Co-operators' intranet, Source, appeared in either English or French. Because the organization is based in Canada, not only were these bilingual options considerate of the employees who may speak one language or another, or both, it's a legal requirement to have these language options available. As such, the intranet's design brilliantly embraced both the English and French versions. The navigation, main content on the body of the page, as well as all supporting content, remained intact and looked visually appealing in both languages.



The English version of The Co-operator's intranet used prominent main navigation and well-formatted body content, which remained visually stable when translated to French.



The French version of The Co-operator's intranet used the same imagery, color scheme, prominent main navigation, and well-formatted body content. It also remained visually stable when translated into English.

Usability test intranet designs with users from different office locations and countries.

Process and Strategic Considerations

Ask employees at various locations to test and review design iterations before they go live. Expand employee participation in usability research beyond those working at headquarters to get a well-rounded assessment and perspective on the intranet's design and scalability across languages and different office locations.

10. Design flexible homepage modules at different scales to communicate importance and maintain a clean design.

Many intranet homepages we studied acted as gateways, introducing content and directing employees to further tools and information. They often contained a compilation of similar components and modules, each with a specific composition, **scale**, and communication purpose.

> **Scale**
>
> **Definitions, Principles, and Methods**
>
> **Scale** is a visual design principle that refers to using relative size to signal importance and rank in a composition.

The homepages typically had a hero space or a main marquee banner, which featured important news, announcements, or other happenings that employees needed to know about. This space often had a flexible yet fixed design treatment and was managed by corporate communications or centralized intranet teams.

Beyond that, secondary messages or paths to specific employee tasks also typically earned themselves a spot on the intranet's homepage. These included items such as calendars or lists of upcoming events, topic, location, or department-specific news and stories, shortcut links or previews of information from other digital workplace tools, or widgets such as weekly weather forecasts, cafeteria menus, social media feeds, or the current time zones at various office locations.

Because of the myriad of messages, employee needs, and competing priorities, intranet homepages must be designed with flexibility in mind. As a designer, the best way to handle this challenge is to design a variety of components to be used like puzzle pieces meant to come together to create a cohesive and visually pleasing homepage, yet still offer some flexibility within a framework.

When designing components, consider their purpose, where they could appear on the intranet, and the other elements that may appear alongside them. Generally, content-focused components usually contain an image, main headline, copy, and a button or link. For widgets presenting other information from other systems, a headline, status, and link may be all that's needed.

Always label components clearly and don't just design homepage components for the sake of having them; make sure they house or communicate something employees truly care about or need to know. Consider **visual hierarchy** and decide if the component would be best suited for a primary, secondary, or tertiary task or message. Thinking through these details as you build the design system will ensure it lends favorably to the homepage but extends beyond it, which will help you design the intranet more cost-effectively and help employees efficiently learn how it's organized.

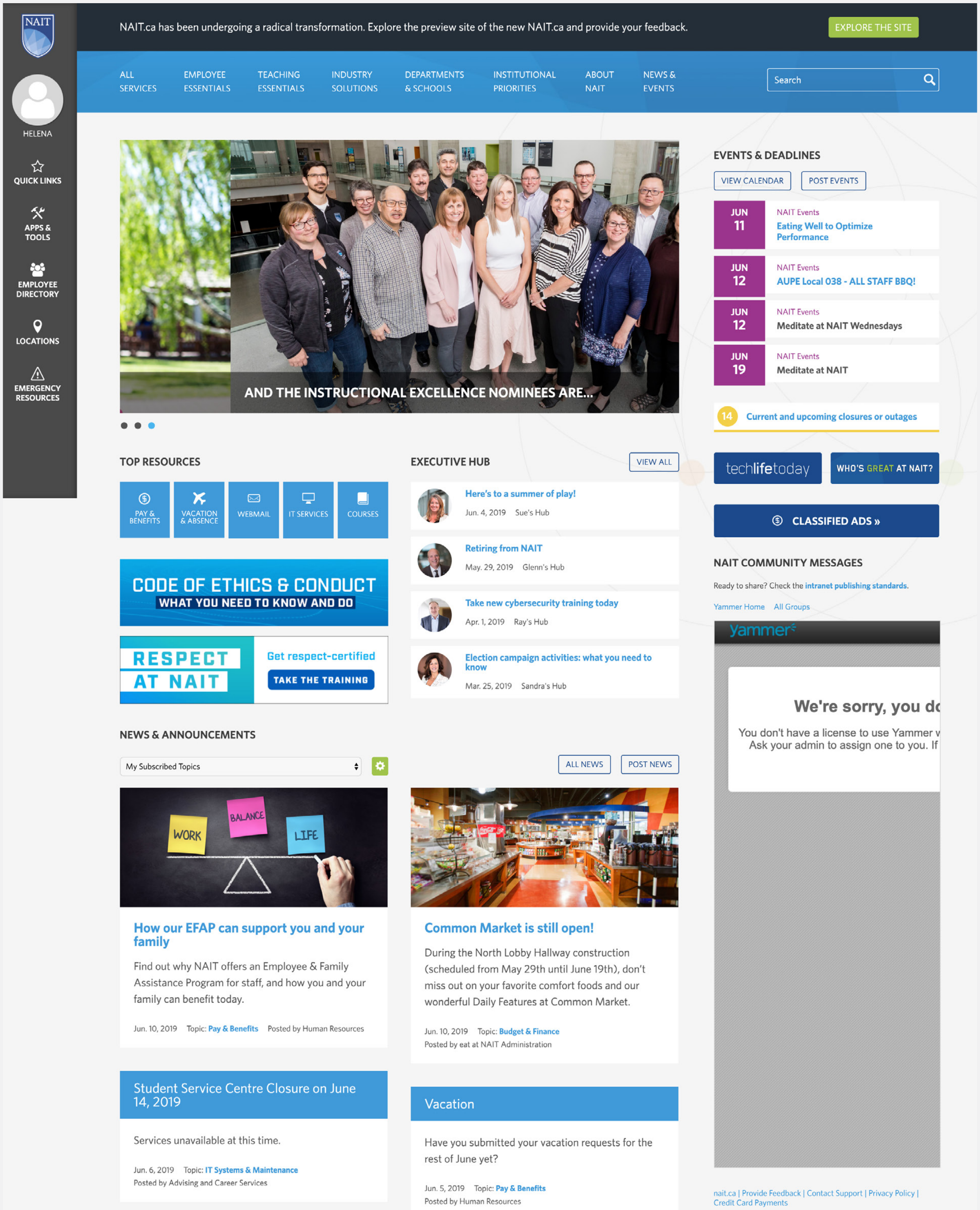
Visual hierarchy

Definitions, Principles, and Methods

The principle of **visual hierarchy** refers to guiding the eye on the page so that it attends to different design elements in the order of their importance.

For example, the Northern Alberta Institute of Technology had a component-based homepage on its intranet. Each homepage module was visually consistent with hues of blue and other complimentary colors in the organization's brand palette. The modules were thoughtfully designed to fit either full-width or a three-column, two-column, or single-column span. This flexibility meant content managers could move pieces around on the page as needed. Fixed heights for certain components ensured the page remained balanced. This approach also allowed the team to iterate on combinations of components to see what worked best for different messages at different points throughout the year instead of being tied to rigid page templates.

A clean marquee banner appeared at the very top, taking up about three-quarters of the page. The rest of the homepage was divided into three clean columns, with ample labels and spacing between each component. A list of events appeared in the upper right rail, while messages from leadership, links to top resources, and other news stories appeared below. This approach led to a clean design logically organized for employees' key tasks and information needs.



The Northern Alberta Institute of Technology's intranet homepage utilized a consistent set of components to build a visually appealing and balanced page.

The Scottish Government took a similar approach in the design of its intranet homepage. Modules encompassed either one, two, or three columns in the desktop view of the page. Additionally, all the components incorporated the three shades of blue in the Scottish Government's color palette: light blue, blue, and navy blue. The blue outline for each component provided clear **contrast** and a boundary, which drew attention to the overall **balance** of the components alongside each of their neighboring components. The color scheme used as the background for certain components, such as the navy and light blue backgrounds, subtly communicated heightened messaging importance.

Contrast

Definitions, Principles, and Methods

The principle of **contrast** refers to the juxtaposition of visually dissimilar elements to convey that these elements are different.

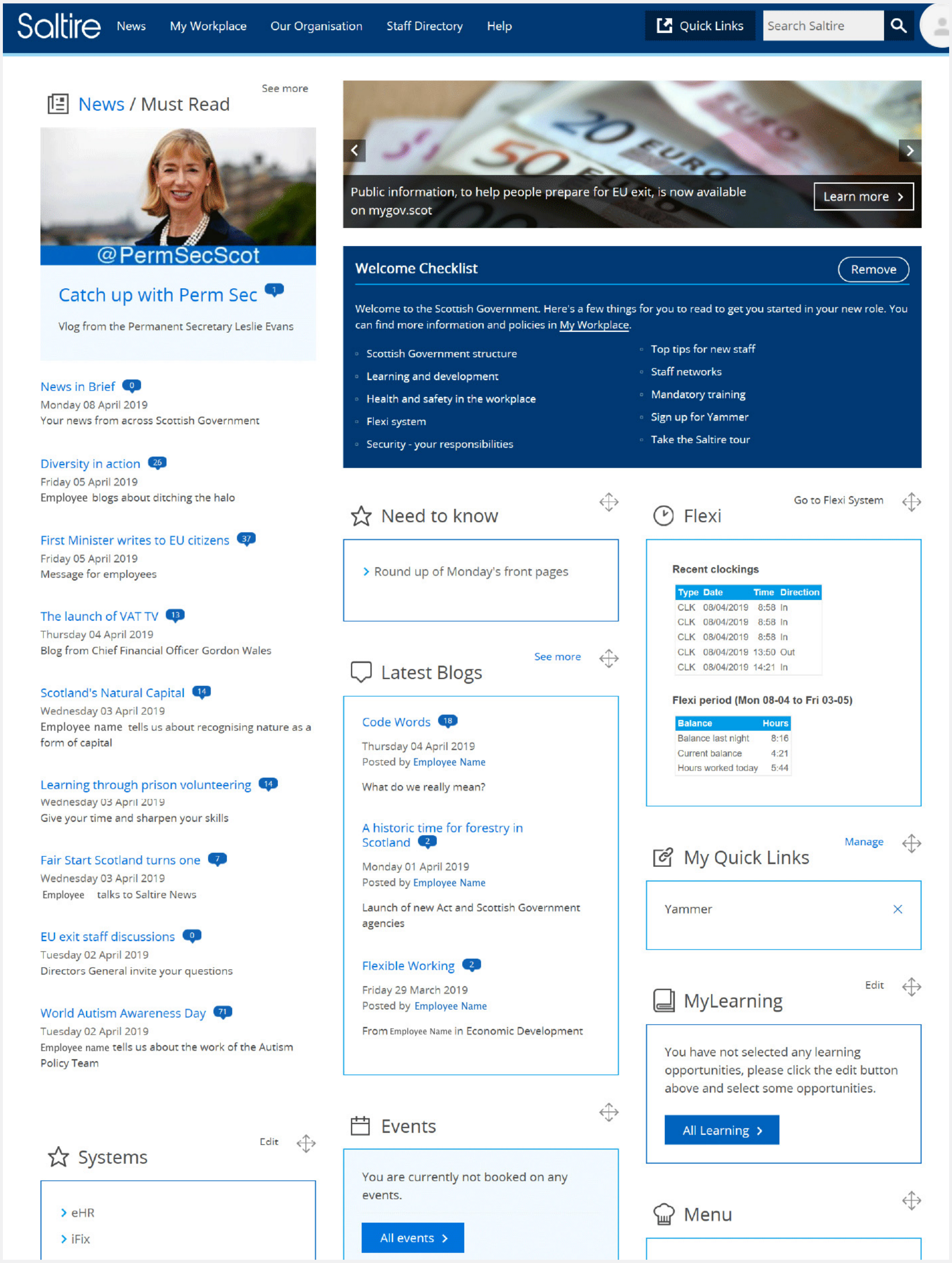
Balance

Definitions, Principles, and Methods

The principle of **balance** refers to a satisfying arrangement or proportion of design elements. Balance occurs when there is an equally distributed (but not necessarily symmetrical) amount of visual signal on both sides of an imaginary axis going through the middle of the screen. This axis is often vertical but can also be horizontal.

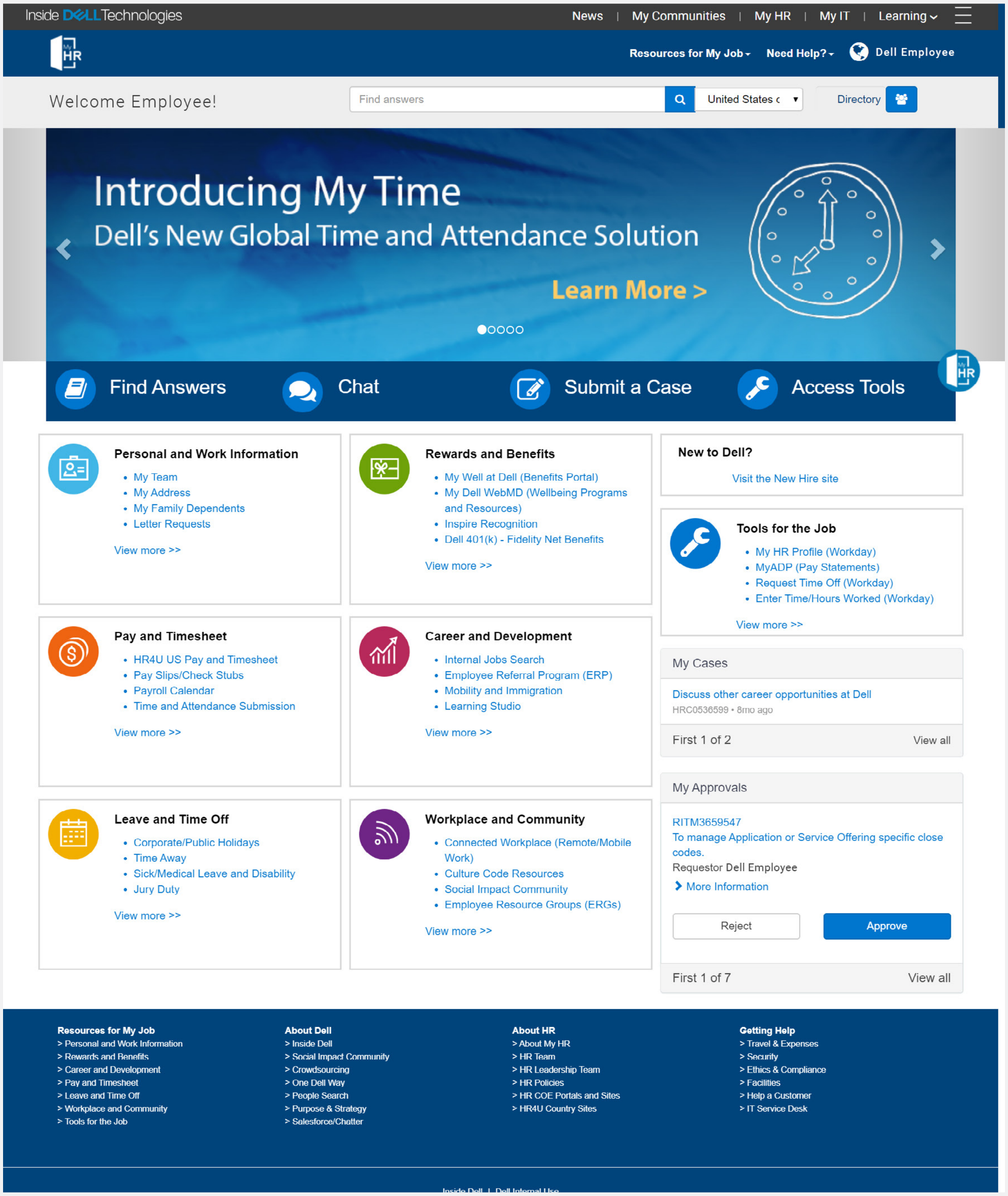
News appeared in the homepage's upper left corner, where eyetracking evidence shows people's eyes tend to gravitate first when landing on a web page. As such, placing news in this location makes sense because Scottish Government employees need to pay attention to many, if not all, of these news stories.

The bright blue label treatment with the Permanent Secretary's Twitter handle, along with other key news stories below, reinforced the visibility of this important widget. For new employees, a welcome checklist appeared in navy blue right underneath the main marquee image. Secondary and tertiary modules with links to the latest blogs, vacation tracking systems, cafeteria menus, and other important spaces appeared below. These lower components were customizable, so employees could pick and choose what they wanted to appear in the bottom portions of the intranet homepage, which was favorable.



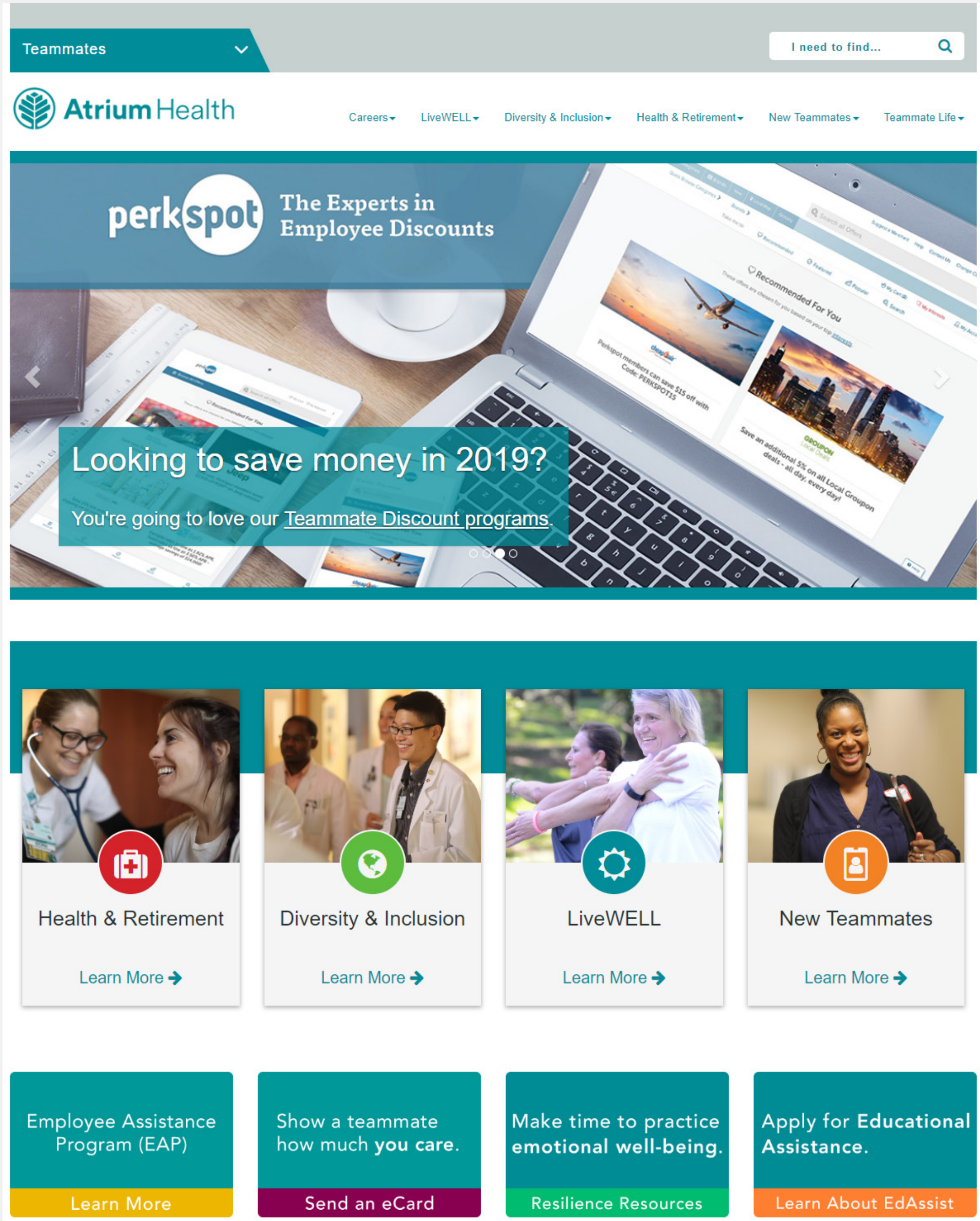
The Scottish Government's intranet features clean and customizable homepage modules.

The homepage of Dell's human resources site also used a set of consistent components to offer employees a path to deeper subsections. Each component was clearly labeled and contained a list of relevant and organized links. Cases and approvals appeared in the lower right corner in related modules that were properly sized and visually differentiated from others on the page.



Dell's HR homepage was organized and thoughtfully designed using components to group important areas and content employees often accessed.

Atrium Health also used primary, secondary, and tertiary homepage components to build a well-organized and compelling landing page from which employees could reliably find what they needed.



Atrium Health used helpful components to organize the intranet's homepage.

11. Reuse components to create visually consistent and engaging category landing pages.

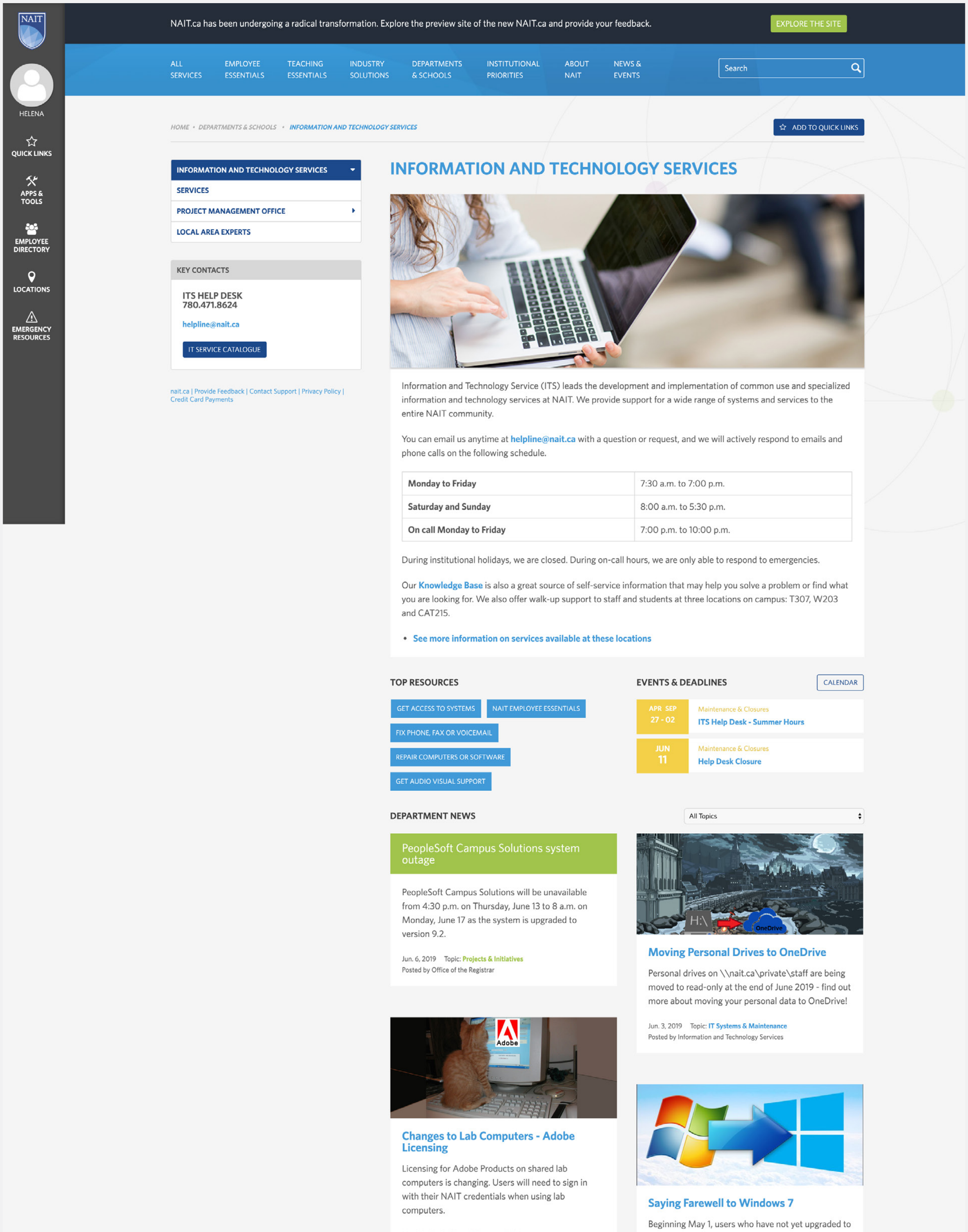
Category and landing pages are midlevel pages within an intranet; they introduce content groupings and items within those groupings, respectively. Usually, items in the intranet's main navigation and organizational functions, such as human resources, information technology, and other departments, have their own landing or category pages.

These pages provide a place to house contextually relevant events and announcements, news stories, team members and organizational charts, links to related tools, and, most importantly, links to deeper-level pages within the category. Many homepage components you design can likely be reused on category and landing pages. This is a viable approach to help maintain visual consistency across the intranet.

Any information employees expect to readily find should appear immediately on the category or landing page. For example, on a category page for human resources, employees should find links to benefits information, pay stubs, vacation tracking tools, and other pertinent HR content without having to scroll, click, or dig. On an IT category page, employees should find links to get help, submit tickets or requests, troubleshoot issues, and find information about the IT department and how to contact someone there. Similar to the intranet's homepage design, items of secondary and tertiary importance should live in visually differentiated components, lower down on the page, or in areas of lower prominence, such as in the right rail.

The paths to content and tools must be thoughtfully designed to convey differences among various content types and individual tools and help employees locate the items best suited to their needs. These pages shouldn't just be a smattering of all content, images, and other design elements that *could* live on the page. It's also important to consider that employees often land on category pages from the intranet's search results. These intermediate-level pages can help employees find specific information very quickly, which is one more reason to care about their user experience and visual design in addition to their importance for within-site navigation.

The Northern Alberta Institute of Technology did an exceptional job with its category and landing page design. A simple left navigation appeared in the first column of the page, which was consistent with other pages appearing at this level in the intranet's information architecture. The subsequent two columns contained a combination of components spanning both or a single column. The hero banner was static and didn't contain any text, which was favorable. The image of a person holding a laptop visually reinforced where the employee had just landed. Important text-based information and links appeared in clean modules at the top of the page, including contact information, self-service resources for troubleshooting, service hours, top resources, events and deadlines, and department news. Each component was clearly labeled, had high contrast with the page background, and ample padding to create a balanced layout. No filler or fluff content or design elements appeared on the page; everything supported employees' IT-related needs.



NAIT created consistent and useful category pages by reusing components.

The City of Calgary also had visually appealing category pages that were consistent with the rest of the intranet. The pages prioritized the content employees looked for after landing on the pages. For example, on the *News & Events* category page, employees were greeted by an impressive image depicting an aerial view of the City of Calgary. The main image did not rotate or contain overlaid text, which was good. This way, employees didn't get distracted or bogged down before scanning down to the valuable navigation-focused areas of the page.

Secondary components appeared in light gray below and sat on a white background in a balanced, two-by-two grid. This area provided employees with direct access to all of the intranet's news, a calendar of events, newsletters, and the blog.

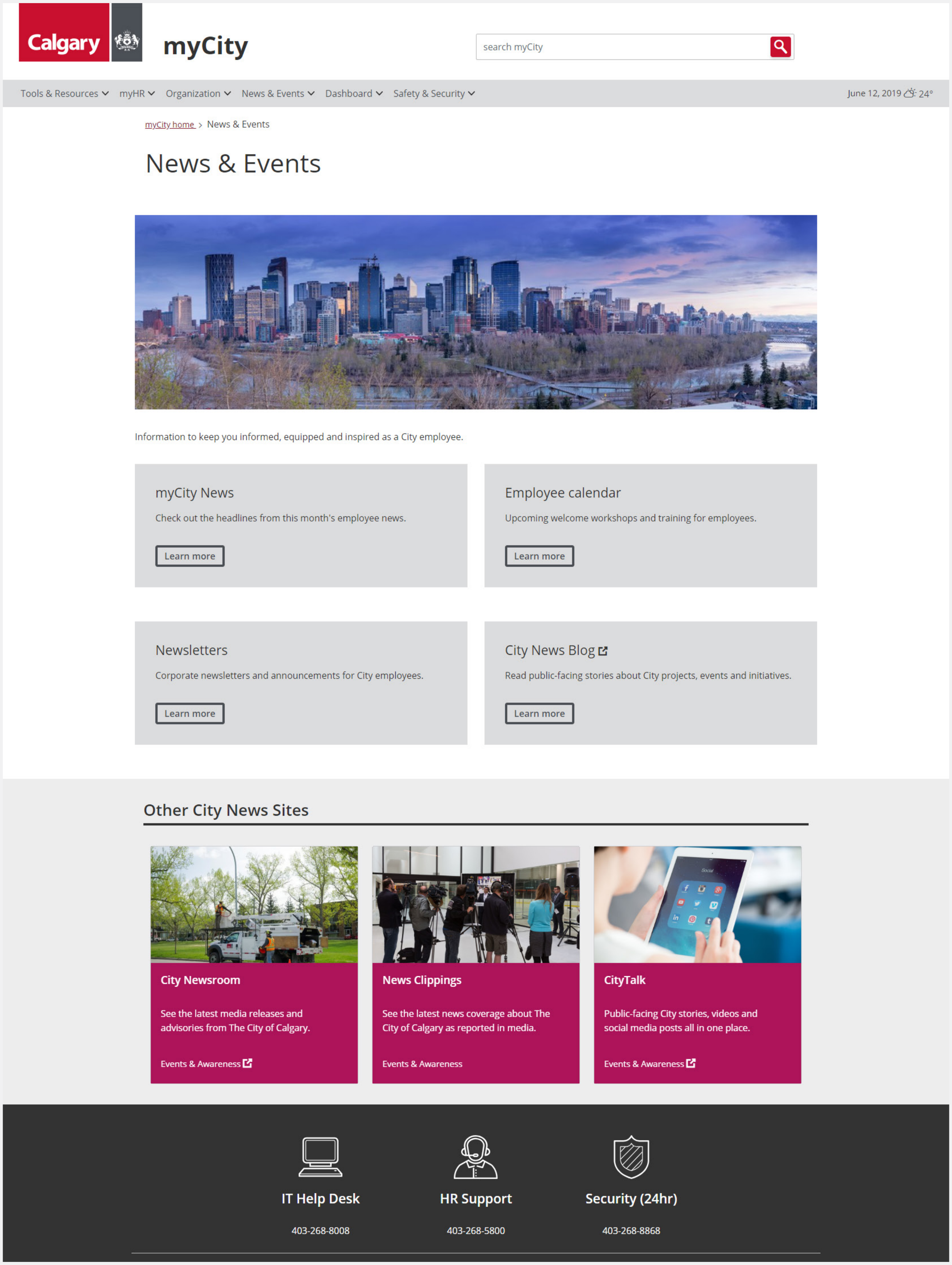
Additional news sites appeared below in a tertiary-style, card-based design. This highly reusable component contained a light gray background, which broke up the page and provided some dimension. The component was clearly labeled, so there was no question about what the cards housed. Each card contained a clear image, headline, small excerpt of body copy, and a link to the respective site. The bright white text on top of a fuchsia background had proper contrast and drew employees' attention.

Use no more than three different sizes for components.

Timeless Design Tips

A visually pleasing design generally uses no more than three different sizes. Having a range of differently sized elements will not only create variety within your layout, but it will also establish a visual hierarchy on the page.

Be sure to emphasize the most important aspects of your design by making them the biggest. A general rule of thumb is to include small, medium, and large components in the design.

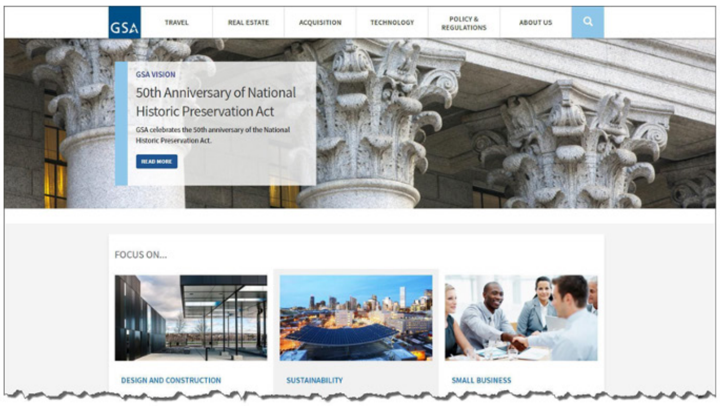


The City of Calgary's category pages had a clean design to support efficiency.

12. Favor static or user-initiated hero spaces over auto-rotating carousels.

Hero spaces and carousels allow for one or more pieces of content to occupy a single, coveted space, usually at the top of key pages. During our research, many teams spoke about the time and resources they spend weekly to plan what content will live in this space.

Required Sizes for Images on Top Level Pages



Homepage

Banner

Two files of the same image must be supplied to optimize desktop and mobile display

1600 px width x 800 px height

800 px width x 208 px height

"Focus On" feature images

360 px width x 200 px height

Tab Pages

Banner

Two files must be supplied:

1600 px width x 160 px height

800 px width x 208 px height

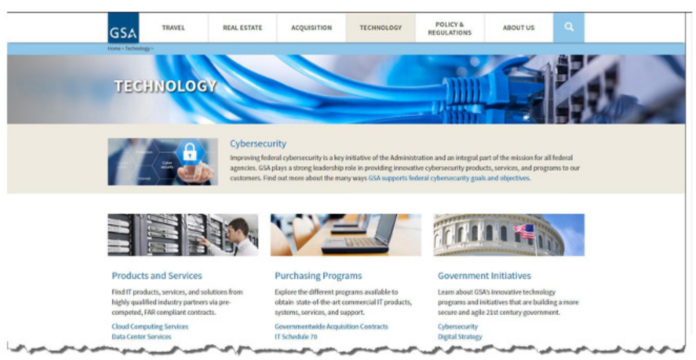
Feature image

Featured item in the beige bar is optional. If included, then a graphic is required:

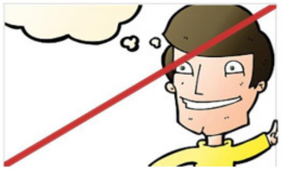
760 px width x 326 px height

Images for topic blocks

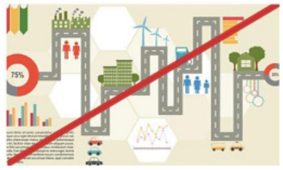
400 px width x 112 px height



The General Services Administration provided clear guidance for hero spaces.



Clip art or cartoon



Infographic too small to read

Low resolution

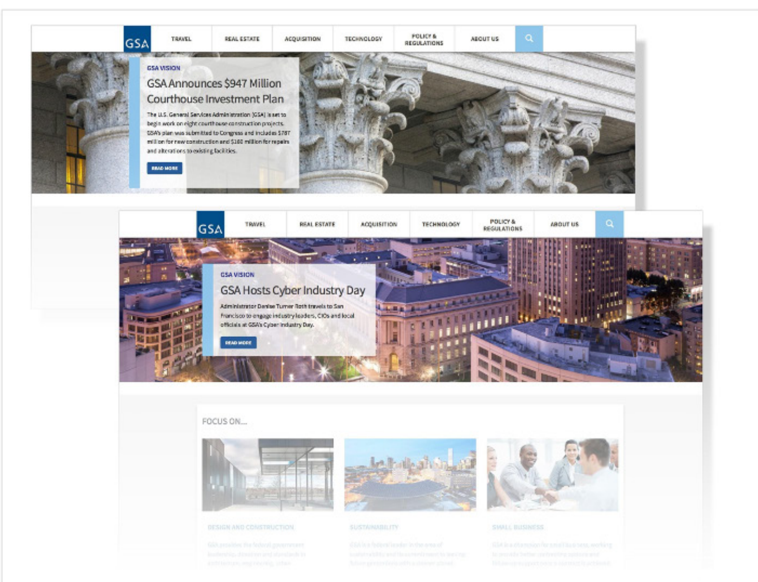
No discernable focus

Homepage Feature Image

The homepage feature image, with an overlay white panel for the title story, is the anchor of the homepage. By virtue of its size, shape, and placement it is the most important element of communication on the page. As such, it has the signature responsibility to not only engage and inform but to set the standard for what best represents GSA.

The image chosen should consistently meet the following standards:

- The image container is an extreme horizontal, so the photo must be sufficiently wide enough to fill the space with ease
- Consider the focal point of the image and ensure that it does not fall behind the white copy panel
- Take care to crop the image so that all important information remains intact
- Use extreme close-ups sparingly as the image area is already very large in terms of screen real estate
- Ensure that the image is a dynamic representation of the title story – as current and documentary as possible. Do not use a repeat image as it will inadvertently signal a story that is not current.



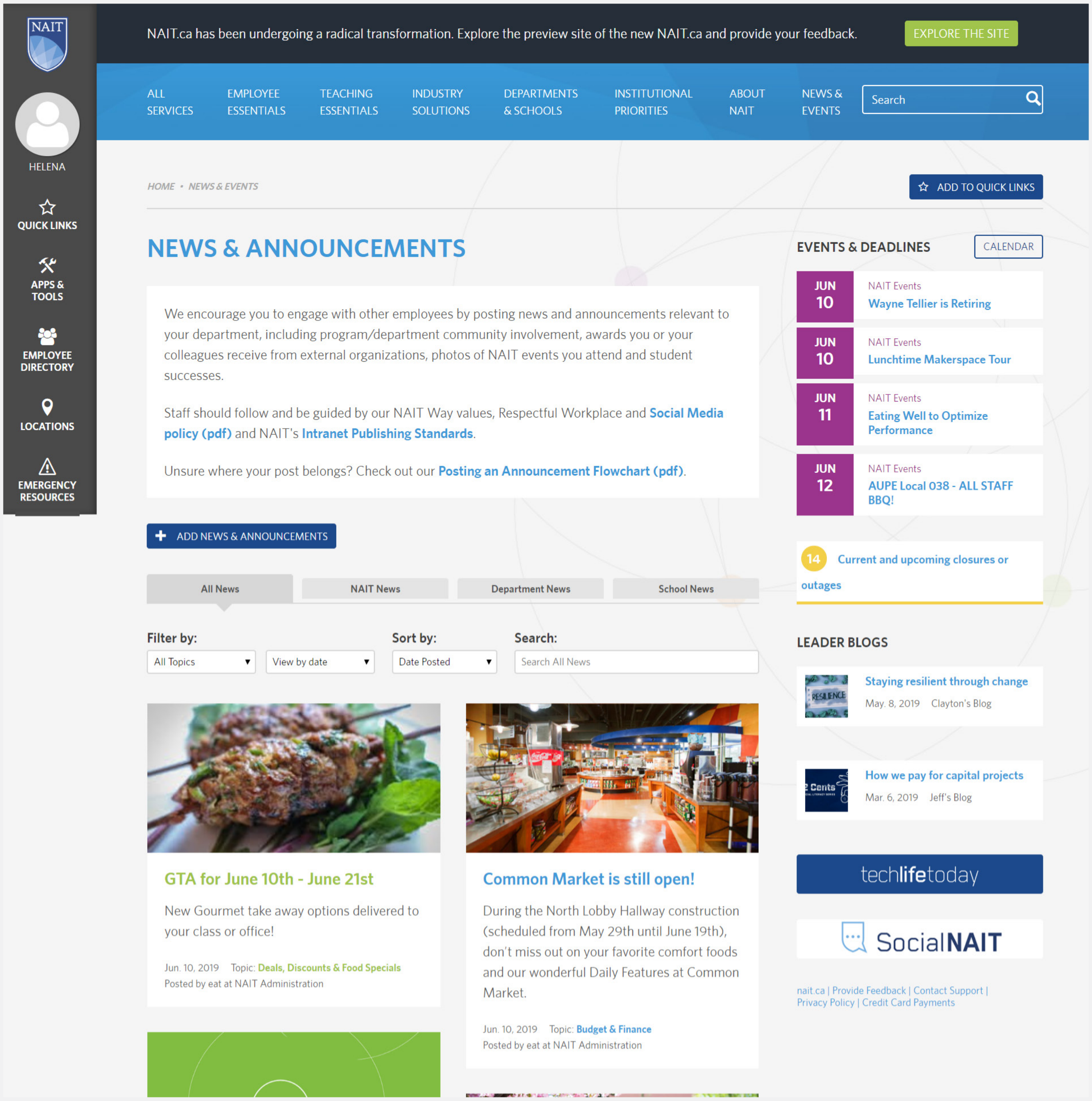
Because the homepage hero image was so prominent and important, the General Services Administration outlined exactly how it should look in the intranet's style guide.

There was a recurring theme of emphasis on hero spaces and carousels, and many teams tended to over-scrutinize what lives here, especially on the intranet's homepage. Some people mentioned heated debates that would arise among teams and designers competing for the opportunity to feature content there, determine how it should appear, and where it should link.

This is one of the greatest perceived benefits of carousels; they enable more than one piece of content to occupy the same piece of prime real estate on the homepage, which can help diffuse any bickering about whose content is most deserving. However, considering the time teams invest in planning this space, designing the assets, and changing them out, the reality is, employees often scrolled right past hero spaces, only noticing what was featured in the current frame *some* of the time.

Not one employee in our research willingly or freely stopped to pause and scan a hero image or scroll through a carousel. Employees also didn't describe going to intranets just to preview what was in the hero spaces. This means the likelihood of employees seeing other content featured here, outside of the piece that happens to be in view when they land on the page, is low. From our testing and observations, better solutions might be either a static hero space or integrating text-based content without a large image higher up in the intranet's user interface.

For example, the Northern Alberta Institute of Technology favored text-based content in the coveted hero spot instead of using a carousel or hero image on its News and Announcements landing page. The message in this area encouraged employees to post news and announcements for themselves or on behalf of their department. Social media policy documents, intranet publishing standards, and instructions on specifically posting news or an announcement also appeared here. Including this content in the top-priority space in the design and in this format was much more valuable than providing just a static image alone or a large banner image with text overlaid and links to these resources.



The Northern Alberta Institute of Technology used text-based content in what would otherwise be considered the hero space. This was much easier to maintain and more valuable for employees who landed on this page. Since it remained as an important fixture on the page, teams didn't have to continually argue about what should go there.

Avoid using autorotating carousels.

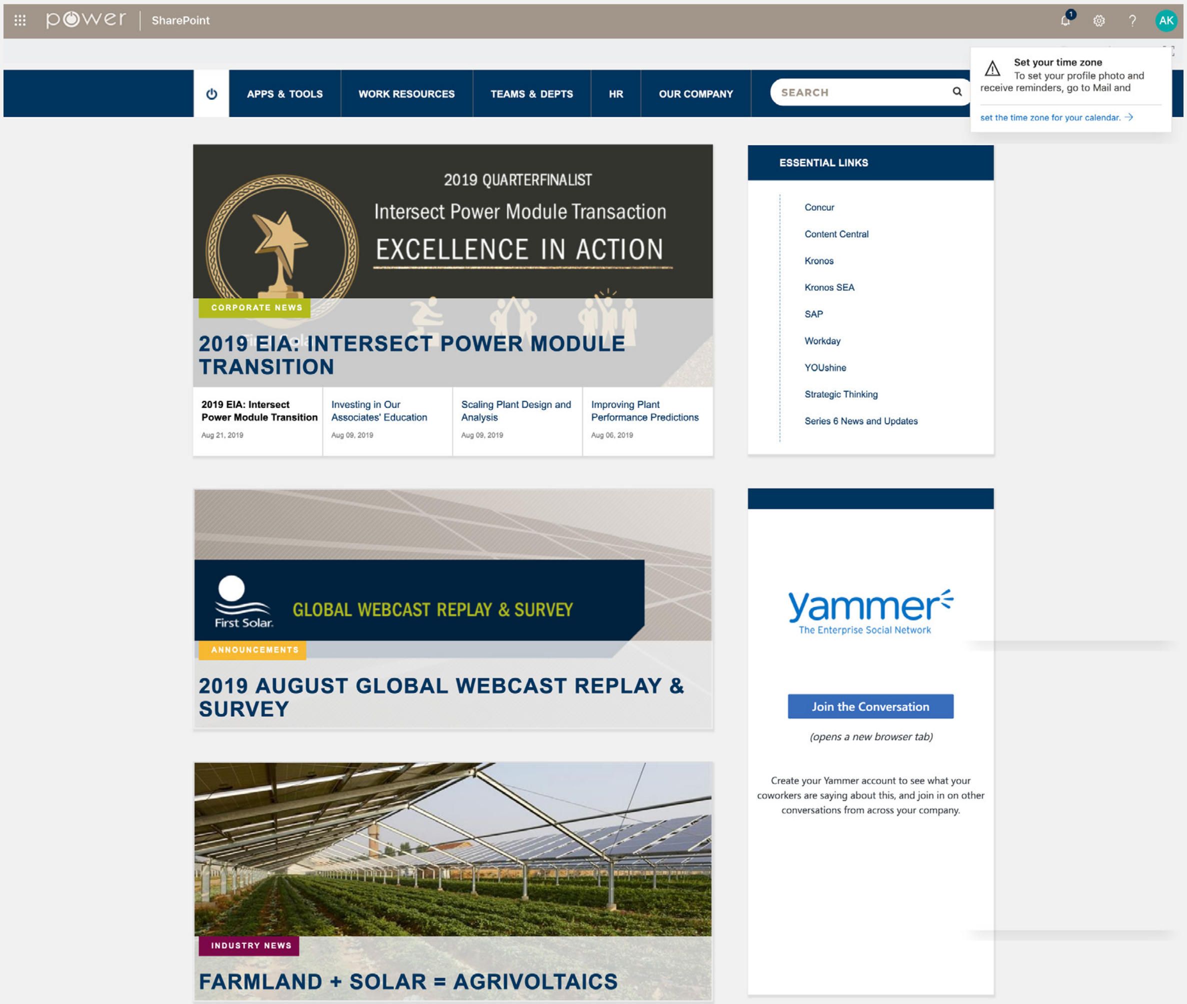
Timeless Design Tips

If a carousel is your hero, use a static rather than an autorotating one. This way, employees can scan through the content contained in the hero without rushing or wondering when it will go away. Or even worse, they may miss the message entirely and be left unsure of how to scroll back to it again.

When multiple pieces of content live in the hero space, good navigation, clear and visible headlines and body copy, and attention-grabbing links or buttons can help make it effective. The best hero spaces and carousels we observed communicated something timely and interesting that employees needed to know and then linked to a news article. In other cases, such as during benefits open enrollment, the hero space was solely focused on this important task that was top of mind for employees and provided an efficient launching-off point to start the process right from the homepage.

First Solar's intranet homepage included a static carousel with four different content features. This is a good amount, as users are unlikely to interact with more. Because all four are listed below the space, employees also get a good sense of how many items are in the carousel.

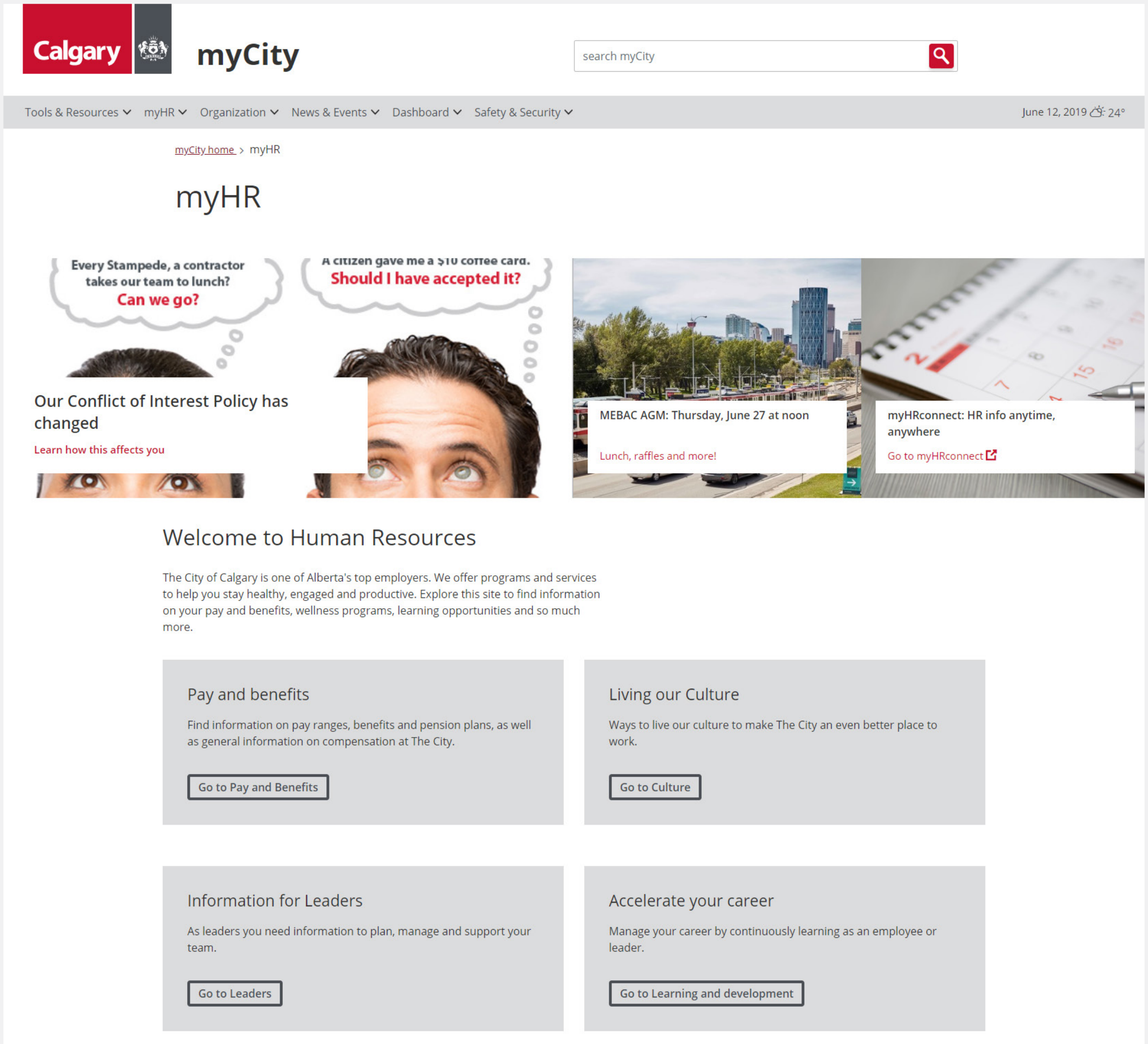
The first frame communicated an award the organization had won, which was favorable and something that interested all employees. Rather than autorotating, employees could click on any of the other four items below to view their corresponding banner. Clicking on the banner took employees to the respective page. The design of each banner was also good; each contained legible text and supporting graphics to reinforce the main message.



First Solar's hero carousel doesn't auto-rotate but is attention-grabbing, communicative, and information-rich. The typeface and colors match those used in the global navigation and header, so the hero appears to be part of the site content rather than a pushy advertisement.

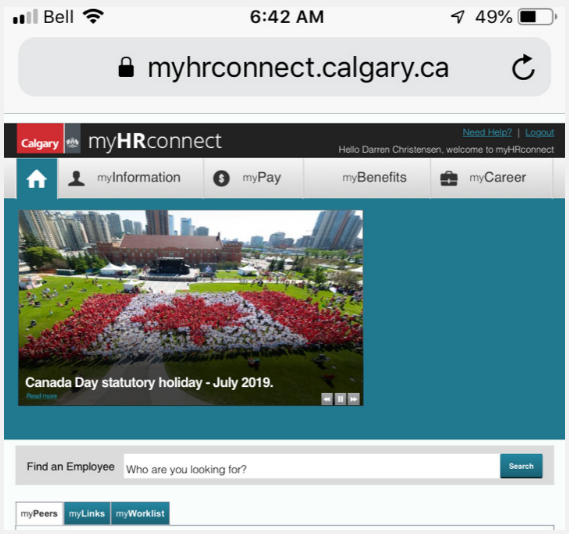
Another consideration with hero spaces is that they shouldn't appear to be a collection of images in a single frame. Try to focus on one main message per banner if there are multiple in a carousel. This way, the design of the space will be cleaner, and the mixed messages won't compete for employees' attention simultaneously. When hero spaces try to incorporate multiple images or banners, it tends to look cluttered and like an ad.

For example, the City of Calgary used multiple banner messages in the hero space on its HR landing page. This design was too busy, and employees missed the other two pieces of content on the right side of the space. Additionally, if an employee saw only one of the images in that set, they may get the wrong idea about where they were on the intranet. This problem occurs frequently when an image is not closely related to the page or subject matter.



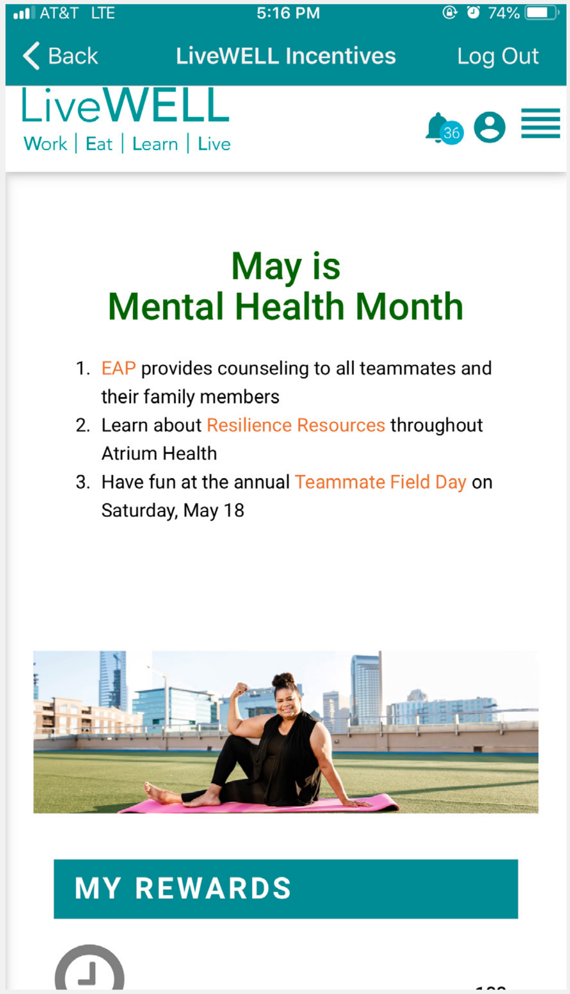
The City of Calgary incorporated three messages into the hero space. This was less than optimal, as employees were unsure which message to pay attention to. A better approach would be to pick one key message to feature in the space.

A hurried employee on mobile, looking for specific content, may never notice a hero space or carousel. Mobile pages are so small that by the time the carousel image changes, the user may have already scrolled down and will not see it anymore. Reading small text and deciphering small images on mobile devices is also difficult. Cramming a large, high-density image into a small space is never a good idea. The clearer the text and images, the more likely employees will be to engage and understand the intended messages. Dots are a particularly poor cue on mobile interfaces because people often do not notice them. On the mobile view of the City of Calgary's HR site, the carousel appeared only to take up half of the screen. This cramped an already compressed view of the top of the page. A better approach would be to either enlarge the carousel, so it spans full width and is a bit taller and more visible or to hide this hero space on mobile and present an optimized view of the table below, right at the top of the page. Instead of using dots to insinuate the number of banners and as a set of controls, noticeable icons in the lower right corner helped employees advance forward and backward through the carousel, which was favorable. However, employees won't typically tap controls like this on mobile. They'll swipe, so be sure the carousel supports this gesture.



The City of Calgary's HR tool contained a compressed carousel in the hero space on mobile. In this case, a better approach would be to either enlarge the carousel and its text so it's more visible or hide the carousel altogether in the mobile view.

In a more optimal example of a mobile hero space, Atrium Health reversed the traditional order of the hero image and body copy on its mobile application, specifically on a page about May being Mental Health Month. With the order flipped employees could immediately scan the text first, then see the image below instead of the typical presentation of the image on top and important text below.



Atrium Health used the very top of the page on its mobile app to feature an important numbered content list. The hero image appeared below, which was favorable, as employees could view the text immediately without having to scroll past an image.

As you're designing the hero space or a carousel, remember that employees will likely only see the first frame or none at all. Ensure that important content is also accessible through the intranet's information architecture and on other landing pages. Consider using a static carousel or hero image instead of a rotating one. Design the text, buttons, and links to be clear, visible, and large enough for users to decipher and be able to click.

13. Ensure that the layout of longer pages indicates the page is scrollable.

Employees must rely on the design and page layout to understand what possibilities for content exploration exist. The content they need may be hidden below the fold, where they will never see it unless they know it's there and are motivated to scroll. It's up to intranet designers to create designs that guide employees toward valuable information by clearly signaling there's content down the page or even to the side. Employees have grown accustomed to scrolling vertically; however, we cannot expect them to know to scroll without visual indicators inviting them to do so.

For example, at Eyeo, false floors and large, white-space gaps in page layouts made users miss out on content lower down on the page. When horizontal gutters are too large, or the content does not completely fill the container it lives in, the large gap between content elements can signal the end of a page when users scroll down and encounter one of those wide gaps.

When searching for the number of languages Eyeo supports in its products, all users found the correct page, but only two users scrolled down far enough to find the blue box containing a link to a new page with the answer. The large stretch of white space between the ideas section and the core languages blog post created an **illusion of completeness,** indicating that there was no additional content to be found on the page.

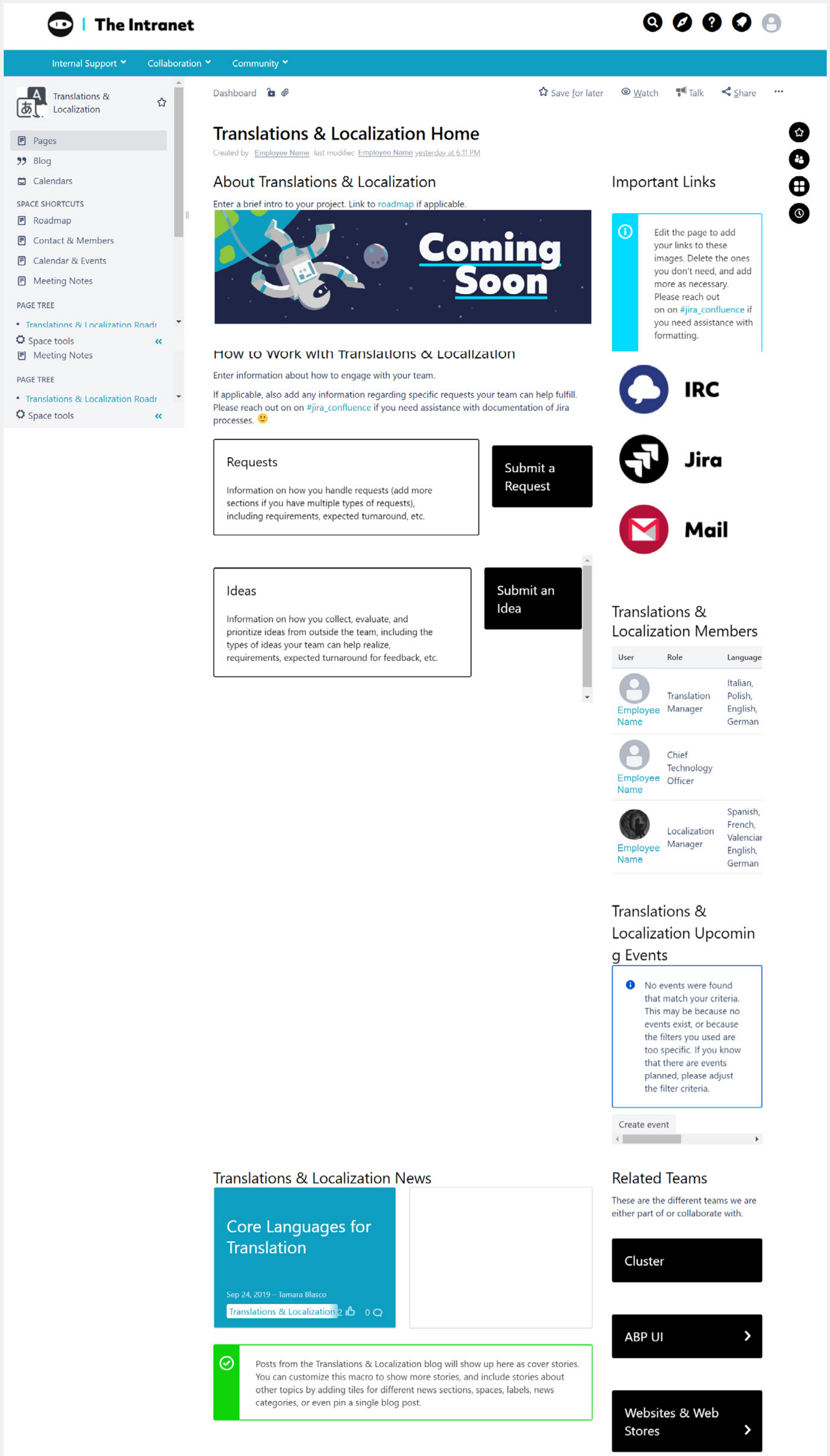
One user said, "Maybe I can find out under translation . . . erm nope, there's nothing . . ." Make sure designers and content publishers preview pages before pushing them live. Additionally, continue to hold training sessions to help new page creators understand how to avoid some of these layout issues.

Illusion of completeness

Definitions, Principles, and Methods

The **illusion of completeness** happens when the visible content on the screen appears complete when more information exists outside of the viewable area. Bruce Tognazzini coined the term in 1998.

The illusion occurs when the visual design fails to guide users toward additional content that is present off-screen. Thinking a page is complete when it isn't is a serious usability failure: it can make users miss valuable information and prevent them from attaining their goals.

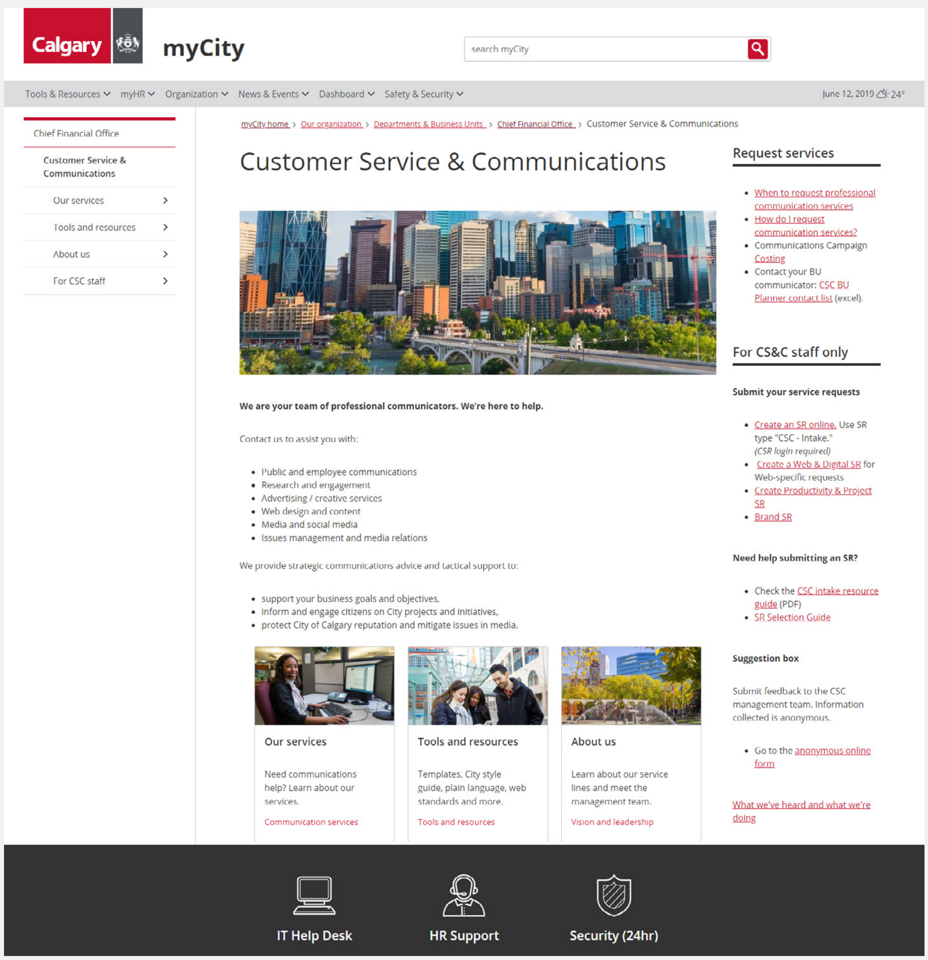


On Eyeo's intranet, large white space gaps created an illusion that there was no more valuable content on the page when there was.

Also, avoid other design decisions that create a visual barrier and discourage employees from scrolling, including:

- Large hero images or videos that take up the entire screen
- A content break marked by a horizontal line that spans the page width
- Buttons that share internal promotions in the middle of a page can indicate to employees that they have reached the end of the page's relevant content

On the City of Calgary's *Customer Service & Communications* page, employees knew to scroll right away to find more content beyond what was presented above the fold. Some favorable visual indicators that helped people know there was more content lower on the page included an appropriately sized hero image, well-formatted subheadings and body text, and adequate white space between text-based content and components, but not so much that it appeared to cut off the page prematurely.



The City of Calgary's intranet design ensured employees didn't encounter the illusion of completeness. Proper spacing and distribution of elements on the page indicated to users that they could scroll to find more content.

PAGE LAYOUT CONSIDERATIONS

14. Visually balance and evenly distribute different page sections, components, and content types.

A balanced page design occurs when there is an equally distributed (but not necessarily symmetrical) amount of visual signal on both sides of an imaginary axis going through the middle of the screen. This axis is often vertical but can also be horizontal. Just like when balancing weight, the design will feel unbalanced if you have one small design element and one large design element on the two sides of the axis.

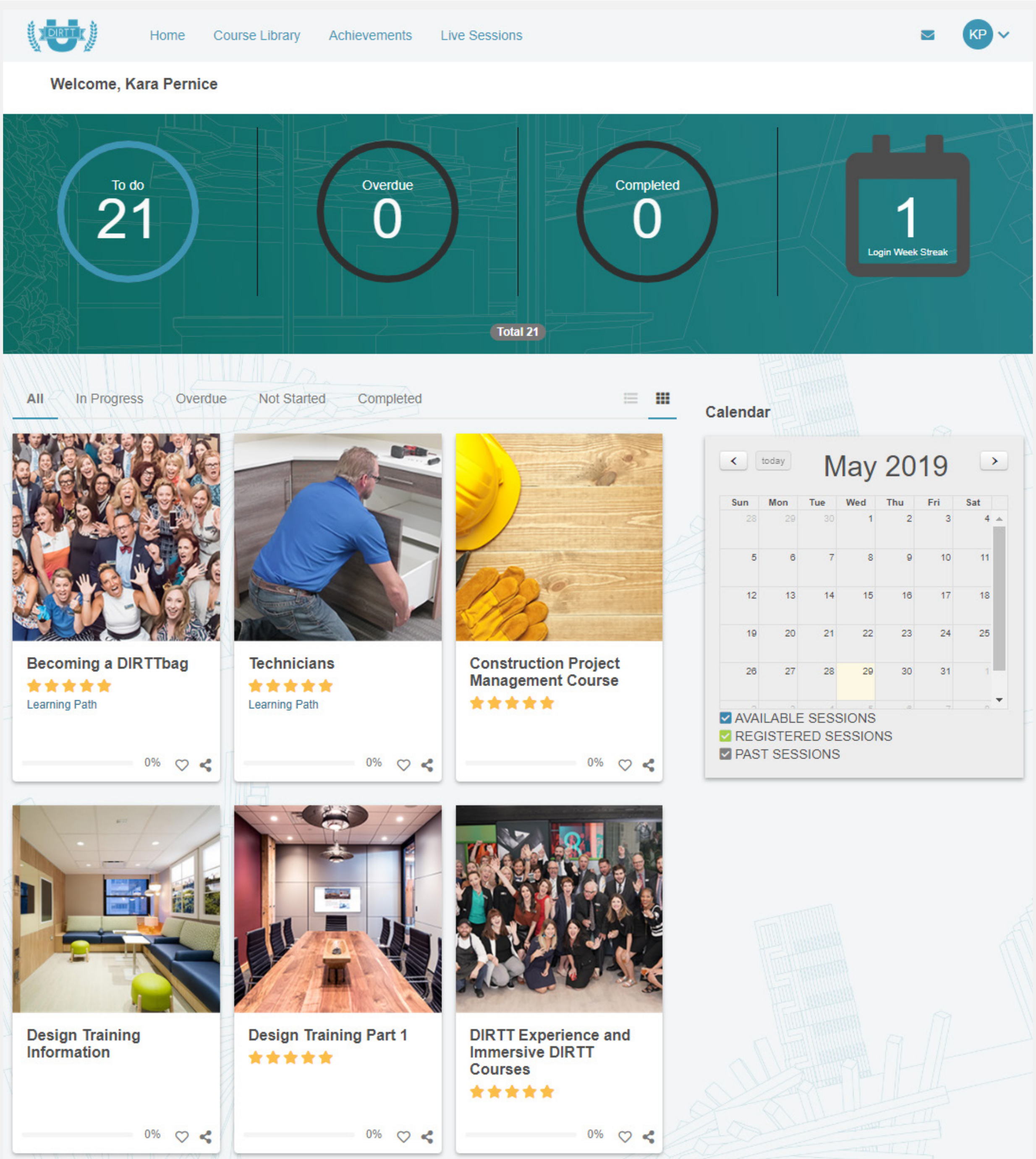
The imaginary axis you establish on each page will be the reference point for organizing the layout. In a balanced design, no one area draws a viewer's eye so much that they can't see the other areas (even though some elements might carry more visual weight and be focal points).

Balance can be:

- **Symmetrical:** Elements are symmetrically distributed relative to the central imaginary axis
- **Asymmetrical:** Elements are asymmetrically distributed relative to the central axis
- **Radial:** Elements radiate out from a central, common point in a circular direction

Establishing a column grid provides vertical anchor lines to which intranet components should be aligned. For example, the main landing page on DIRTT's training platform, DIRTT-U, used a symmetrical, four-column grid. The design looks crisp because the card-based content is left-aligned to the leftmost grid line, and the right-sidebar content is easy to scan.

The design also uses space to create groupings and proximity, or the spacing around elements is even, which helps to establish the groups. The minimal space between the content tiles signals that they belong together. When creating groupings in an intranet design, use less space between the header and its content and more space between groups.



The training site at DIRTT was balanced and aligned to a clean grid. This made the page design easy to parse and scan.

For intranet designs, create a visual system and grid and stick to it across different areas of the digital workplace experience. Unfortunately, even though the General Services Administration had ample resources and a style guide available for content publishers, some pages still appeared messy and cluttered as they didn't align with the established grid system.

The spacing between components on the General Services Administration's intranet is inconsistent, as is the visual presentation of the images, links, and bullets. A lack of attention to these details makes the overall design feel sloppy and unpolished.

Make the interelement spacing around your intranet the same or a multiple of the same unit (e.g., if the base spacing between the heading and body is 5px, two base-spacing units could be used to separate different sections, and so on). Set up a column grid and keep alignment consistent across the pages and elements. Any alignment inconsistencies should be purposeful. Define clear rules to guide content creators and publishers and remember that left alignment supports scannability. Align graphical elements to a grid; each element in your design should line up with your grid system.

15. Use a card-based page layout to flexibly group and summarize information and link to additional details.

In recent years, we've seen a lot of interest in creating modular UI components that work well across various screens and window sizes. One such component that's gained tremendous popularity on intranets is the "card," a UI design pattern that groups related information in a flexible-sized container visually resembling a playing card. This design element is intended to encourage employees to click or tap to view more details or navigate to a new page.

For example, the City of Calgary and the Royal National Lifeboat Institution both used card-based designs for their intranet's main news landing pages. Each card included at least an image and a title. At RNLI, the cards also included a small copy excerpt and the date the news article was released.

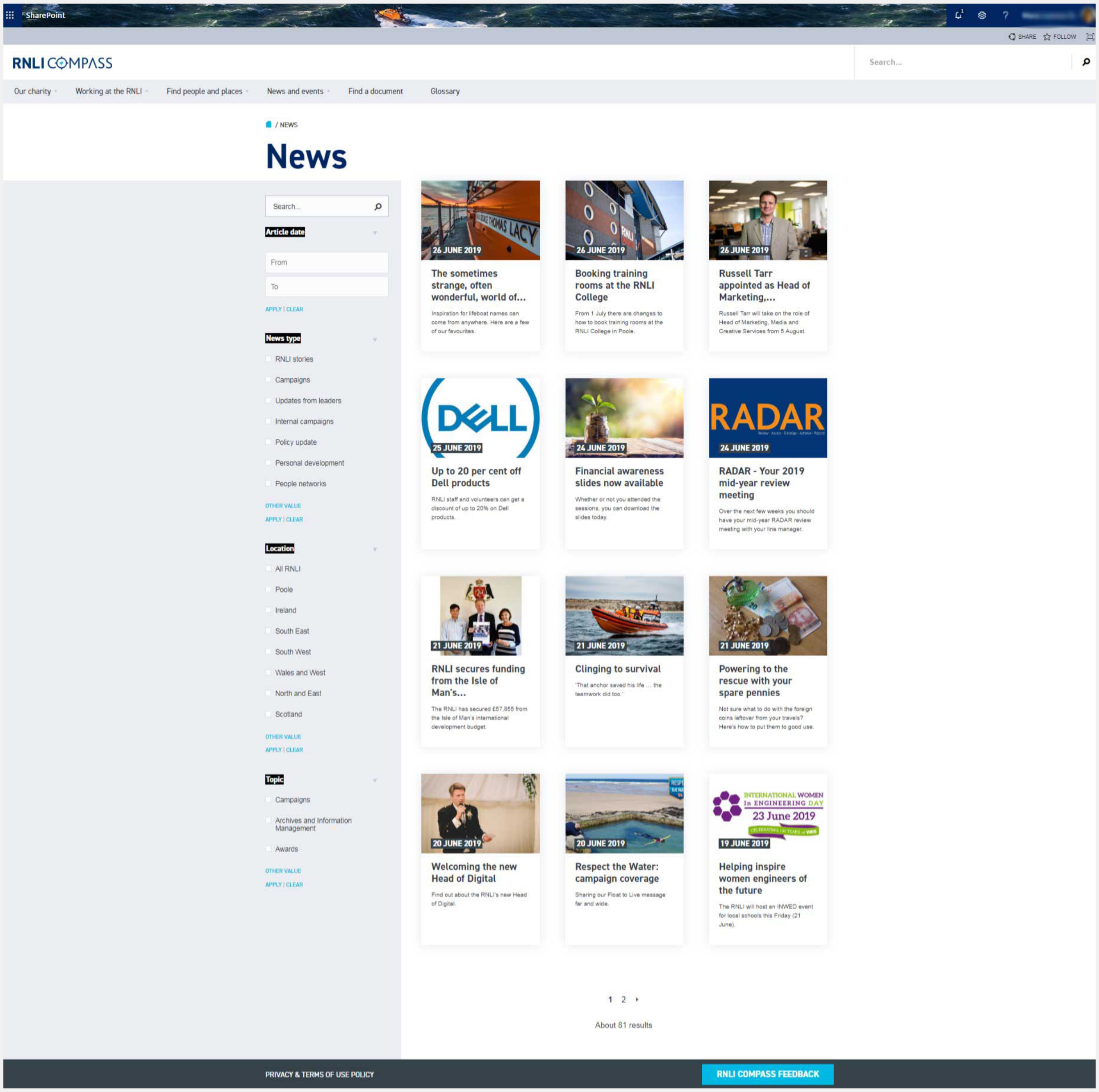
On the City of Calgary's intranet, each card featured a category, and the cards were grouped on the page according to their respective categories. The different background colors on the cards also aligned with categories to create a visual and meaningful system.

Both card designs provided an outline with high **information scent** to entice employees to click through to find further details and information on a separate article page. The three-column grids gracefully scale down to a two-column layout on tablet and a single-column grid on mobile.

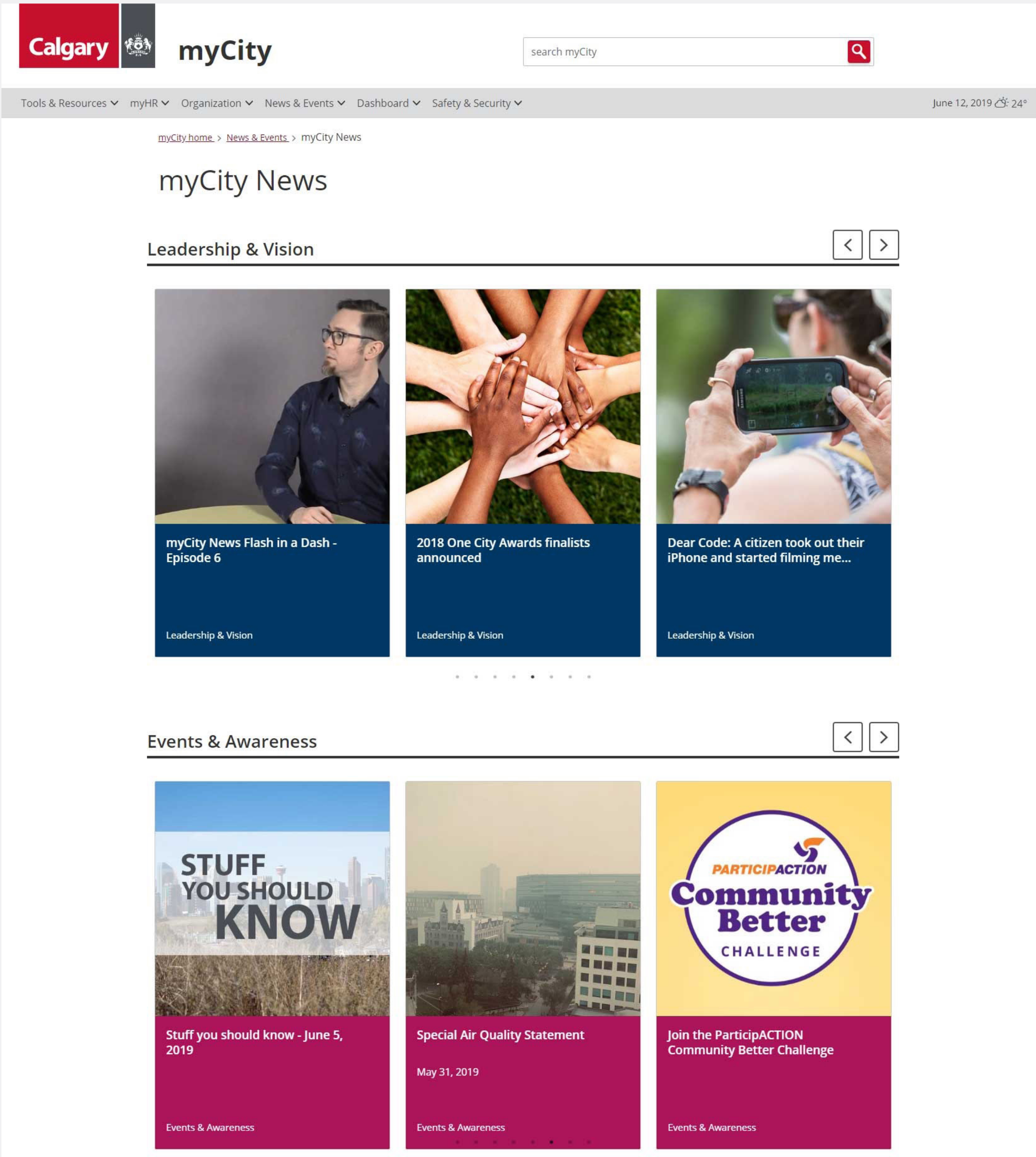
Information scent

Definitions, Principles, and Methods

The **information scent** of a source of information (such as a web page) relative to an information need represents the user's imperfect estimate of the value the source will deliver to the user, derived from a representation of the source.

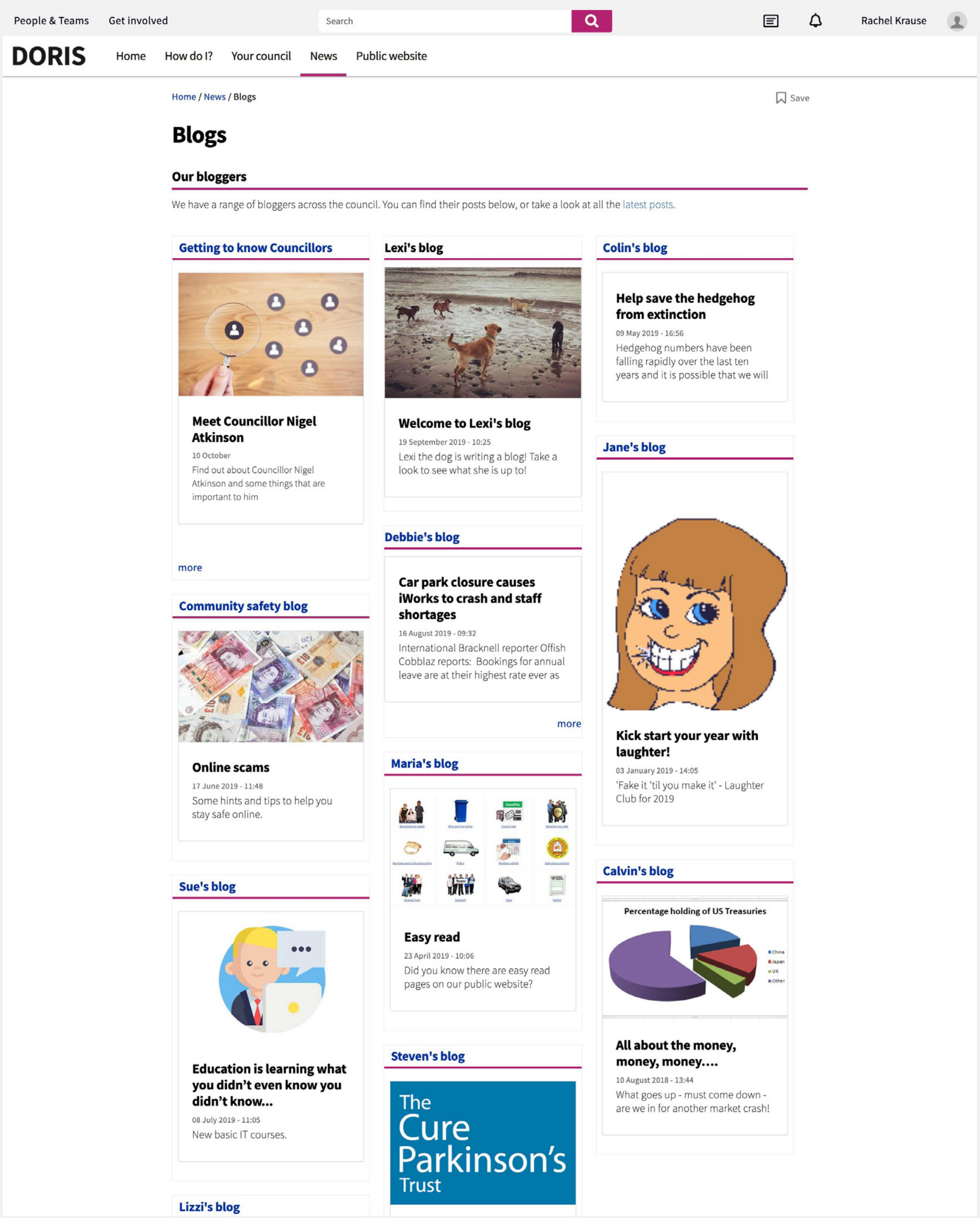


The card-based layout the Royal National Lifeboat Institution used for its News *page reintroduced visual depth through a subtle drop shadow as a signifier of clickability.*



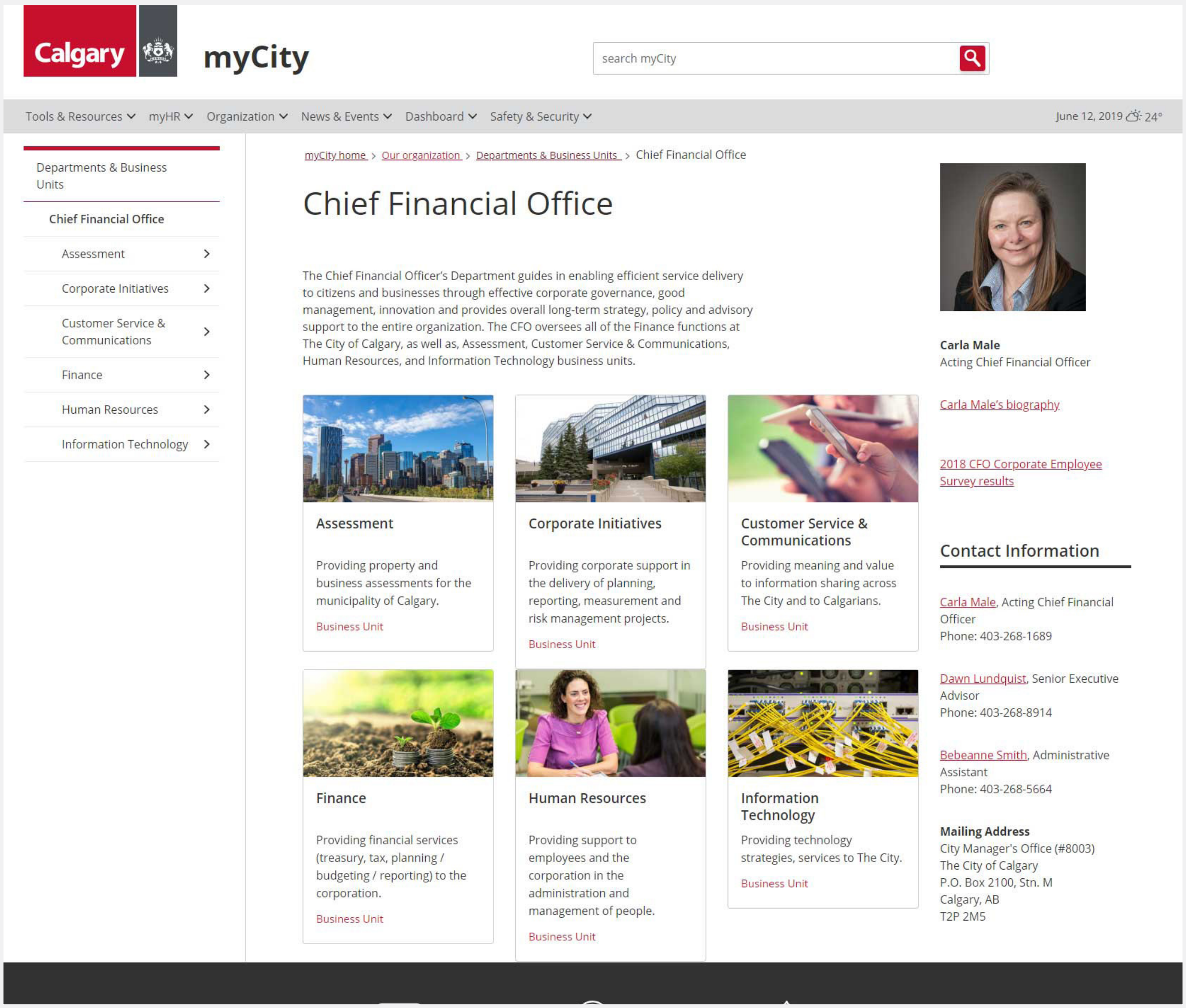
The cards on the City of Calgary's intranet chunked several different (but related) news articles into groups of digestible units. The card design featured a background color and image to create a border and differentiate them from the underlying canvas. These small design elements combined to create a strong sense that the different pieces of information contained within the border were grouped together.

When multiple cards are used together in an intranet page layout, such as on Bracknell Forest Council's intranet, they often do not all have the same type or amount of information. Some cards might include a text summary or an image, whereas others on the same page may include completely different details. Some card-based designs allow for cards of varying heights to accommodate differing amounts or types of content. Typically, the width is fixed from one card to the next.

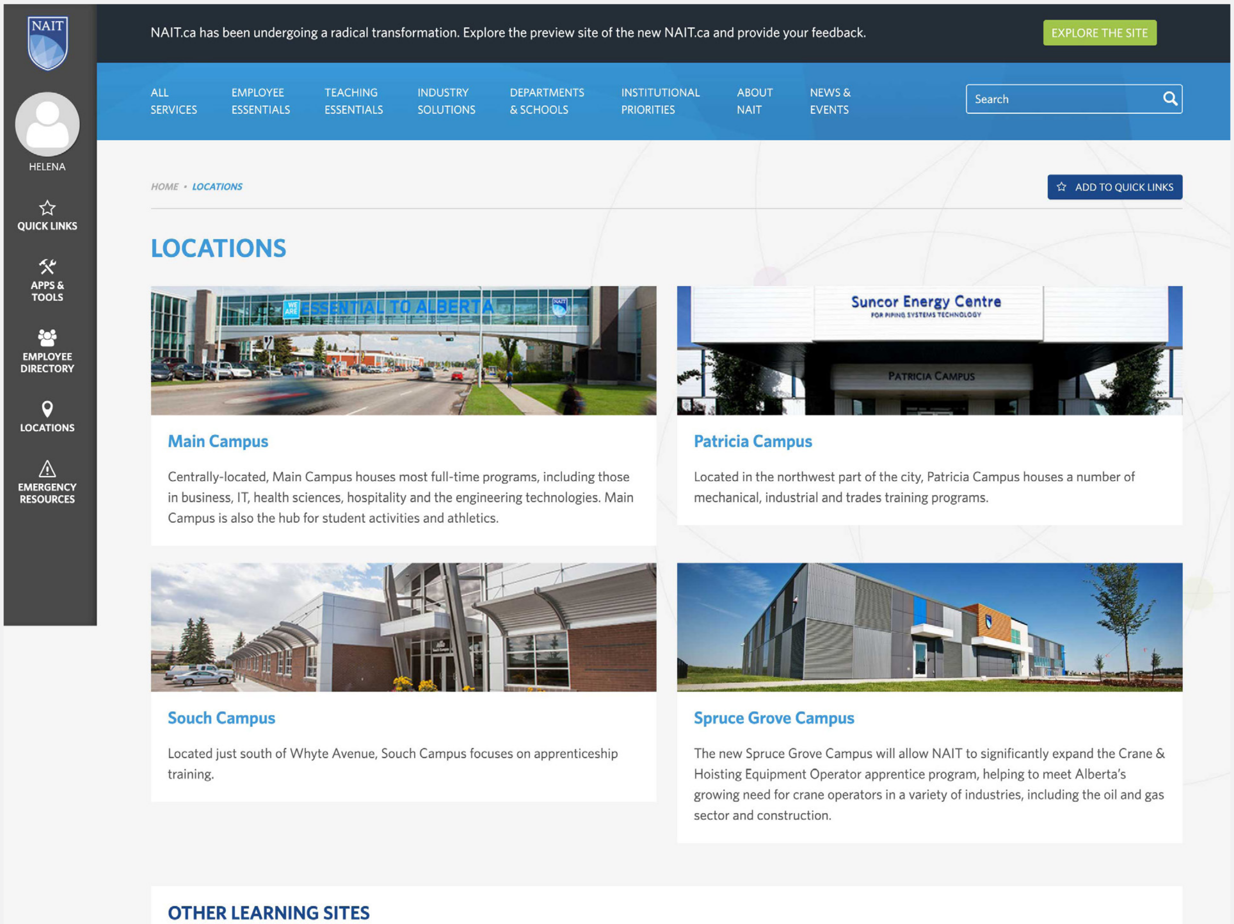


Bracknell Forest Council's intranet blog page design allowed for cards of varying heights and compositions, though the width of the cards and spacing between each one remained consistent. This facilitated a clean, balanced layout.

It's important to be careful with card-based designs and presenting cards of varying heights. If the layout doesn't naturally accommodate cards at different heights, instead favoring symmetry and exact alignment to a grid, it can cause the layout to look misaligned when cards contain additional information causing them to grow taller than others in the same row. We observed this on both the City of Calgary's and the Northern Alberta Institute of Technology's intranets. A simple fix for this issue is to ensure that any additional lines of text do not offset the cards' height; edit the text so that each card remains consistent. This task shouldn't stop you from utilizing the flexibility of a card-based design but, instead, is something to watch out for to maintain a clean design.



The middle card in the second row on the City of Calgary's Chief Financial Office *page contained more subtext than the others in the same row. This caused the card's height to grow, making it taller than others in the same row and throwing the grid off-balance.*



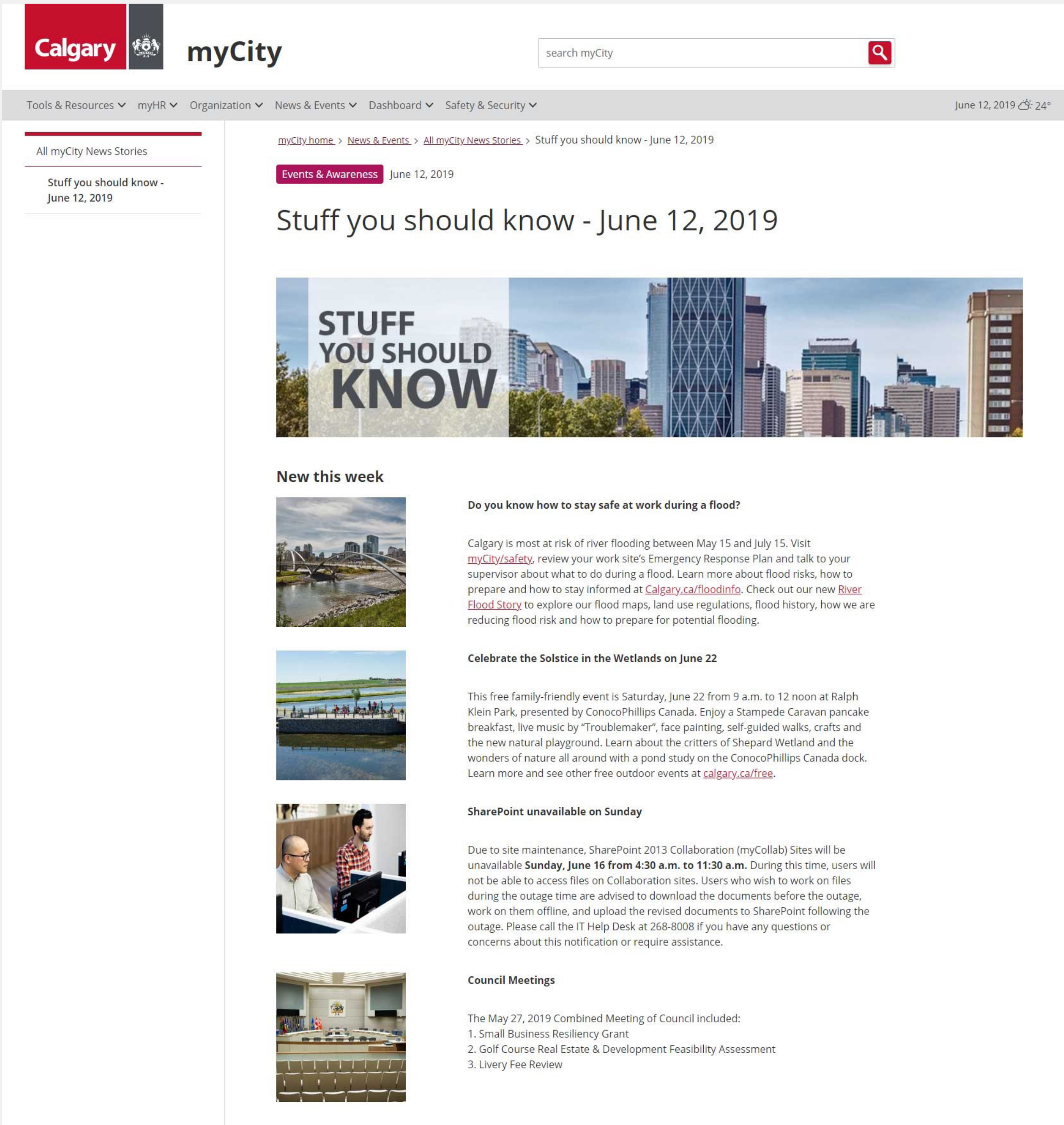
The card in the lower right corner of the Northern Alberta Institute of Technology's Locations *page also contained more copy than the one to its left. This made the card taller, thus throwing the grid off-balance. The one directly above also had less body copy than the one to its left. In this case, a better approach would be to set a two or three-line standard for text that appears below each campus location to maintain a clean grid.*

16. Favor list-based layouts to emphasize content ranking when employees need to scan quickly.

List-based intranet pages or components are better suited for situations when employees are likely to search for or quickly scan information to find a particular piece. List-based layouts also tend to emphasize the rank order of content. For example, the list's most important content appears highest, with the less important content listed after that. Or, in the case of search engine results pages, the most relevant links appear first in the list.

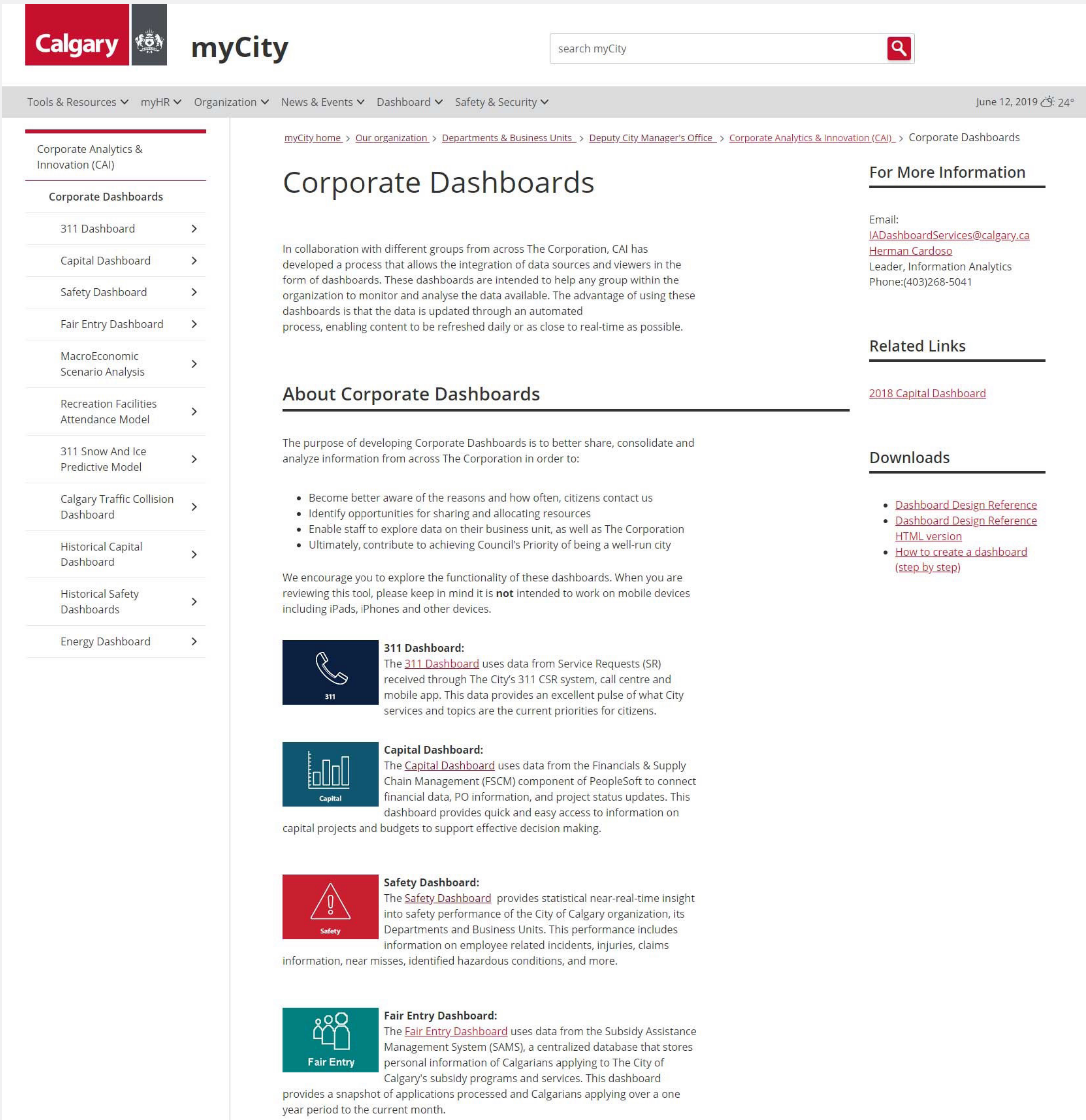
A standard vertical list view (in which each item occupies a new row in the layout and may still contain mixed media such as an image, title, summary, and so forth) is more scannable than cards because the positioning of the individual elements is fixed in size and more predictable for the eye. List-based layouts also take up less space than card-based layouts. Because cards are larger than a line of text, any given screen size can't show as many cards in a single view as would be possible in a list view. The more things that are viewable without scrolling, the less demand is placed on employees' short-term memory.

For example, the City of Calgary used a list-based layout for its weekly employee newsletter, *Stuff You Should Know*. The list-based layout was optimal because employees intended to skim and scan this content briefly. The page had a clean design; images were placed consistently, padding and spacing were uniform, and content was presented in a visually appealing length and format.



The City of Calgary used a clean, list-based layout for its weekly newsletter.

As with card-based designs, there are some nuances and inconsistencies to watch out for that can make a list-based design approach look unpolished and hard to scan. On the City of Calgary's corporate dashboards page, the height of the text was often taller than the accompanying images in the list. When this happened, it threw off the spacing between the list items, and rather than maintaining a clean, balanced-looking list, the text wrapped below the image, causing the layout to look misaligned. A better approach here would be to modify the copy to keep it to a maximum of five lines, including the headline, to preserve the main messaging while resolving the awkward text wrapping.

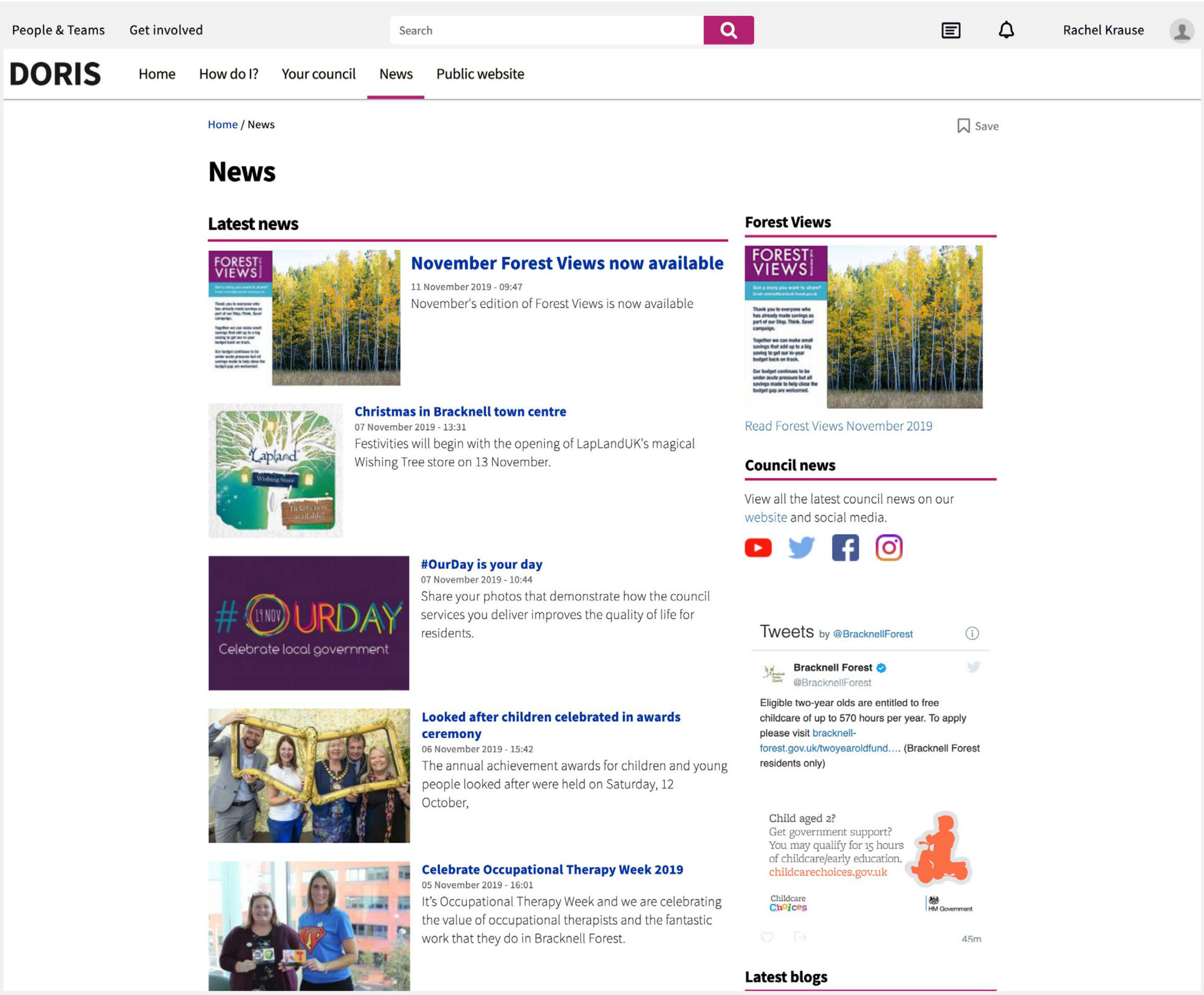


Paragraphs of copy exceeding five lines on the City of Calgary's Corporate Dashboards *page caused the list-based design to look less scannable as the text grew taller and the corresponding icons wrapped below. Aligning with the appearance of the first item in this list would be a better approach.*

Inconsistent image widths combined with text can also impact the alignment and scannability of a list-based design. For example, Bracknell Forest Council used a list design for its *News* landing page, but when the images on the left had inconsistent widths, the corresponding headline and copy to the right bumped over. While this helped to maintain consistent padding between the image and the text in the individual list item, it misaligned the text with the rest of the list items.

A simple solution for this issue would be to ensure all images in the list have the same width and aspect ratio. For example, don't place a square image here if the design requires a rectangular shape. It’s crucial to train content managers and remind them why consistent image size is important, as well as to encourage publishers to preview specific areas of the intranet before pushing content live.

Using vertical list designs to support easy scanning and comparison from one item to the next will help employees find what they’re looking for more easily, as information is placed in predictable locations on each item in the list.



Bracknell Forest Council used a list-based design for its News *landing page. A slight inconsistency in the image width on the second list item caused misalignment. Using a rectangular image instead would quickly remedy the issue.*

CONSIDERATIONS WHEN USING IMAGERY

17. Use imagery strategically to reinforce meaning and to provide additional context for written messages.

Imagery can add valuable information to an intranet; however, imagery shouldn't be used or placed haphazardly. The style of imagery, icons, and photography used tremendously impact the intranet's overall aesthetic and design. Images and graphics should help employees visually understand their location within the intranet or support the concept they're reading about with no extra clutter to distract from the information.

Do’s and Don’ts

It’s worth remembering that a picture is worth a thousand words. Users scan information online and images play a critical role in prioritizing information to make that easier. When shooting or selecting photos for GSA.gov, consider that the choice of image represents and reinforces the GSA brand.

It is important to consider the following:

Do’s

- Do look for images that best portray the diverse and dynamic workforce of GSA
- Do choose imagery that showcases the momentum of GSA’s mission and key initiatives
- Do ensure that the image clearly represents the content and is as specific as possible
- Do crop the image to best emphasize the key focal point of the communication
- Do take care with lighting – ensure that all subjects are illuminated and in focus
- Do take time to request a group’s attention when at an event and the goal is to capture a composed and professional group shot




Dynamic group shot *Cybersecurity - relevant image* *Subject in clear focus* *Crop enhances image*

Don’ts

- Do not use cartoons or clip art
- Do not resize infographics to fit a space that makes the content illegible
- Do not use the same image repeatedly as it will inadvertently signal that the content is not current
- Do not use logos in a space that would be better served with an illustrative image. If a logo is the most appropriate image, take care to crop and place the logo as effectively as possible
- Do not use a generic image when a specific image is called for. This is critical in feature story areas like the homepage.
- Do not place an image if it is out of focus, low resolution or if the composition is unsatisfactory
- Do not use any photography that does not represent the inclusive and diverse workforce of GSA

The General Services Administration included detailed guidance on selection and image placement in its intranet style guide. It was helpful that they included detail about the appropriate types of images to include and which to avoid.

Don't use graphics just to decorate a page. Consider whether an image is really needed or if you're simply trying to fill space. Ask yourself if another format, such as audio or video, would better deliver the message, or even text-based content alone. When written content is sufficient, try adding some style or color to the text or combining it with a complementary typeface. This can work well to drive visual interest in a similar and often more consistent manner than using a random image. This strategic approach will ensure the intranet remains visually tidy and appealing. Make sure any graphics you include on the intranet help reiterate main points or speed up comprehension.

For example, when interviewing an intranet content manager at the Mayo Clinic and discussing doctor's perceptions of the audience for their department on the intranet, she said:

> "The doctors often want us to put pretty pictures and wow factors on the intranet without understanding that people just want to understand the information. We don't have to spend much time on Flash and stock images. It's important to prioritize function, not beautiful photos."

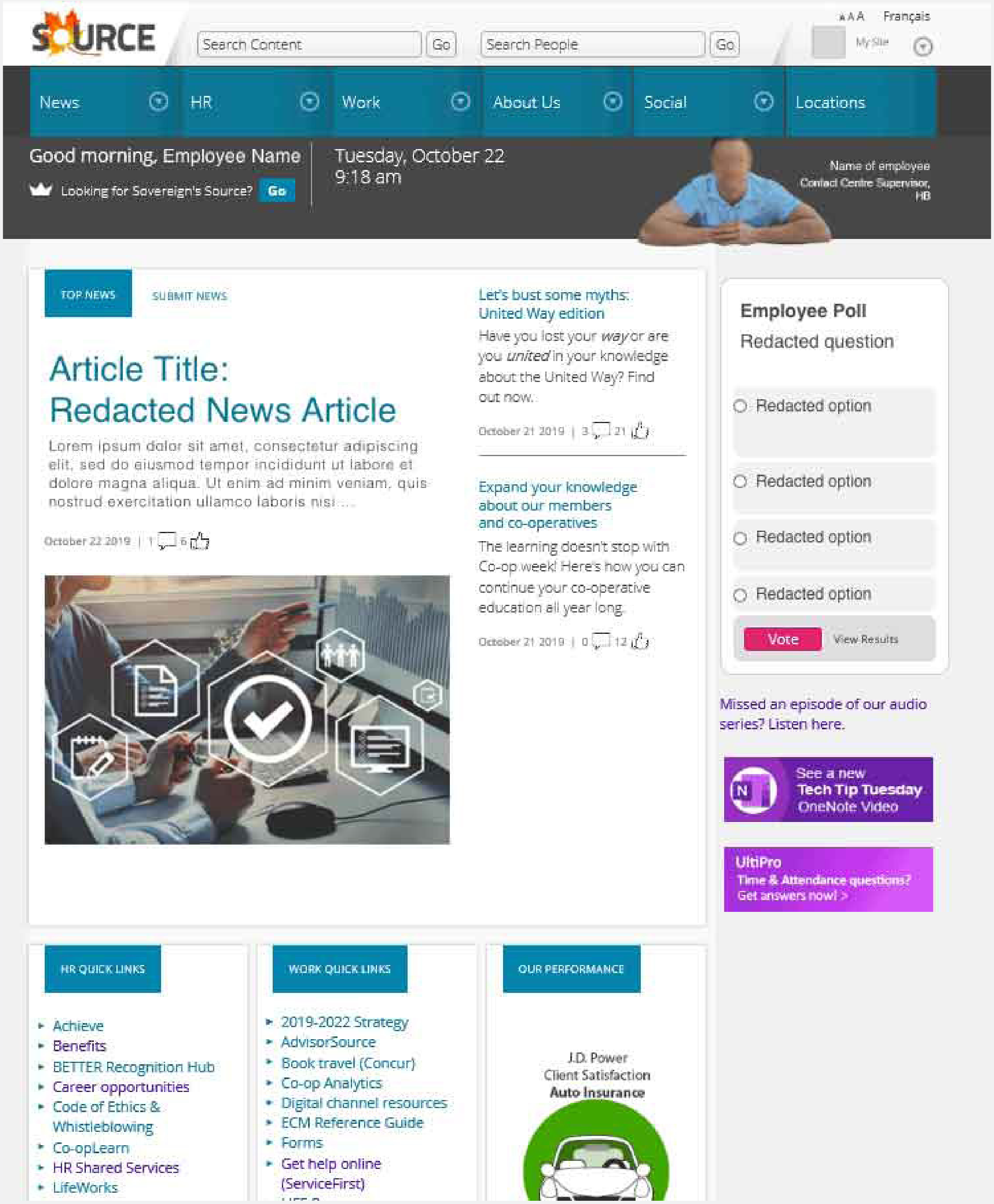
Reduce graphics' file size while balancing quality to ensure pages load quickly.

Timeless Design Tips

Where you do use images in your intranet's design, reduce the image file sizes as much as possible without compromising presentation quality. Do this before uploading the media to the intranet so pages load quickly.

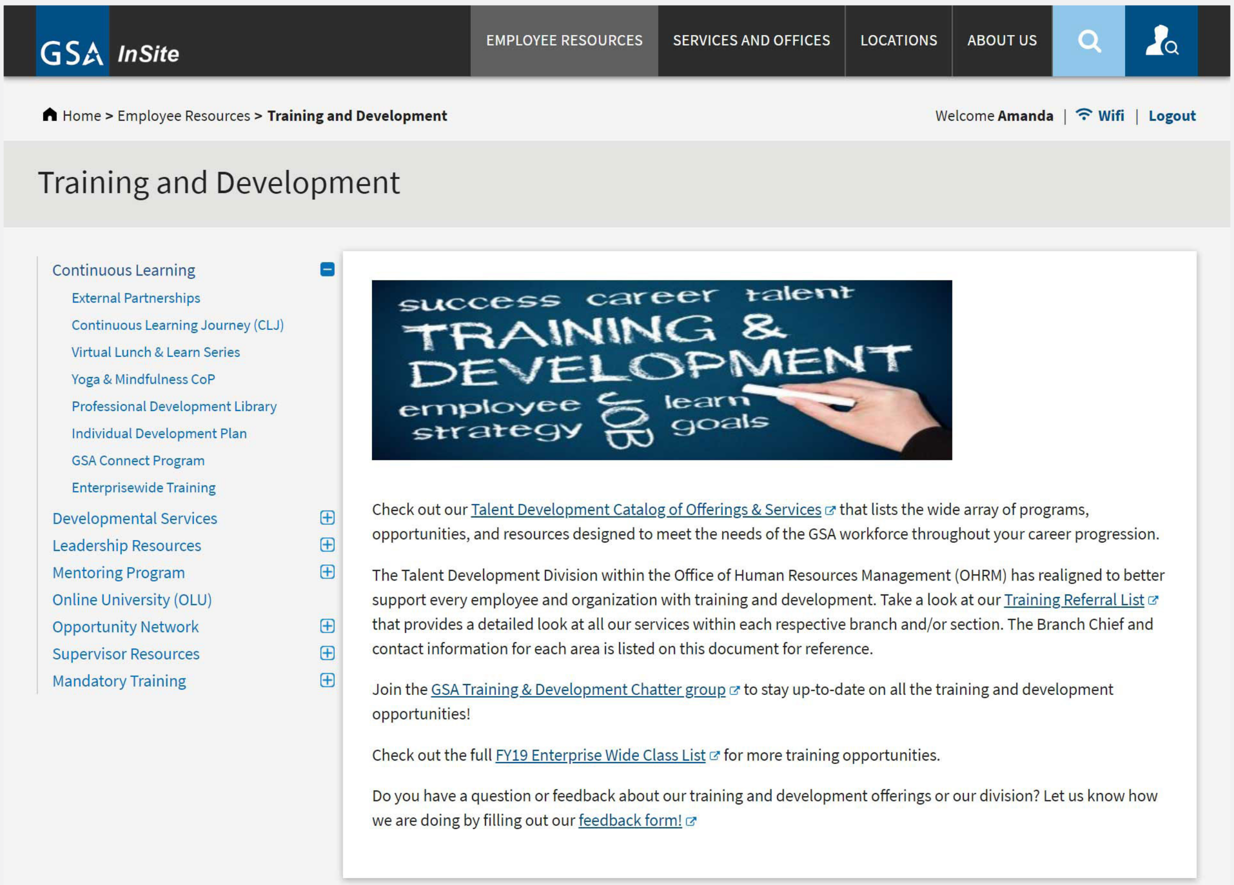
It's also helpful to indicate the preferred image size standards, such as "under 150KB," and file type specifications, such as .png or .jpg, near where content publisher upload their imagery.

Images on the homepage of The Co-operators' intranet were randomly placed and didn't strongly support the messages they accompanied; it appeared as though they were only there to fill space. Additionally, several of the images appeared to be pixelated and were not high resolution. For example, the Source logo and the picture of the featured person were not as crisp and clear as they could have been. In this case, a better approach would be to use more meaningful images only when they're truly necessary and give them a more logical placement. Using a different image format or exploring whether the image resolution could be improved without negatively impacting page load times would also help.



The Co-operators' intranet's homepage contained randomly placed images that did not work well to reinforce key messages or provide context.

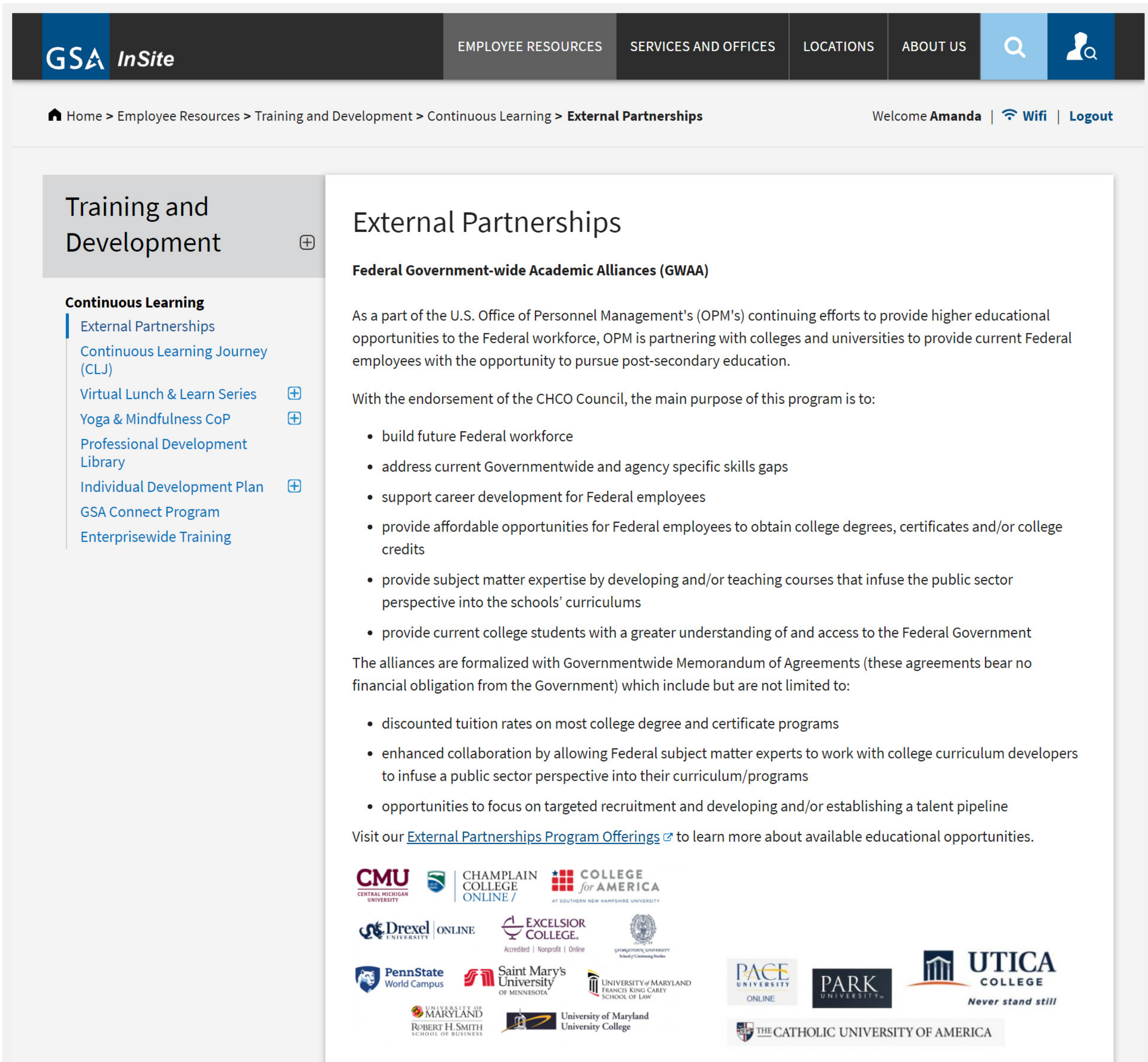
We asked General Services Administration employees to use the intranet to find out how much tuition reimbursement they were eligible for. To find this information, people first navigated to the *Training and Development* section, where a filler image appeared at the very top of the section's landing page. Though the image contained text that said, *Training & Development* and other similar phrases written in chalk, it was vertically stretched to fill the image container, which made it look distorted. This image wasn't adding value to the page and obstructed the text below. A better approach for this page would be to remove the image and write a meaningful second-level headline summarizing what employees can find on the page.



The hero image on GSA's Training and Development *page is vertically stretched and doesn't add much meaning or value to this page.*

From the *Training and Development* page, employees then navigated to the page titled *External Partnerships*. As users scanned the page, they grew interested in learning which universities' tuition was covered in addition to the amount GSA would reimburse. Unfortunately, many employees squinted to scan this text and had difficulty reading the university names from the tiny logos scattered at the bottom of the page. This is also not an effective or strategic use of imagery.

A better approach would be to either remove the logos and use a bulleted list to outline the universities with which GSA partnered or to use a cleaner grid and set of containers to organize the logos better. Using a text label underneath each one would also more clearly communicate to which university the logo belonged.



The logos at the bottom of GSA's External Partnerships *page did not help employees quickly or easily understand which universities' tuition would be reimbursed. They were too small and placed sporadically.*

Recognize that content managers may not know how to handle or resize images, which can lead to distortion, improperly sized, or out-of-place images. Provide training to help them understand the nuances of image sizes, resolutions, aspect ratios, file formats, and proper placement techniques in pages or components. For example, during a **contextual inquiry** at Bracknell Forest Council, we asked a content manager if parts of her job caused her concern. She said:

> "I struggle with sorting out the photos. If I need to do a news item, you have to have a certain size picture for that. I don't do it often enough to remember what the size is, so I have to go back and work out what the size is. Our stuff is quite boring, so if it's a picture of an icon I have to send it off to someone else to put a background on it because white is not very good for the homepage. A lot of it was learning, but now I know most of the answers, so now I don't have as many issues with it."

Contextual inquiry

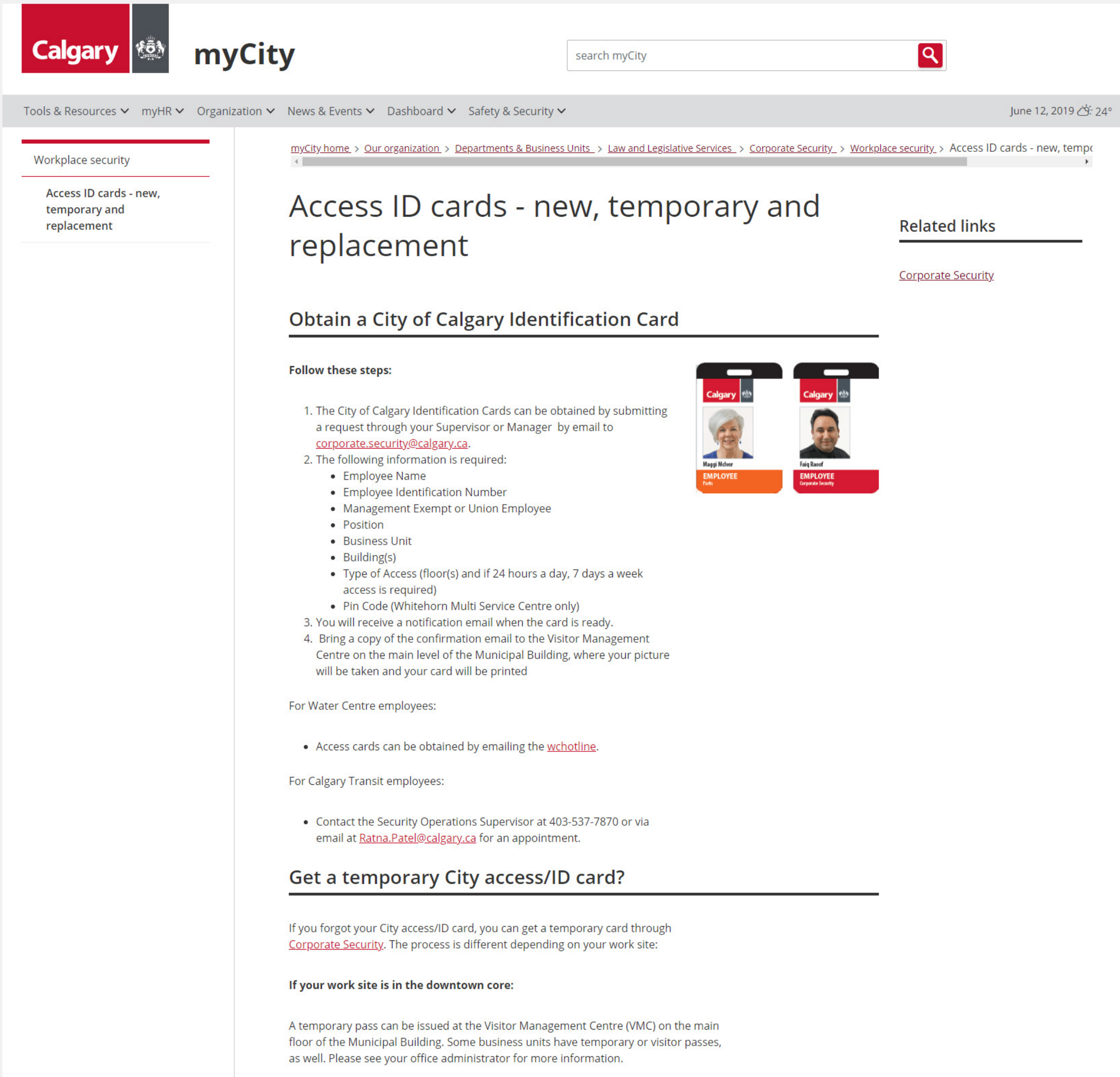
Definitions, Principles, and Methods

Contextual inquiry is a type of ethnographic field study that involves in-depth observation and interviews conducted with a small sample of users to gain a robust understanding of work practices and behaviors. Its name describes exactly what makes it valuable — inquiry in context.

The research takes place in the users' natural environment as they conduct their activities as usual. The researcher watches users as they perform tasks and ask for information to understand how and why the users do what they do, in the context in which they normally work, in their home, office, or somewhere else entirely.

Contextual inquiry is useful for many domains, but it is particularly well-suited to gain an understanding of users' interactions with complex systems and in-depth processes, as well as to the point of view of expert users.

The City of Calgary did a nice job of using imagery strategically on its access ID cards page. Upon landing on the page, employees could scan the well-formatted text, and an example image of what the actual ID cards looked like appeared to the right. This image choice is favorable as it set employees' expectations by reminding them what their own ID card looked like. The image placement is also good; it is balanced in the space, doesn't obstruct the text, and works to effectively reiterate something valuable related to the page's topic.


Calgary myCity

search myCity

Tools & Resources myHR Organization News & Events Dashboard Safety & Security June 12, 2019 24°

Workplace security

Access ID cards - new, temporary and replacement

myCity home > Our organization > Departments & Business Units > Law and Legislative Services > Corporate Security > Workplace security > Access ID cards - new, tempo

Access ID cards - new, temporary and replacement

Related links

Corporate Security

Obtain a City of Calgary Identification Card

Follow these steps:

1. The City of Calgary Identification Cards can be obtained by submitting a request through your Supervisor or Manager by email to corporate.security@calgary.ca.
2. The following information is required:
   - Employee Name
   - Employee Identification Number
   - Management Exempt or Union Employee
   - Position
   - Business Unit
   - Building(s)
   - Type of Access (floor(s) and if 24 hours a day, 7 days a week access is required)
   - Pin Code (Whitehorn Multi Service Centre only)
3. You will receive a notification email when the card is ready.
4. Bring a copy of the confirmation email to the Visitor Management Centre on the main level of the Municipal Building, where your picture will be taken and your card will be printed

For Water Centre employees:

- Access cards can be obtained by emailing the wchotline.

For Calgary Transit employees:

- Contact the Security Operations Supervisor at 403-537-7870 or via email at Ratna.Patel@calgary.ca for an appointment.

Get a temporary City access/ID card?

If you forgot your City access/ID card, you can get a temporary card through Corporate Security. The process is different depending on your work site:

If your work site is in the downtown core:

A temporary pass can be issued at the Visitor Management Centre (VMC) on the main floor of the Municipal Building. Some business units have temporary or visitor passes, as well. Please see your office administrator for more information.

The City of Calgary's Access ID cards *page represents a good example of using imagery to reinforce a page's topic. Seeing an example of the ID cards reminds employees of what they look like. The placement slightly offset from the text signals it's related without taking up excessive page real estate.*

We often see lots of random, distorted, or inconsistent imagery and stock photos used on intranets. To elevate your intranet's design, set a specific image style that fits your overall brand and aesthetic. Allow images to blend in with the rest of the design by matching their color scheme with the rest of the intranet or the background color of the surrounding space. Set standards for when to use an image versus when text alone will suffice.

Include alt-text for images.

Process and Strategic Considerations

ALT text, a contraction of "alternative text," is a short, written description of an image. This text is intended to provide context when the image can't be viewed, for example, to aid employees who rely on screen readers and assistive technologies to use the intranet.

An easy way to think about how to write good ALT text is to write it as if you were trying to briefly describe the image to someone over the phone. A few words are often enough, though a complete sentence is sometimes necessary. Screen readers may cut off ALT text at around 125 characters, so it's best to stick within that limit.

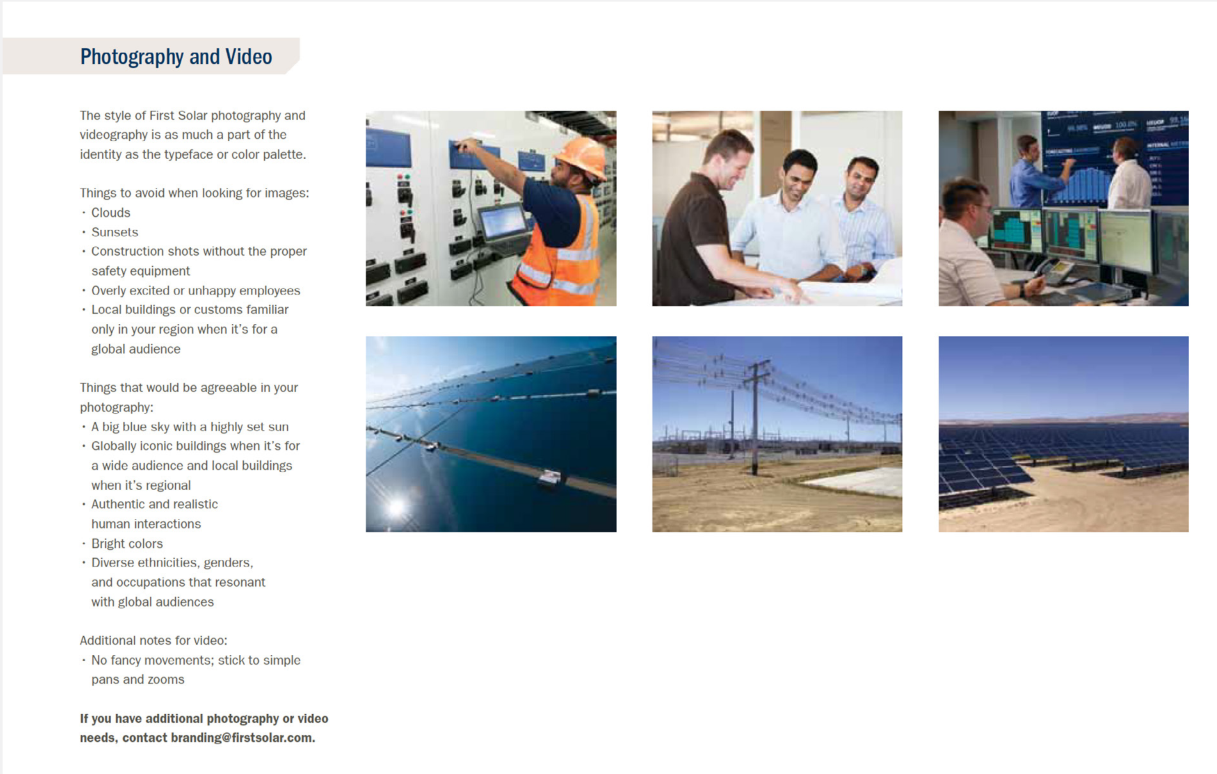
It's good to help people understand context, so explain what type of image it is (e.g., a headshot, illustration, chart, or screen grab,), but don't begin an ALT text description with, "Image of..." or "Picture of..."

ALT text isn't needed if it repeats what's already on the page, such as when there's an adjacent caption or for decorative icons.

Ensure content managers also know when and how to write effective alt-text. Communicate that this is a mandatory part of their publishing duties.

18. Include authentic images of employees, buildings, and products on the intranet.

As much as possible, avoid using cheesy stock photography on the intranet. Stock photography usually feels generic and degrades the overall perception of the intranet and its visual design. Instead, use images of actual employees, buildings, products, and events, not photos of overly happy people wearing headsets or groups of people in business suits holding their thumbs up.



Photography and Video

The style of First Solar photography and videography is as much a part of the identity as the typeface or color palette.

Things to avoid when looking for images:
- Clouds
- Sunsets
- Construction shots without the proper safety equipment
- Overly excited or unhappy employees
- Local buildings or customs familiar only in your region when it's for a global audience

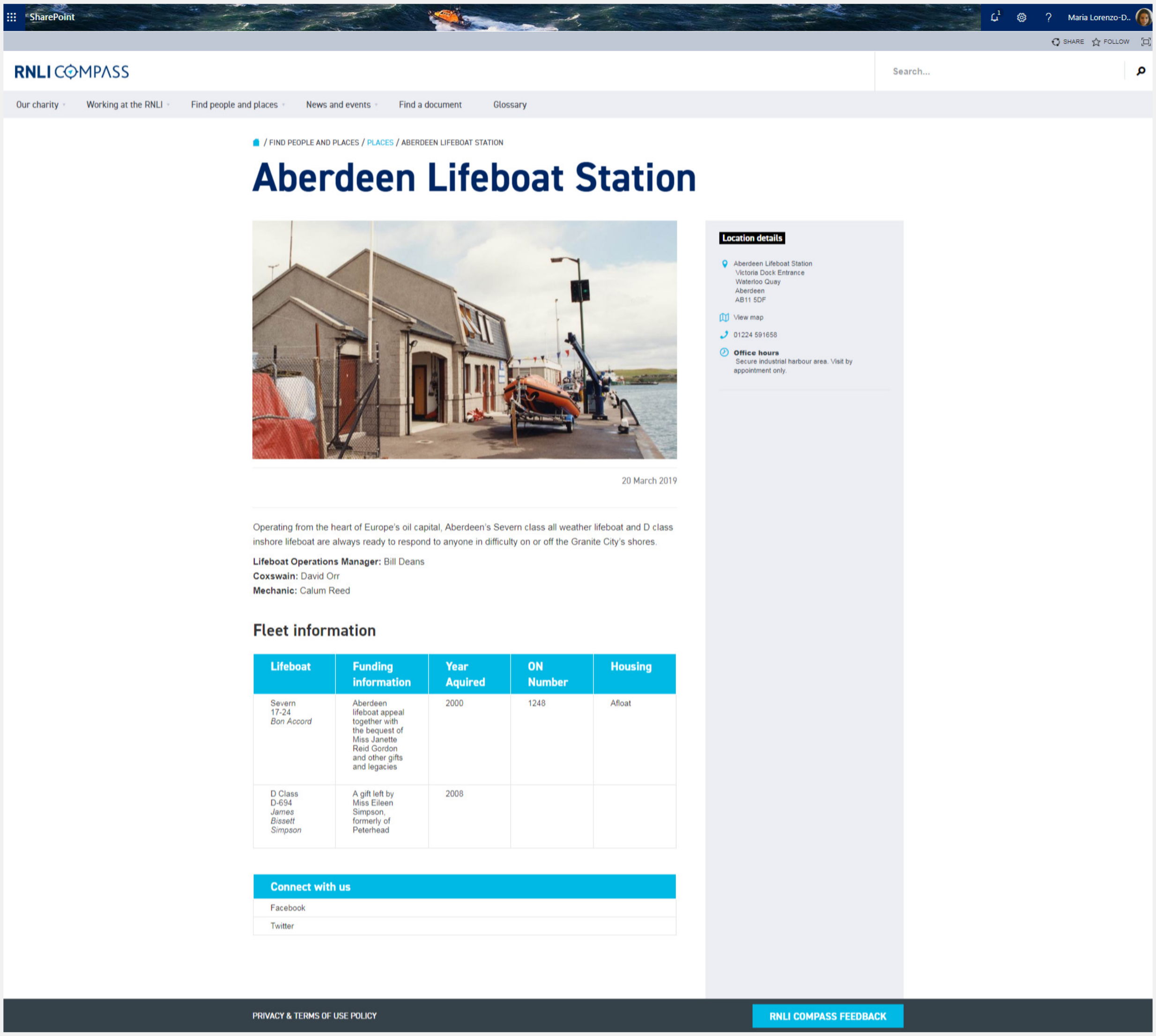
Things that would be agreeable in your photography:
- A big blue sky with a highly set sun
- Globally iconic buildings when it's for a wide audience and local buildings when it's regional
- Authentic and realistic human interactions
- Bright colors
- Diverse ethnicities, genders, and occupations that resonant with global audiences

Additional notes for video:
- No fancy movements; stick to simple pans and zooms

If you have additional photography or video needs, contact branding@firstsolar.com.

First Solar prioritized using images of actual employees, buildings, and its products on the intranet and outlined in detail the right types of images to use and how to photograph them in the company's brand guidelines.

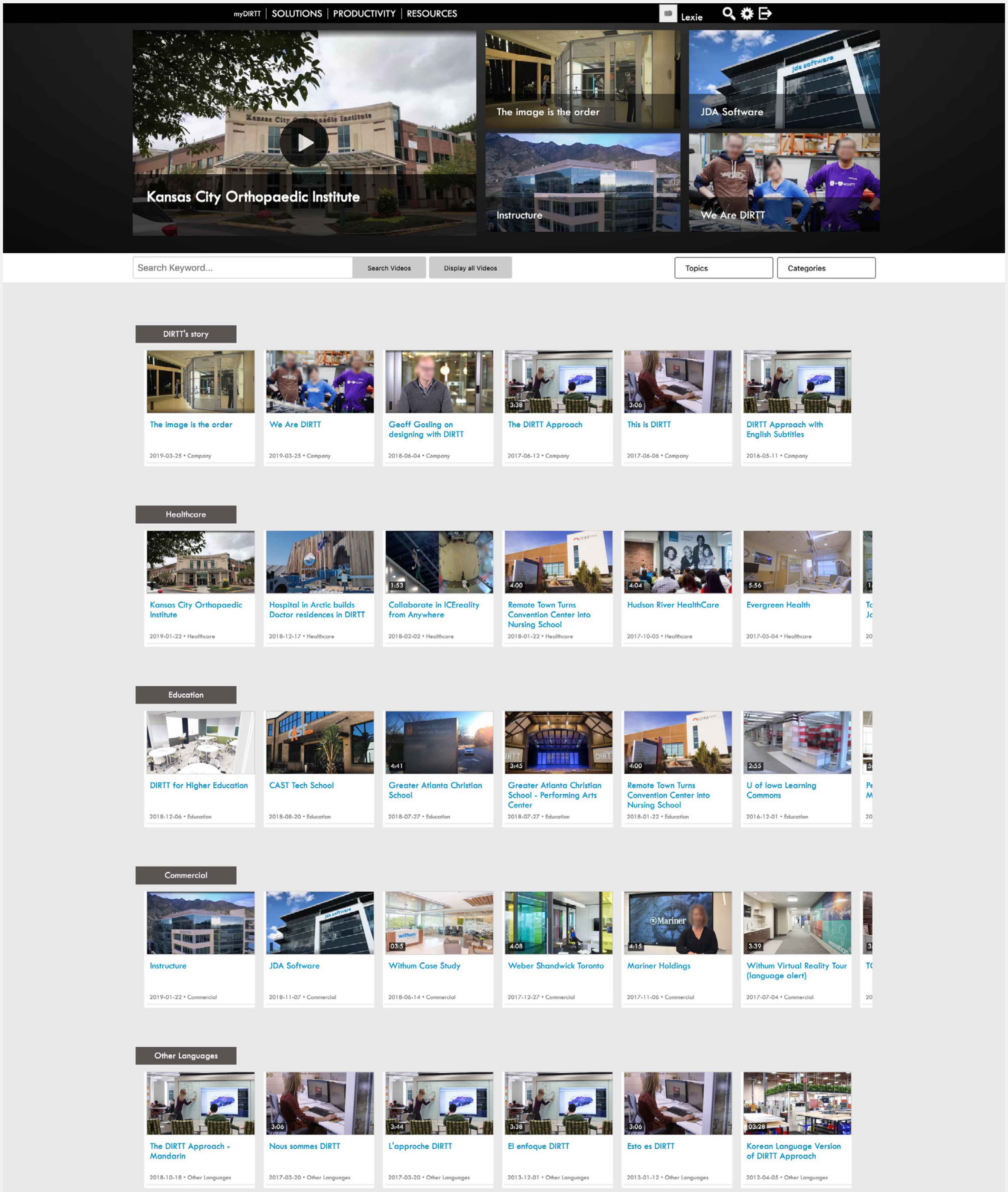
Invest in a quality camera to shoot authentic imagery of people, places, projects, and other happenings around the organization. Many mobile phones today also have high-quality cameras capable of taking high-resolution photos that can be used on the intranet. Some organizations we studied, for example, DIRTT, even set up shared photo libraries where employees could freely upload photos of each other and of events and projects happening at the organization. This way, the intranet teams had a catalog of authentic imagery and videos to pull from and use on the intranet when needed.



The Royal National Lifeboat Institution used high-quality, professionally shot images of its actual duty stations on its location pages instead of abstract or stock photos, which was ideal.

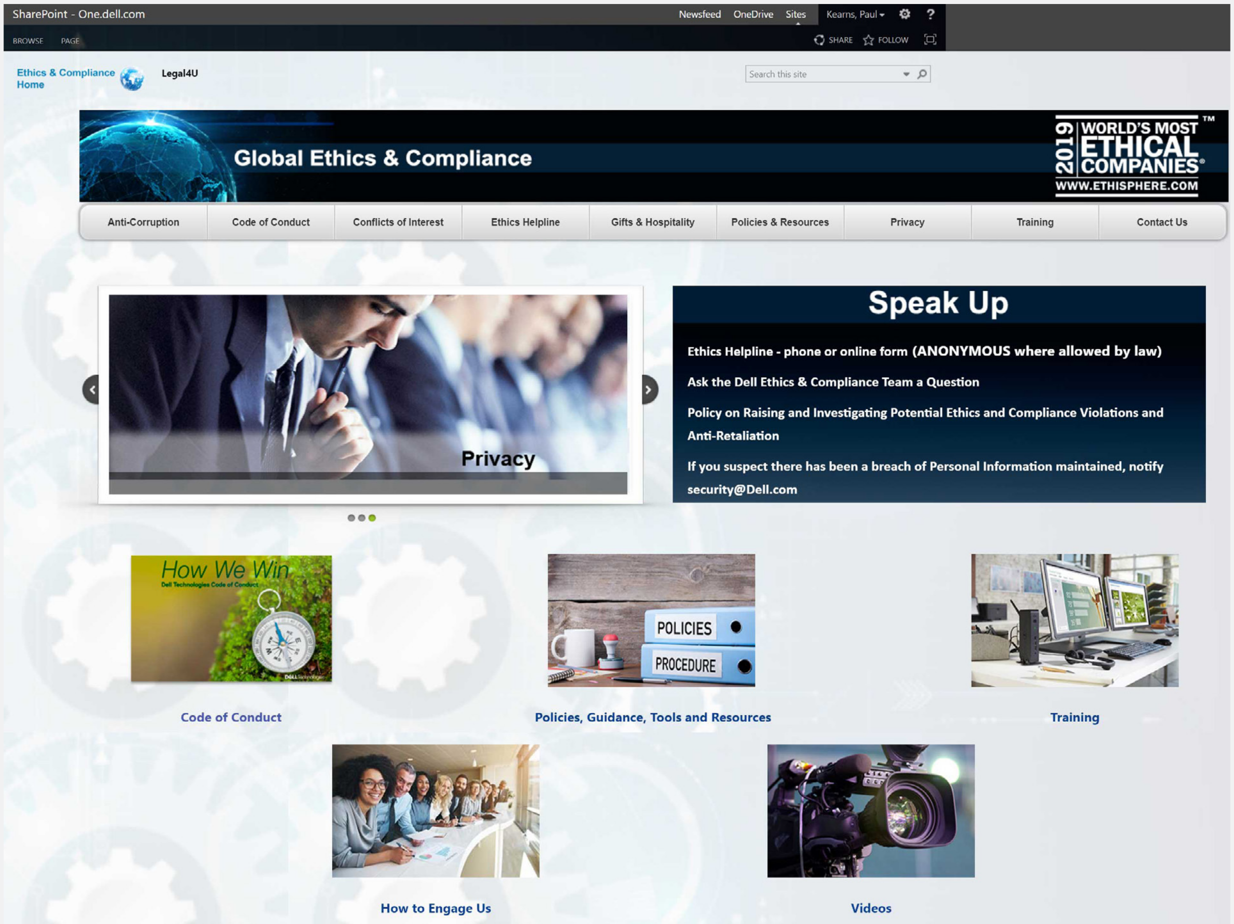
At the time of our study, Eyeo content managers and space administrators for certain areas of the intranet could pick their own images for spaces. However, the team shared that, eventually, designers would provide branded versions of all images and logos and educate content managers on the importance of using authentic and consistent imagery. They said:

> "Logo tiles are custom, created by the branding team, and available on the intranet for posts. People can request tiles, and we have brand guidelines for the types of images that can be used. Image guidelines aren't well-known yet, though. Longer-term, we need to educate people more on images when posting. People don't know these things yet, but we hope to keep it mostly branded."

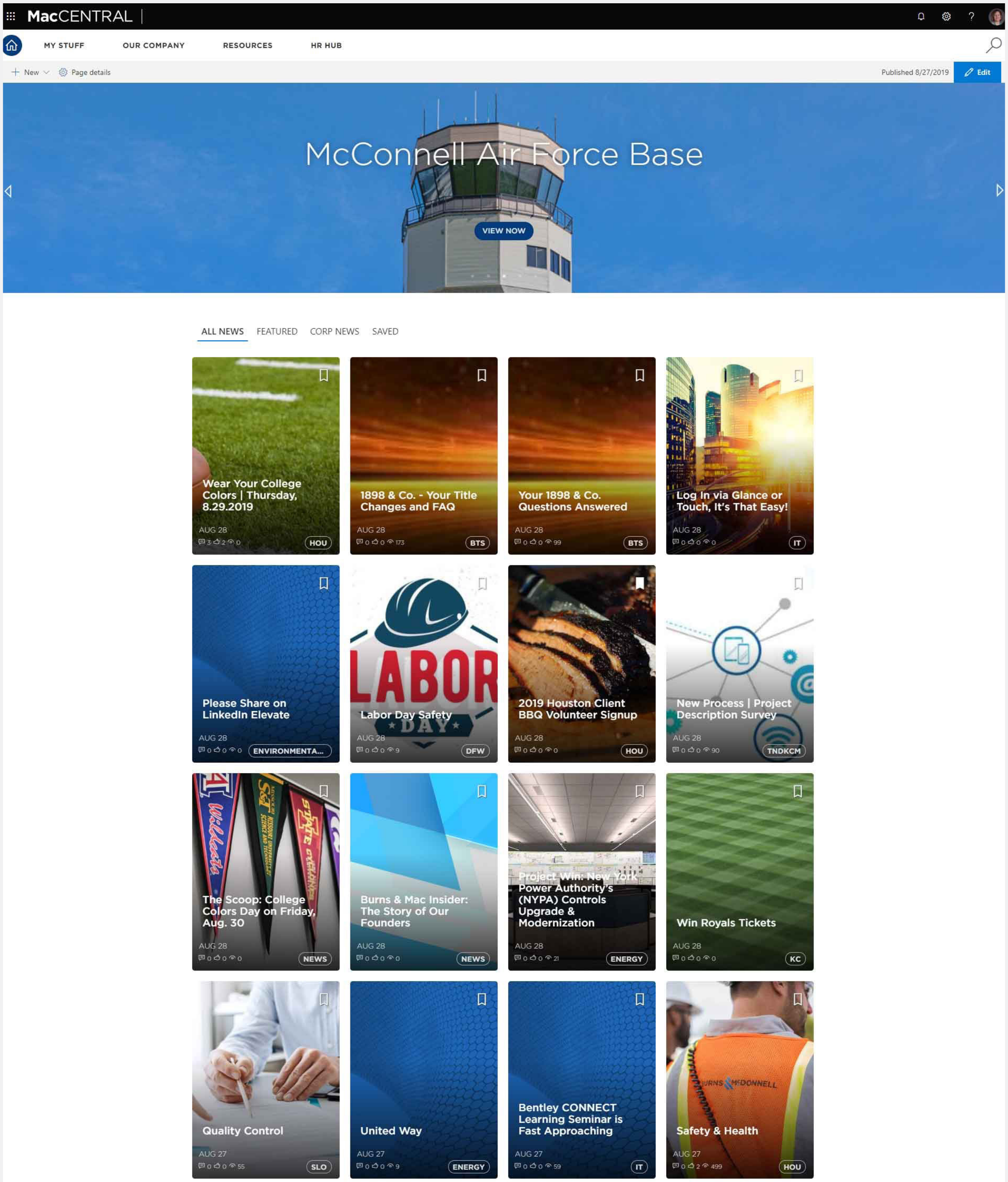


Instead of using stock photography, DIRTT set up a photo and video gallery where content managers could find media assets. This approach was good, especially for distributed content management teams who could use imagery unique to the organization.

Dell and Burns & McDonnell used stock photography heavily throughout their intranets. In both cases, the images felt “fake” to employees. It would be better to use photos of real employees, even if the photos aren’t perfectly polished and professional.

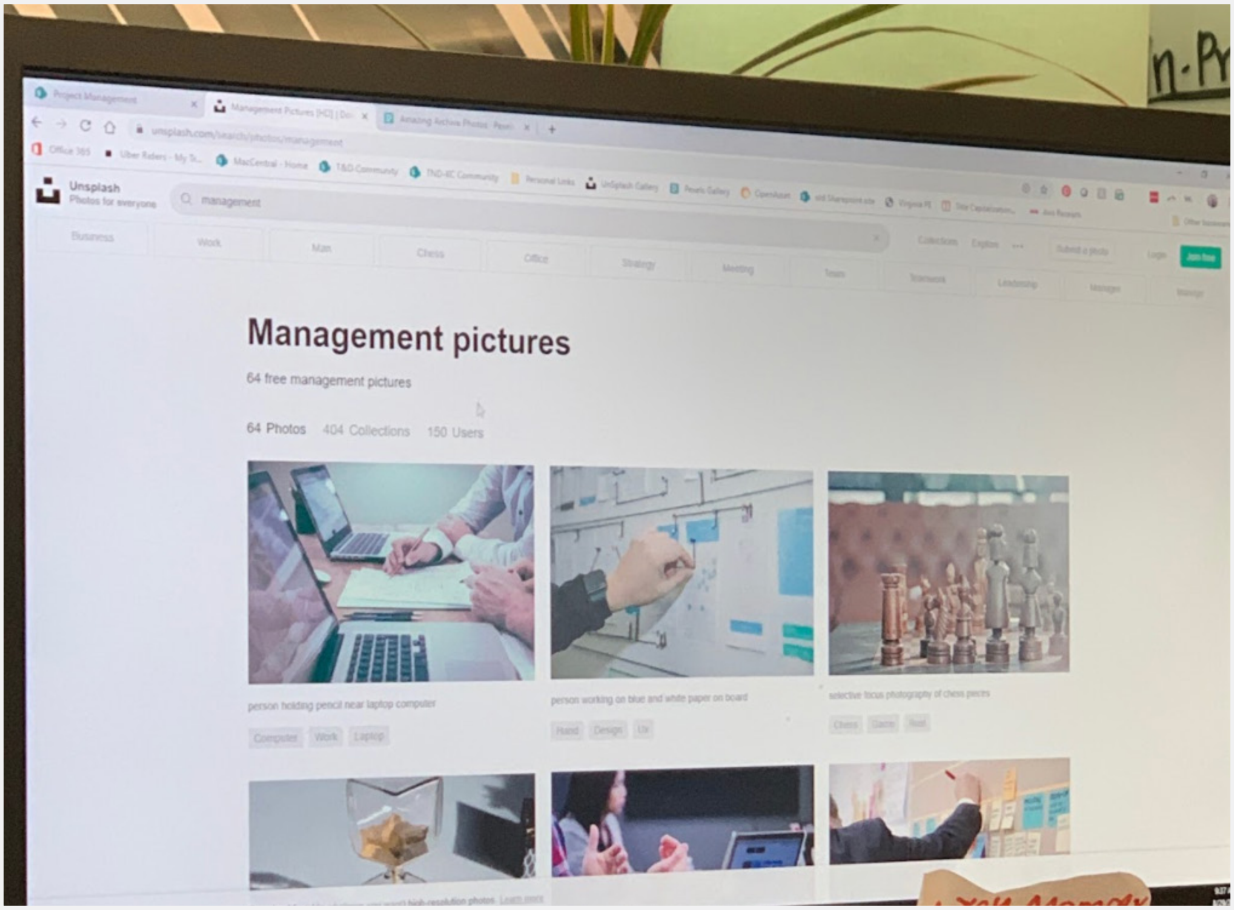


On Dell’s Global Ethics and Compliance *homepage, stock photos are randomly placed, making the page look overly staged and disorganized. Also, each image is quite different from one another in style.*

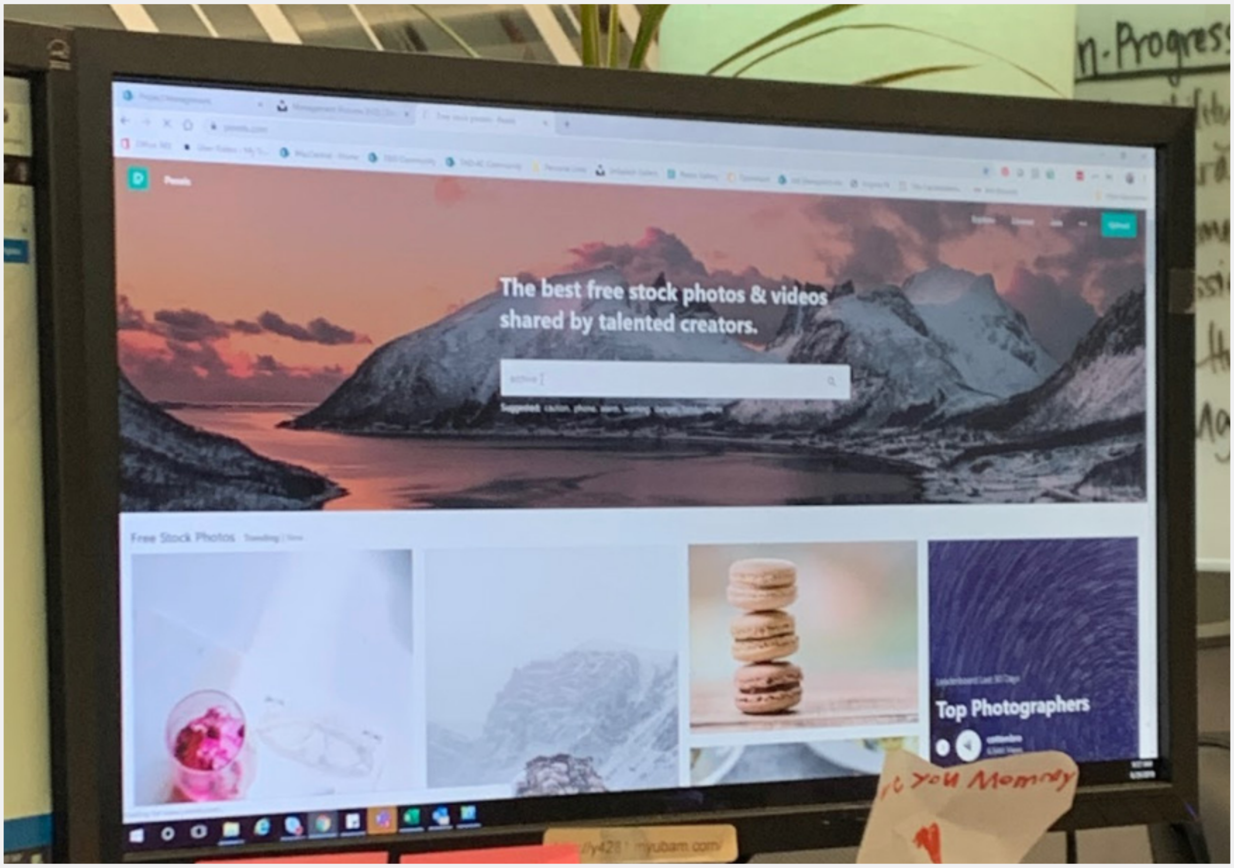


A few images on this Burns & McDonnell intranet page are authentic, but most are stock photos. Instead of stock photography, authentic images would better support Burns & McDonnell's culture.

Some teams used mainstream stock photography websites such as iStock Photo to find imagery for the intranet, while others used websites that offer more natural-looking, royalty-free images, such as Unsplash and Pexels. If taking photos of actual people, places, or events isn't possible, use these images sparingly.

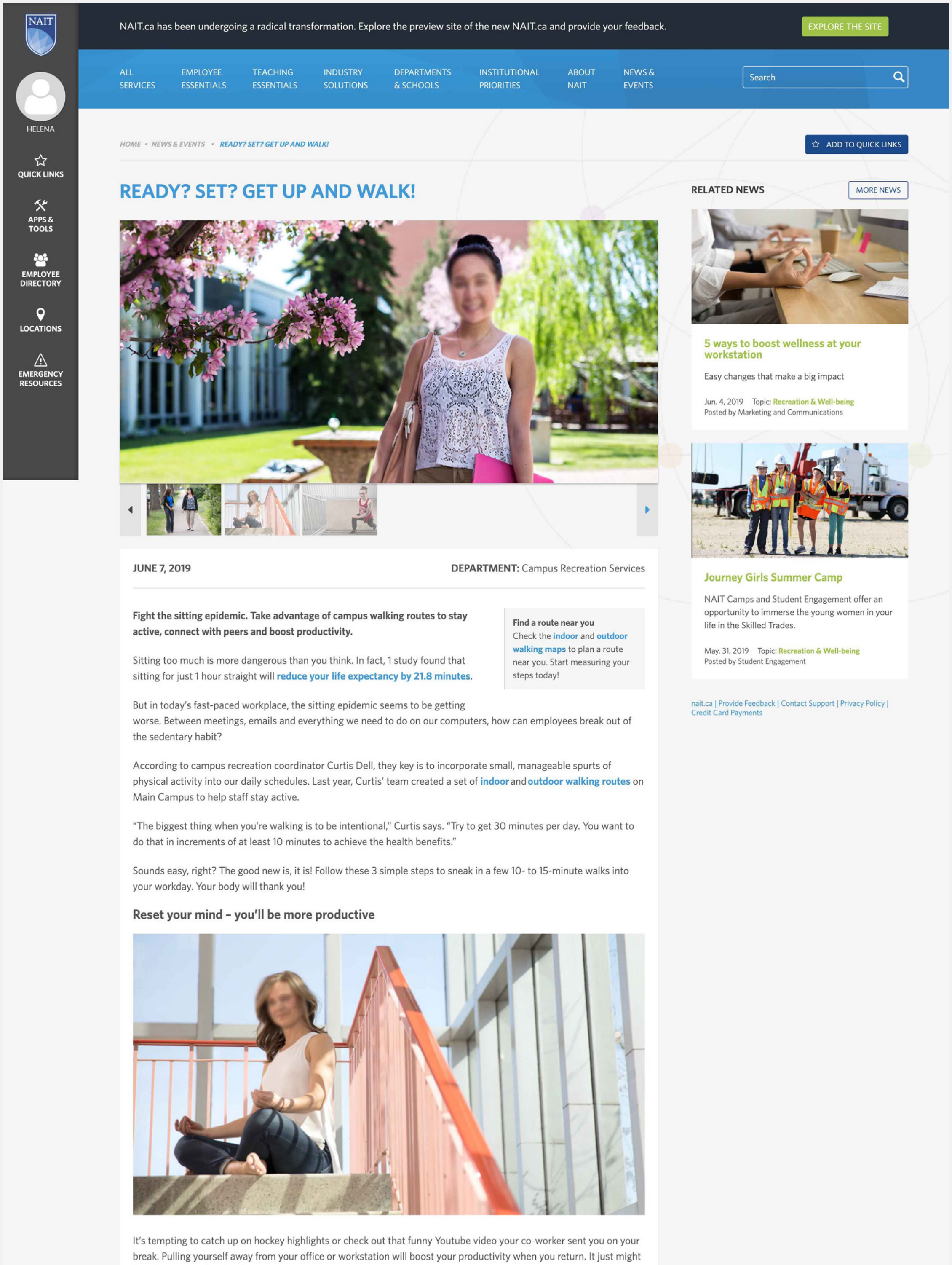


While observing a content manager updating pages, they went to Unsplash, a royalty-free photo website, to look for management photos for the page. Many of the photos on this site look much more realistic than traditional stock photography.



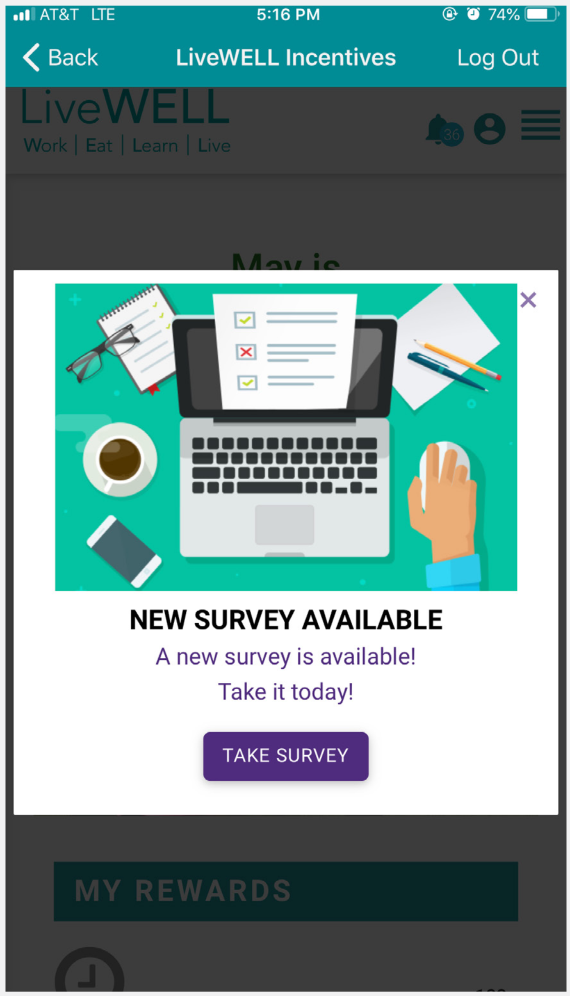
Another royalty-free photo website the content manager used to look for intranet assets was Pexels. The photos on this site were free to download and looked much more realistic than traditional stock photography.

The Northern Alberta Institute of Technology used authentic imagery of real employees, campus locations, events, and other photos across its intranet. Authors and content publishers made it part of their standard editorial processes to curate or shoot new photos when they were needed. Some used a professional-grade camera, while others used a mobile phone. But its inherent editing and filtering capabilities, combined with enhancements in Photoshop, made genuine intranet images quick and easy to make. Naturalistic stock photography that still fit the intranet's overall visual style was only used in rare cases when no other images were available, or a new photo couldn't be taken.

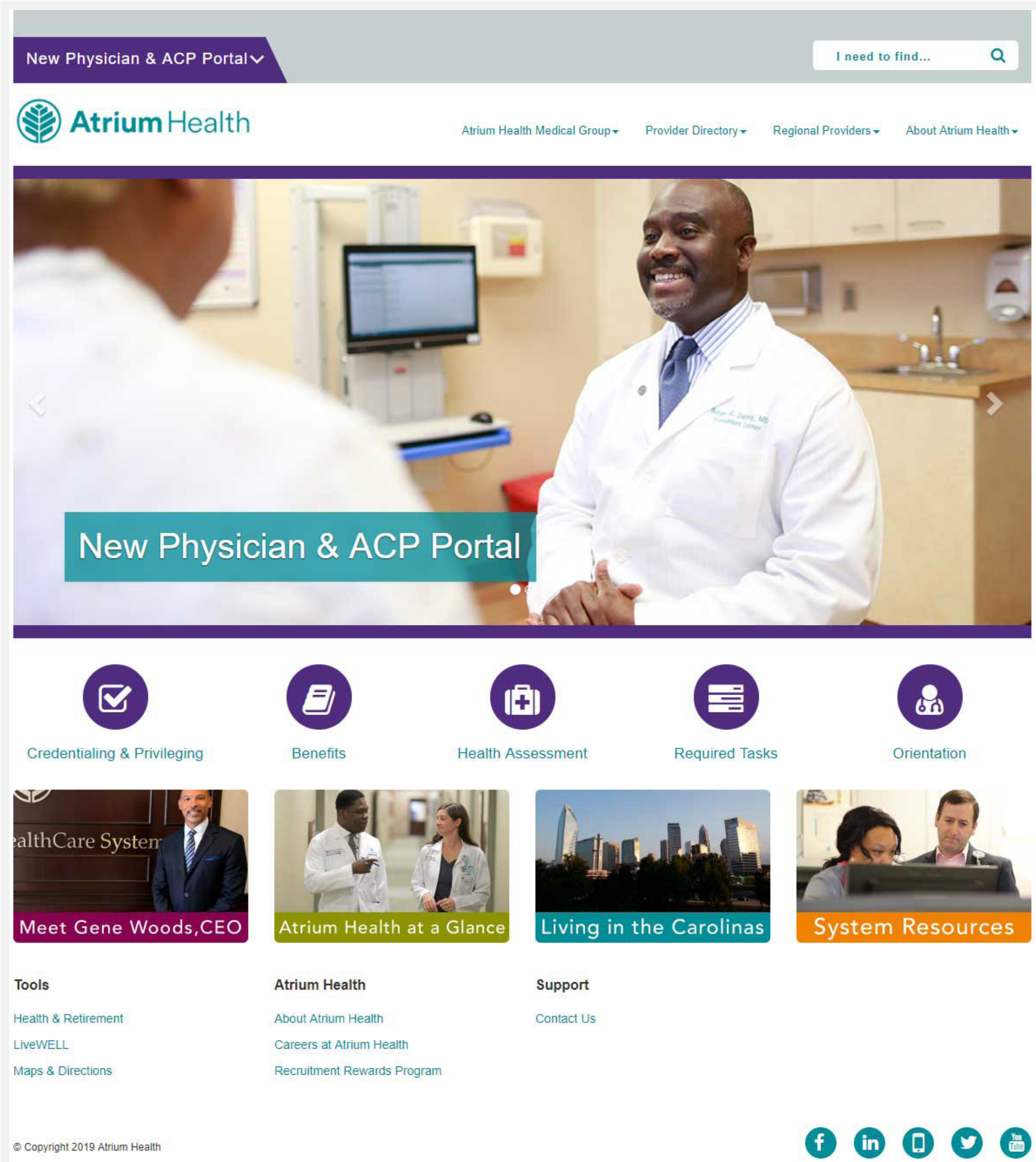


The Northern Alberta Institute of Technology used authentic imagery of real employees, campus locations, events, and other photos across its intranet rather than stock photography, which usually feels generic and degrades the overall perception of the intranet and its visual design.

The type of imagery chosen for use across an intranet can vary, but whether it's iconography, illustrations, abstract photographs, or pictures of real people and locations, the imagery should be complimentary and realistic. Atrium Health used a mix of illustrations and photos of real people and places on its intranet, which worked well because all of the photos, icons, and illustrations looked consistent and complementary with one another. The use of similar colors helped preserve the consistency of the visual design across the digital workplace, even though different types of image assets were used.



An illustrated image on Atrium Health's mobile app version of its intranet prompted employees to take a survey. Even though this wasn't a photograph, the illustration was still consistent with other visual treatments and image styles used elsewhere, which was favorable.



In the areas where Atrium Health used photographs across its digital workplace, they were authentic, consistent, and included real people and places, not stock photos.

19. Use consistent thumbnails and visual indicators to denote related and similar types of content or links to tools.

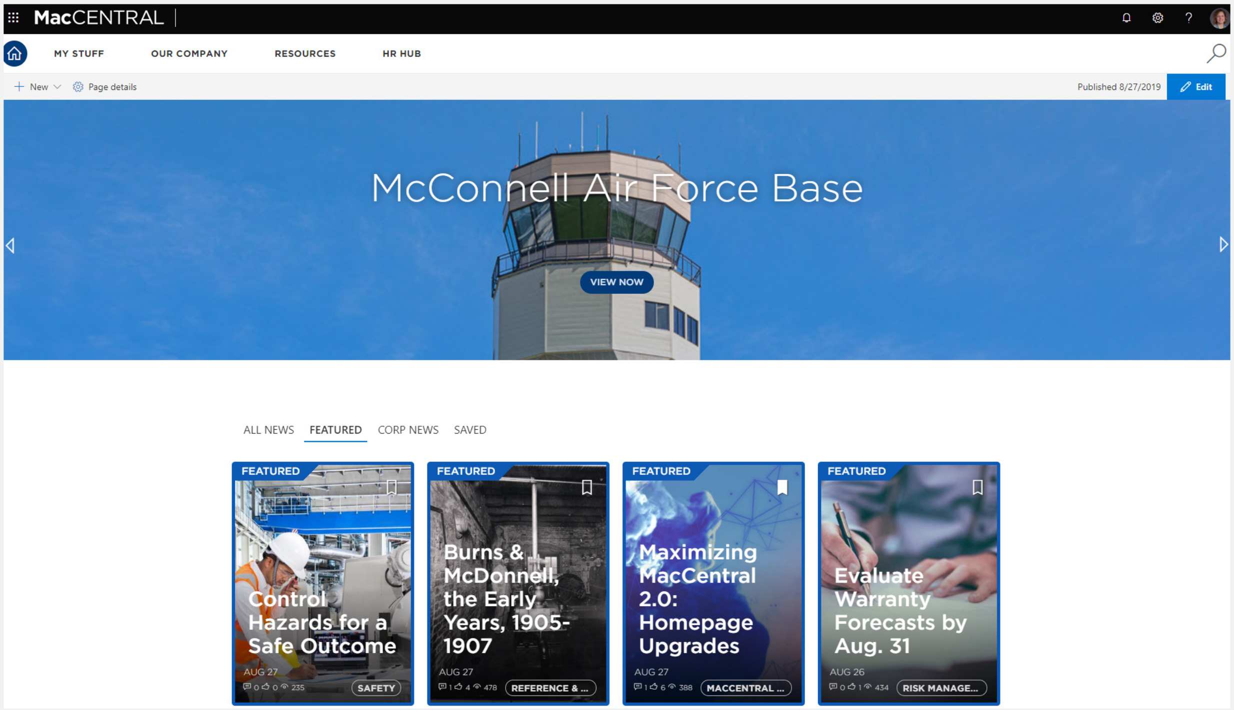
Including consistent-looking thumbnails and image treatments on an intranet can provide a signal to help employees find or pay attention to certain types of content as they scan and navigate. These are known as **visual indicators**.

Visual indicators

Definitions, Principles, and Methods

A **visual indicator** is a marker that helps users quickly locate an item with an important, distinctive attribute within a list or grid of otherwise similar objects. People rely on secondary cues such as color or shape to distinguish groupings and locate relevant information quickly and easily.

Some intranet designs may use a family of multiple or related visual indicators at the same time. For example, Burns & McDonnell used consistent thumbnail images with a blue *Featured* tag overlaid in the upper left corner to signify noteworthy news. In another example, its content series, *Safety Moments,* always appeared with a yellow and black striped image. These consistent visual indicators drew attention, distinguished the content from other nearby types, and helped employees quickly recognize the topic or content type.



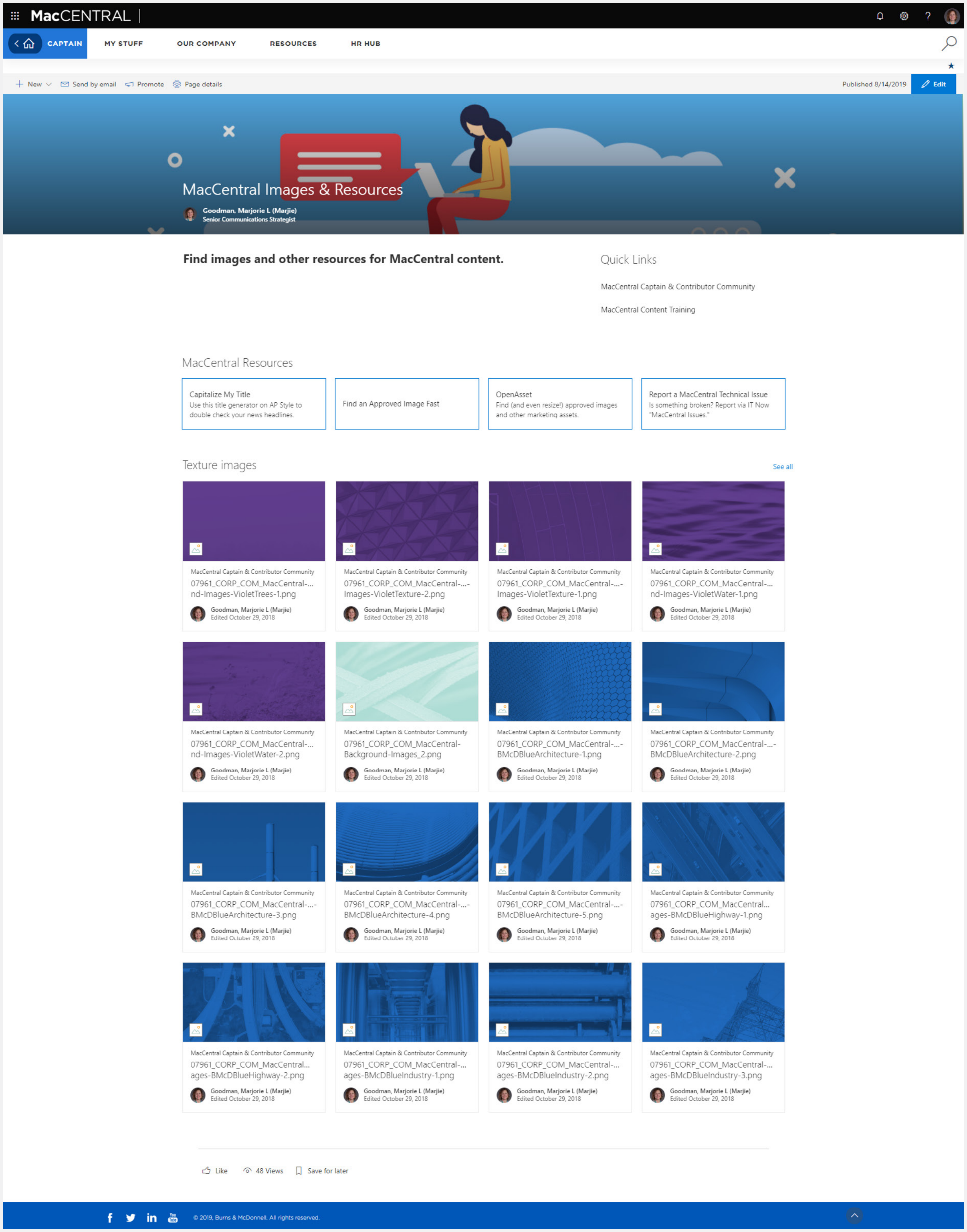
Burns & McDonnell used a blue Featured *tag in the upper left corner of its thumbnail images to call out significant news items. This visual indicator helped these news stories stand out so employees could quickly identify them across the intranet.*

When designing visual indicators, consider how the indicator or thumbnail will help users decide which items to pay attention to or choose from the set. Ask yourself whether someone would be able to decide where to navigate using only the indicators as their guide.

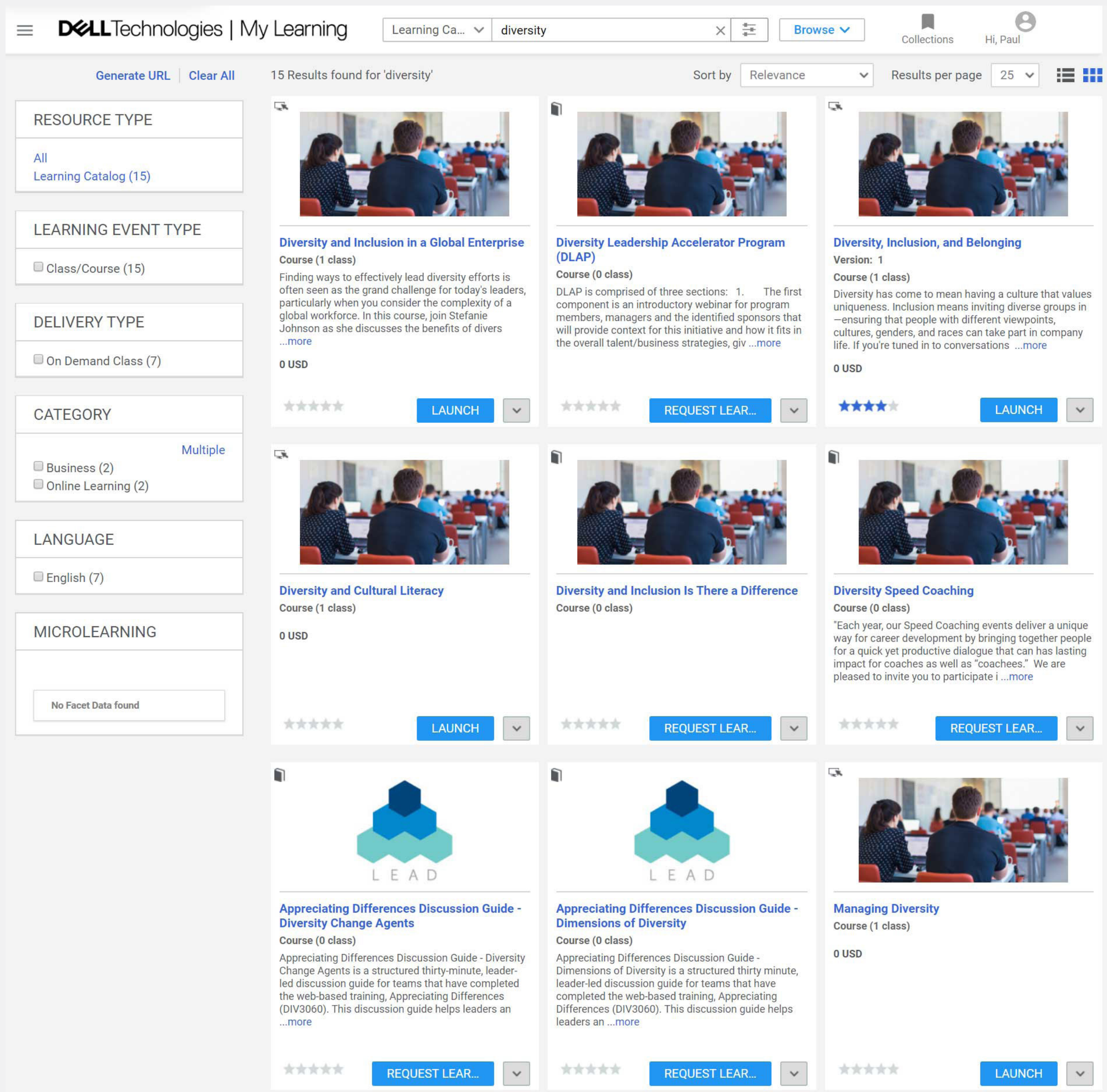
Repetitive thumbnail images appeared on Dell's digital workplace and other areas of Burns & McDonnell's intranet, which didn't aid in focusing attention or employee decision-making. On many listing and grid pages on these intranets, the same image was used as a thumbnail multiple times. Because image thumbnails are intended to help users quickly recognize the differences between pieces of content, they couldn't serve their purpose when the thumbnails were repetitive.

Also, some thumbnail images were comprised of abstract colors and patterns that seemed to have no relevance to the actual content they represented. In a contextual inquiry, a content manager mentioned that she chooses those abstract images based on what colors might look good on the page. She said, "There's already a blue one on the page, so I'll pick an orange one."

Consequently, the images had no consistent meaning — they were purely decorative. Use unique images for each thumbnail, preferably images that somehow represent the topic. Consider modifying page templates to allow for text-only list items and remove thumbnails when they don't add anything meaningful or valuable to the content.

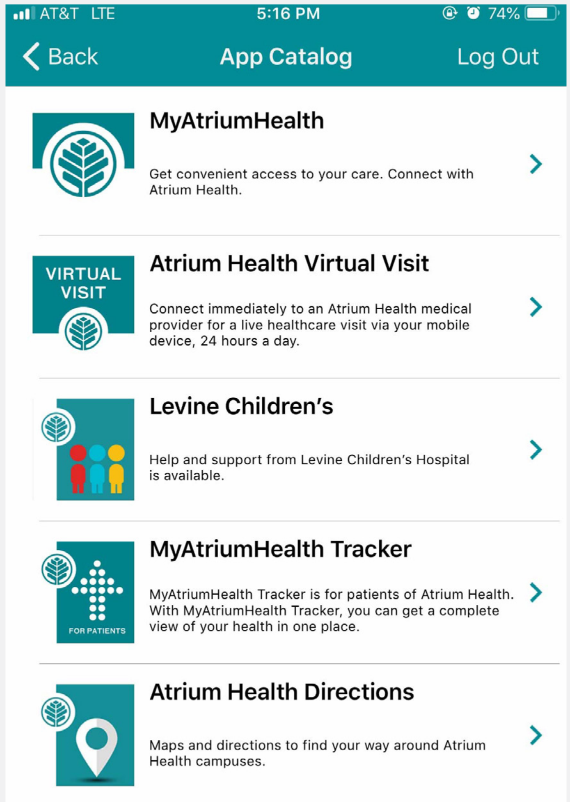


The thumbnail images on this page on Dell's intranet, though consistent, were not meaningful. The images did not convey anything valuable and were needlessly repetitive.



Dell also used the same thumbnail image to represent several different training courses on diversity and inclusion. This approach did not effectively help employees understand which courses to pay attention to, nor did it provide a signal to differentiate the courses from one another.

Atrium Health used an appealing set of branded, icon-based thumbnails on the mobile app version of its intranet. The thumbnails represented links to different digital workplace applications. Each thumbnail was consistent in color and included Atrium Health's logo and a meaningful icon, which reflected the tool's purpose. The thumbnails were different enough to help employees understand the content and the links they represented but visually consistent enough to create a polished and attractive visual design. Because the thumbnails were accompanied by a clear, bold title and a short description of the tool's function or purpose, this is an excellent example of using a consistently designed set of visual indicators.



Atrium Health had a thoughtful and consistently designed set of icons to represent links to digital workplace tools.

If you're considering a family of visual indicators to mark items on your intranet, consider these recommendations:

- Use a mix of color, imagery, text, and icons to differentiate and make thumbnails and visual indicators noticeable.
- If, for some reason, you are trying to decide between using two fairly similar icons for the two indicators or two different colors, favor a unique one with good information scent as a distinguishing factor.

VIDEO

20. Distinguish video from other content types using a thumbnail image, play icon, and label.

Video is a helpful supplementary content format to include on an intranet, useful for communicating information, providing training, troubleshooting issues, and broadcasting big meetings or events. To ensure users can differentiate video from other content types, include an illustrative thumbnail that sets expectations for the video style, such as an interview, lecture, animation, etc. Videos should be easily discoverable and consistent in style across the intranet. They should also include a play icon and a text-based label that accurately represents the type of content they provide.

Employees often preferred text-based content over watching videos during the workday.

User Behaviors

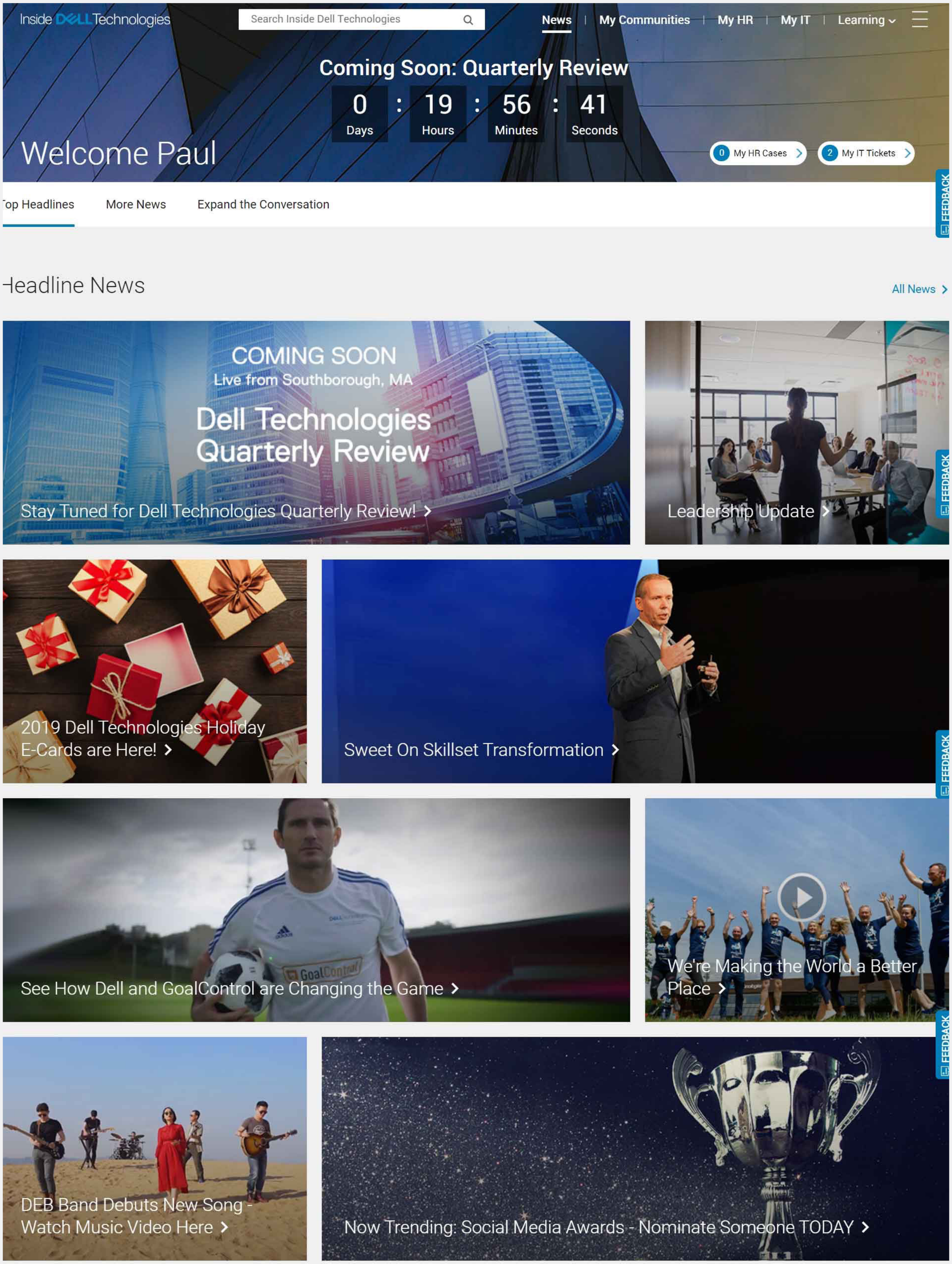
In our studies, many employees stated that they didn't want to watch videos during the workday because they lacked time. Instead, they preferred skimming and scanning text.

Employees typically followed these behaviors (listed in order of occurrences we observed):

1. Most read the text content only, avoiding the video
2. Some skimmed the text content, then watched some of the video
3. Few immediately watched all or some of the video — before (or instead of) reading the text

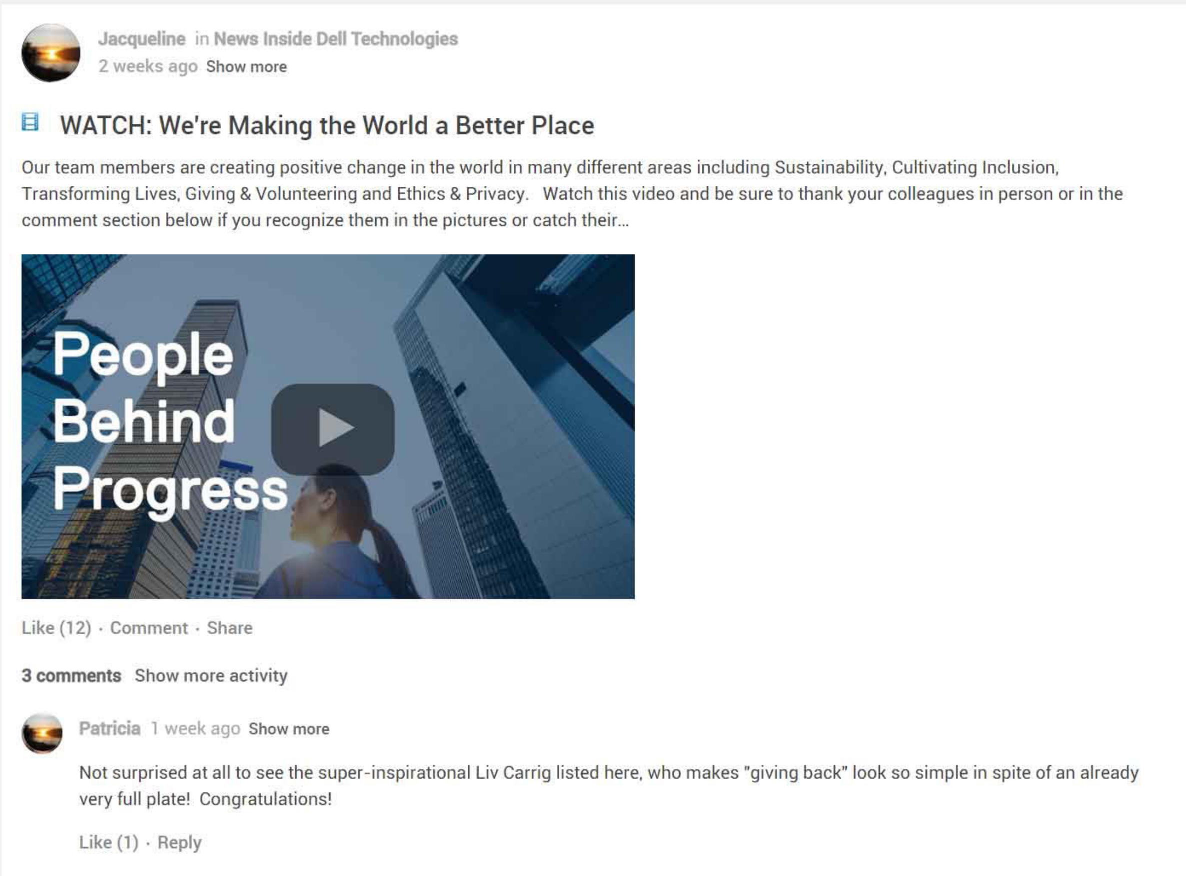
Employees also commented that they were concerned about disturbing coworkers around them by playing a video with sound. This was of particular concern to those who didn't have headphones. Including closed captioning and video transcripts can help but may not entirely alleviate this concern.

Employees reacted negatively when the intranet failed to set expectations for video content. For instance, on Dell's intranet homepage, it was not clear whether news content was a video or an article. A *Play* icon appeared inconsistently on homepage image tiles; it appeared on some but was missing from others, even if the image tile linked to a video. People were disappointed when they clicked, and a video began playing, as they had expected to see text-based content instead. Had the video tiles consistently included a thumbnail with a *Play* icon and a label indicating a video, this surprise, and disappointment could have been avoided.



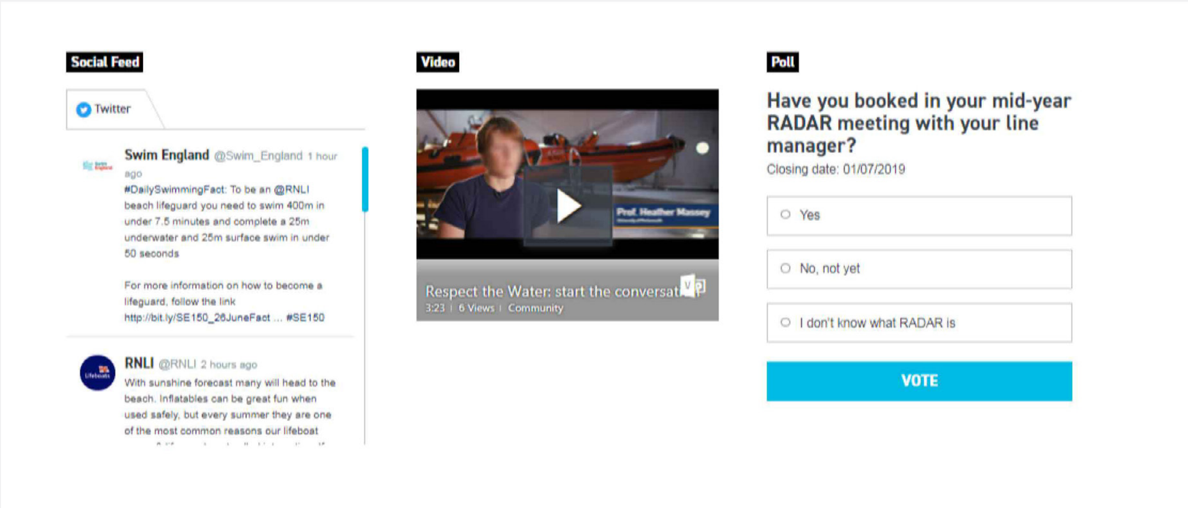
On Dell's intranet homepage, play icons were displayed inconsistently on video tiles.

Dell’s video landing pages had a much more consistent presentation of video content compared to the homepage. Each video included a *Watch* label right before the video’s title and the *Play* icon, both of which helped reinforce the expectation that a video would play on click. A simple solution to address the homepage video design would be to include the same type of *Play* icon and *Watch* label, there and anywhere else videos are cross-promoted on the intranet.



Dell’s video landing pages did a much better job of applying consistent visual elements to help distinguish video from other content formats. Each video included a Watch *label and a* Play *icon.*

It is best to display the video’s length directly on the page along with the thumbnail, play icon, and label. Knowing the length of a video allows users to decide whether they want to play it. Shorter is often better. Employees are more likely to watch it when the duration of the video is visible before playing it. Display the duration above the video, alongside the title, or as part of the video thumbnail, and not just within the video player’s scrub or progress bar. The Royal National Lifeboat Institution used a consistent visual presentation for videos across its intranet, where the length of the video is displayed at the very bottom of each video card in white text overlaid on a dark gray background.



The Royal National Lifeboat Institution presented its video content consistently across the intranet and included a timestamp indicating the video's length.

ICONOGRAPHY

21. Use a consistent set of icons across the intranet.

Icons can be visually pleasing and enhance the aesthetic appeal of an intranet's design. If well-designed, icons are easy for employees to recognize at-a-glance. This is particularly true for standard icons that employees have seen and used before and those that are consistently used across a digital product. When icons are disjointed and inconsistent, they lose their ability to support the notion of the digital workplace as a cohesive product family or suite.

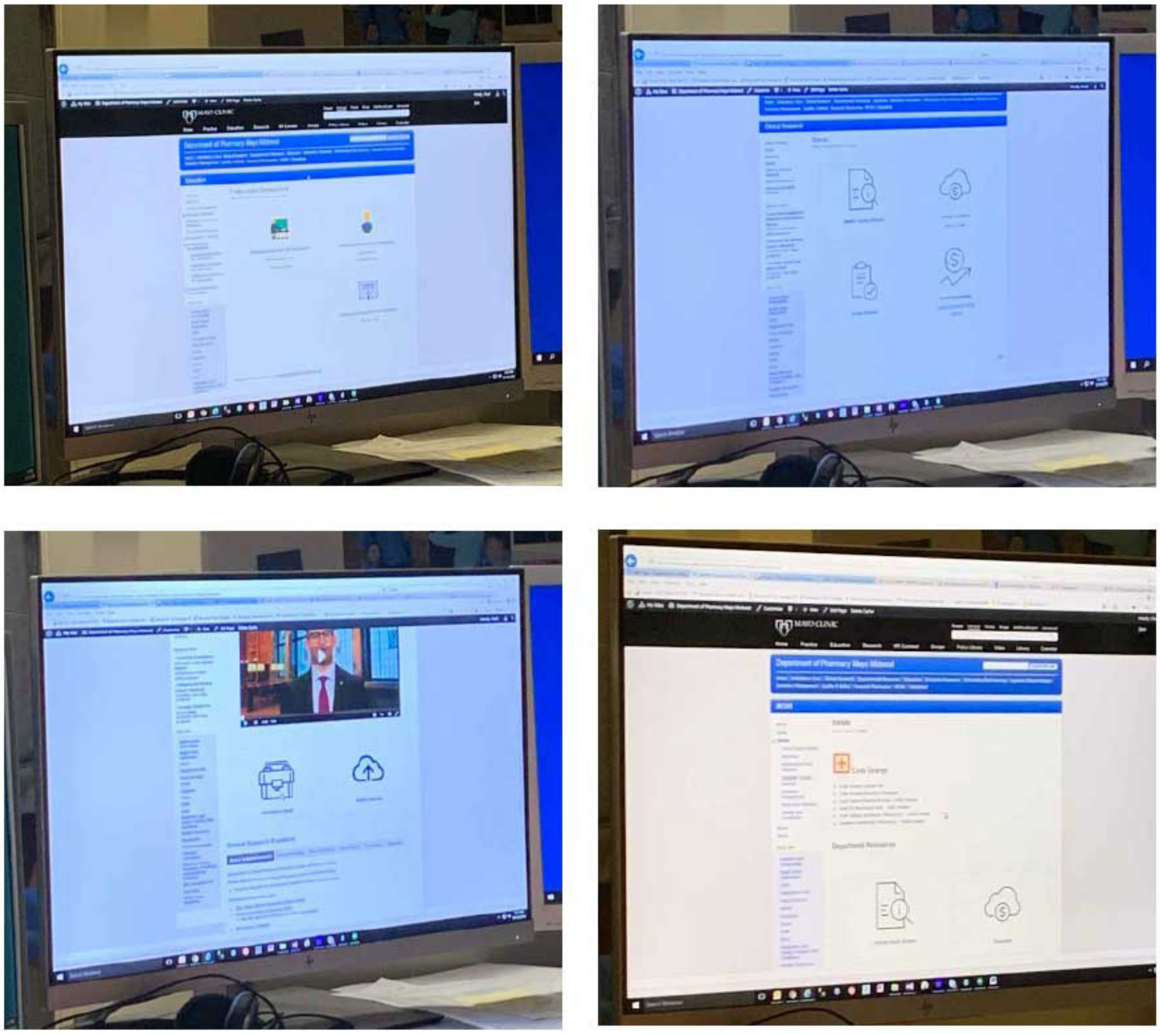
Even a slight difference in appearance, meaning, or functionality hinders employees' ability to understand and rely on an icon when they encounter them in future experiences. The tighter the mapping between icons and the thing they represent, the easier they are to understand, but standardization can also make icons easier to understand.

Aim to incorporate icons that match each other in visual style across the intranet. One such example of a consistent library of icons is flat design, material design, or font awesome. Use these, something similar, or even a custom set of icons for an overall less cluttered and consistent aesthetic.

For example, during a contextual inquiry session at the Mayo Clinic, we observed a content manager who was updating several intranet pages. During the session, he placed many random and different-looking icons on various pages to represent different links and functionalities. From his perspective, “This made the intranet look and feel more like an app.” The pages let him place icons wherever he wanted rather than in strategically planned spaces. Because the icons were all styled so differently, the design looked inconsistent and less polished than had he used a consistent icon library. He also made changes to the HTML to accommodate the icons and different visual layouts, and in doing so, he said:

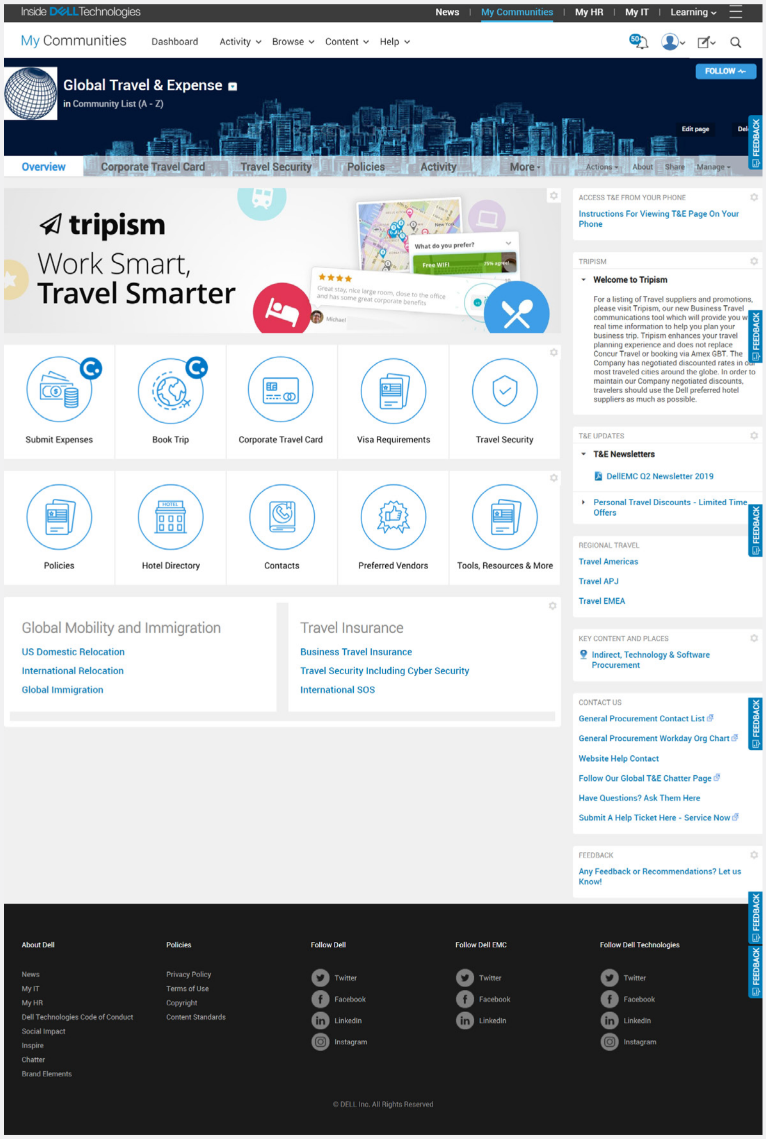
> “This is a lot of custom HTML that I did using the WYSIWYG editor. What’s nice is that you can do HTML or visually get in if you know that type of stuff. I have a little background in it, so I can do it. It’s helpful to be able to do that. I’ve been doing tags and things like that to make this look like this. I wanted a thin border around the icons and more spacing. It’s nice to edit it that way.”

Because some intranet teams don’t have graphic designers on staff or proper software, some icons are produced with subpar tools. Thus, the resulting icons are grainy-looking, fuzzy, and hard to discern.



The icons across the Mayo Clinic's intranet did not adhere to a consistent visual style, nor was there an intentionally designed set or library of icons that content managers could choose from to place on intranet pages.

On Dell's intranet, the design team created a custom set of consistent and cleanly designed icons to use on its *Global Travel & Expense* tool. Each icon was of similar weight, visual aesthetic, color, size, and placement. Just by scanning the icons, it was easy to understand what they represented. Then, after clicking through to the content sections the icons represented, they also appeared similarly on these deeper pages and other areas of the intranet as well. Clear labels also appeared underneath each icon. All of this made for an excellent example of how to apply cohesive iconography on an intranet.



Dell used consistent and modern-looking iconography on the Global Travel & Expense *area of its intranet.*

Test icons with real employees.

Process and Strategic Considerations

Icons should also be tested for recognition and attractiveness individually and as part of an icon family. One of the common reasons to use icons in the first place is to add visual appeal to a design, but not all icons are good-looking.

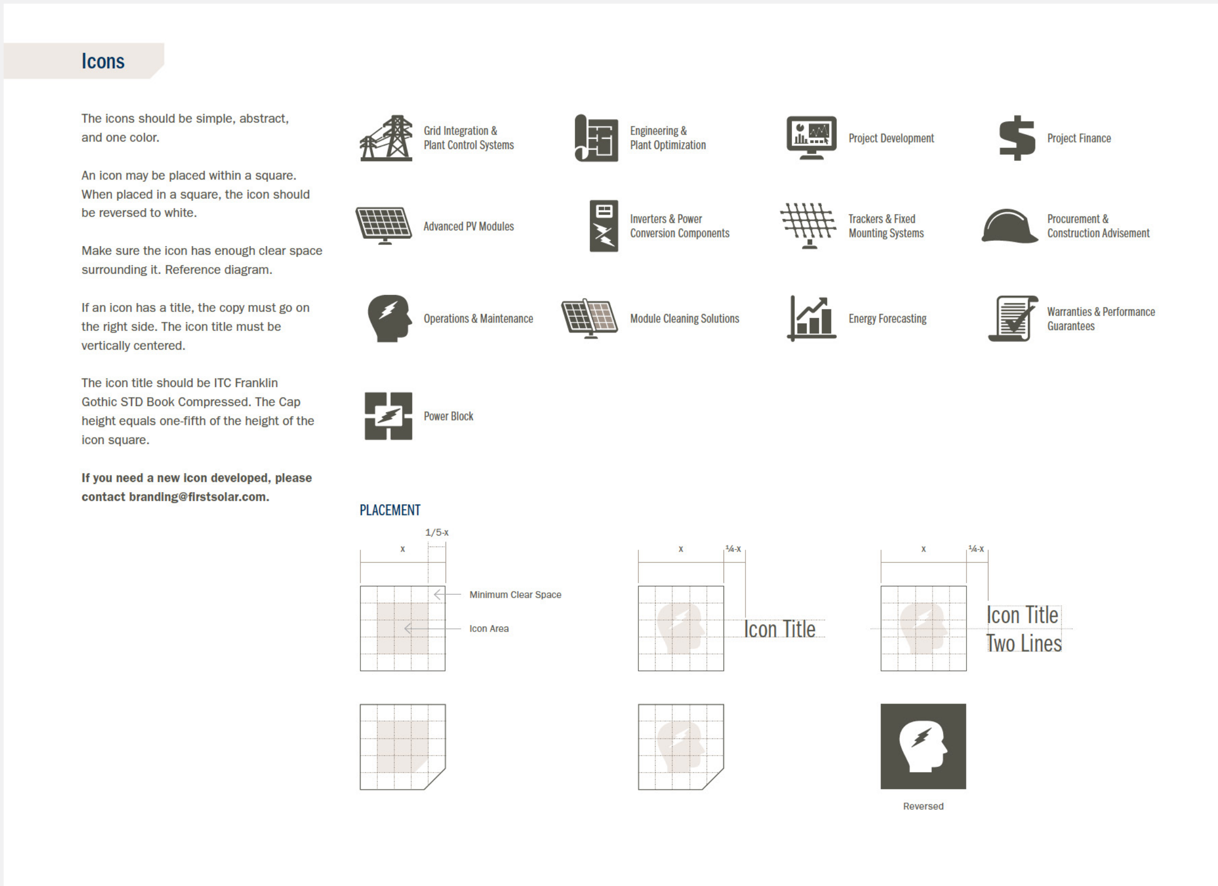
The simplest way to test for this is to ask people to score each icon on a 1–7 scale. If you have alternative designs of the same icon, you can also ask people to pick the most attractive from each set of alternatives and have them explain why they like or dislike particular images.

Finally, you can show people an entire icon family and ask them to pick the one they like the best and the least. This last test can help you avoid the common problem where most of your icons are fine, but there are one or two less attractive ones that require a do-over to match the aesthetic of the overall design better.

Test the icons to ensure they are both recognizable and memorable. Ask people what they expect the icons to stand for and then ask a repeat set of users if they can remember the icon's meaning after being told what it represented a few weeks earlier. Later, A/B testing can be used to determine which candidates have the strongest information scent.

There is no need to change or translate icons for international employees, provided the icons were designed with cultural differences in mind (for example, mailboxes look very different in various countries, whereas envelopes look the same. Therefore, an envelope is a more international icon for an email program than a mailbox).

Keep the design of your intranet icons simple, schematic, and consistent. Reducing the graphic details by focusing on the essential characteristics of the object rather than creating a highly realistic image will help speed up recognition, as intricate details are difficult to distinguish at smaller sizes.



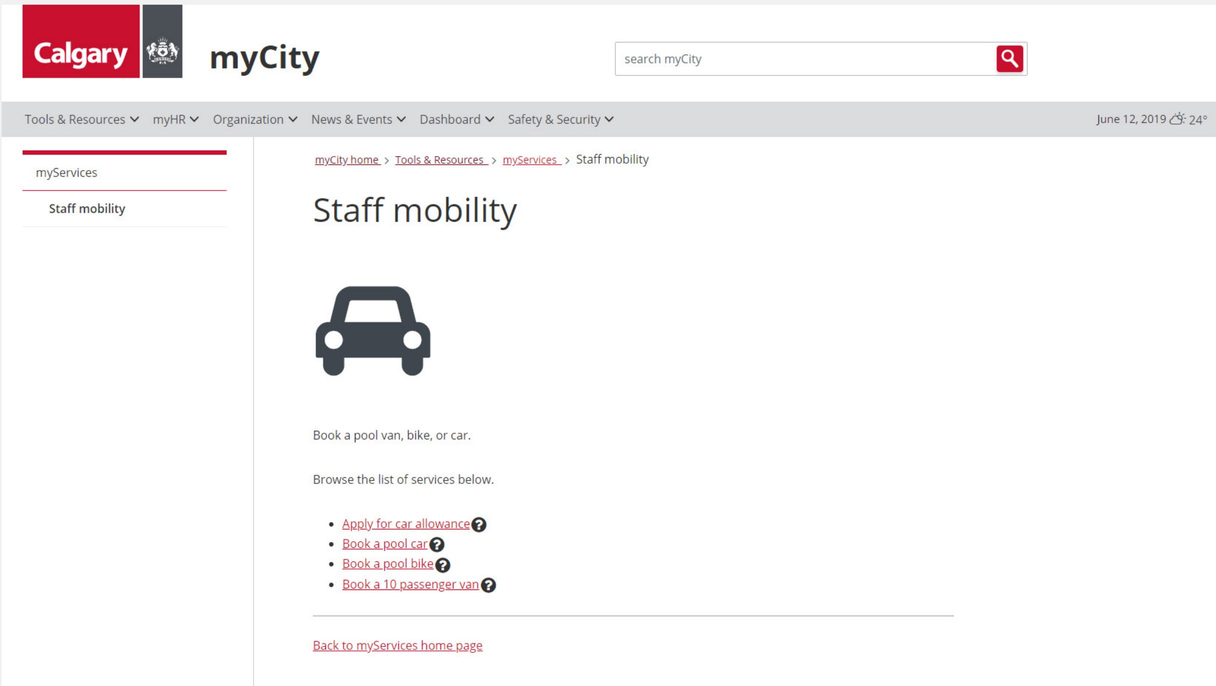
First Solar designed a custom set of consistent icons to represent specific parts of its business, which were favorable and recognizable to employees.

A set of bad intranet icons amplifies confusion, adds clutter, and wastes screen real estate, not to mention employees' time. When people learn what action is associated with a given icon, the icon's presence can provide an opportunity for some users to locate the command quickly and be more efficient with repetitive tasks. A set of links with icons of inconsistent quality will confuse employees and waste their time. Design a set of usable, consistent icons, or just use clear text links and no icons at all.

22. Use icons to reinforce meaning but avoid adding them arbitrarily.

It's tempting to break up text-heavy pages with photos, illustrations, and icons, but icons must first and foremost communicate meaning in a graphical user interface while conveying brand personality through color and style. Icons are, by definition, visual representations of an object, action, or idea. If that object, action, or idea is not necessary or immediately apparent to users, the icon's value is reduced to mere eye candy. Worse, it can be confusing, frustrating, eye candy that adds visual noise and hinders employees from scanning text and completing a task.

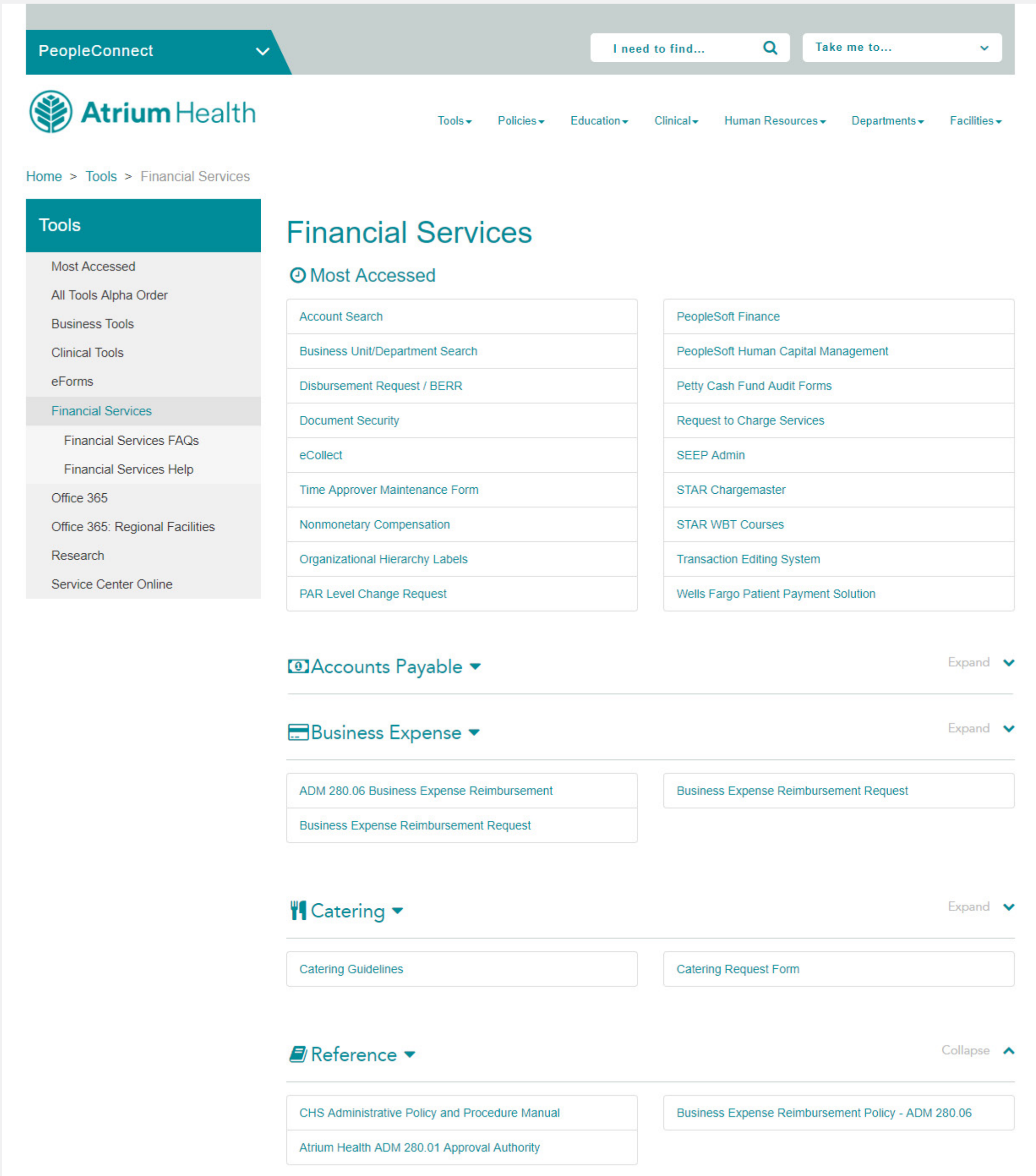
For example, using the City of Calgary's intranet, we asked employees to find out how much they would be reimbursed for mileage if they drove their own vehicle for work travel or to meetings at other office locations. Some users navigated to the *Staff Mobility* page in search of the answer. However, on the staff mobility page, a car icon appeared at the very top, and users had to scroll and scan past this icon to see the text. In this case, this icon is unnecessary, as it doesn't add any additional or helpful meaning to the page beyond what the text is already communicating. In this case, a better approach would be to remove the icon and bump the text to a higher page placement.



The car icon on the City of Calgary's Staff Mobility *page is unnecessary and could be removed to get the text-based content higher up in the layout. Also, consider the relative size of an icon compared to other visual elements presented on the screen. Here, the icon is a distraction.*

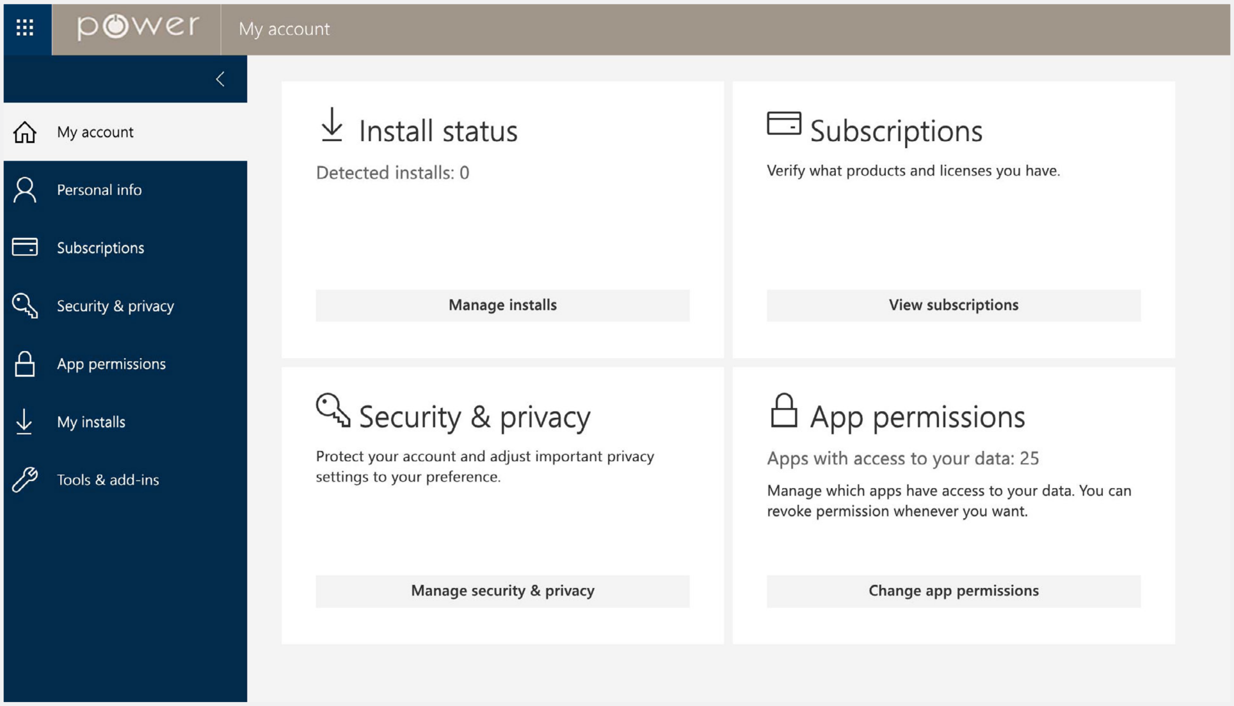
Not every link or page on the intranet deserves or needs an icon. And icons don't just materialize out of thin air. Unlike adding a text link, someone with graphic-design skills needs to create them. They are conjured, drawn, usability tested, and iterated. Then, once created, they need to be coded, quality-tested (usability-tested again), supported, and sometimes documented, all of which is more work than just adding a text link. Icons also take up more screen space than text links, meaning another UI component may be forced below the fold, onto another page, or omitted altogether. Icons may also add to visual noise. While good icons can be helpful, poor icons add clutter, and some are hard to understand. The benefit the icon offers should be greater than the costs of having it.

For example, Atrium Health included icons next to each subheading and accordion label on its *Financial Services* page. While consistent in color, placement, and style, these icons were not needed since employees would rely on scanning the text to understand what the section or accordion entailed. A better approach would be to remove the icon and let the text communicate on its own.



On Atrium Health's Financial Services *page, the icons next to the subheadings and accordion labels were arbitrary and likely not needed. Employees would be able to scan the page faster without the added clutter.*

First Solar used icons to visually reinforce connotations for different parts of the employees' user accounts. The icons quickly conveyed meaning — sometimes more so than the text alone. When considering adding an icon to a text label, ask yourself if it will benefit employees before deciding to include it.



First Solar included icons to clarify further what different parts of the employees' account entailed, which was helpful as some of the sections could be interpreted differently. The icons, along with the corresponding text, helped reinforce what employees would find in each area.

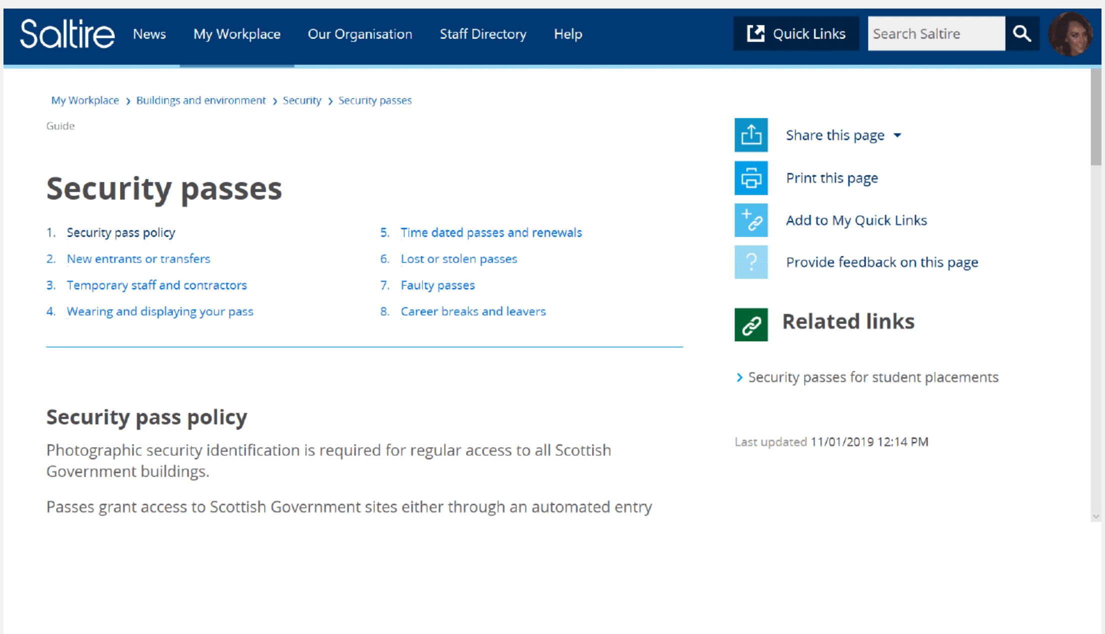
When deciding whether or not to add an icon, consider if the concept or command you want to enhance with the icon can be naturally represented by one. Some concepts are complicated and too difficult to be represented by a simple icon. Sometimes designers think of a great visual for an icon, but it's impossible to minimize, shrink, crop, or make work as one. Ensure the icon's visual will fit well in the available space. People should not need to stare for long, lean in, or squint to decrypt the icon's meaning.

If you find yourself pondering how to come up with an icon to represent something, chances are it's not needed, nor will it be easily recognizable or intuitive for users. Stick with simple text alone or a stand-alone text link instead. This will be less work for you and better for employees, as they won't have to navigate around or get distracted by meaningless icons. If it takes you more than five seconds to think of an appropriate icon for something, it is unlikely that an icon can effectively communicate the intended meaning, so leave it off.

23. Ensure icons are accompanied by clear labels that communicate what they represent or the action they initiate.

A text label must accompany icons to clarify their meaning and use in the workplace context, which will help address the ambiguity that almost all icons face. Even if you're using a standard icon that employees would recognize from mainstream digital products, still include a label, especially if the icon was altered slightly to match your intranet's aesthetic preferences or design constraints.

For example, the Scottish Government did an exceptional job of clearly labeling icons across its intranet. A series of five consistently and cleanly designed icons appeared in the upper right rail of each page. Each icon had its own associated command for actions that included *Share this page*, *Print this page*, *Add to My Quick Links*, *Provide feedback on this page*, and one that denoted *Related links*. The text was easy to understand, and the icons' imagery aligned well with the corresponding action. The touch targets were also large enough that employees could effectively click or tap the icons on both the desktop and mobile versions of the intranet.



The Scottish Government did a great job of clearly labeling all intranet iconography, which meant employees didn't have to guess what an icon meant or what it would do on click or tap.

Make touch targets at least 44 pixels wide by 44 pixels tall.

Timeless Design Tips

Touch targets that include both a word and an icon are larger than targets that are just the word or the icon alone. These larger targets are easier to click and tap than smaller ones.

Icon labels should always be visible without any interaction from the user. Don't rely on tooltips or hover to reveal text labels; this increases the interaction cost and fails to translate well to touch devices. Stripping icons of text labels renders them wholly meaningless and is counterproductive to the goal of providing easy access to content, features, and functionality to support employees' tasks.

DIRTT displayed three small but important icons in the upper right corner of its intranet without text labels. The icons' style, positioning, and appearance — without labels — made the intranet's design seem dated and forced employees to guess what each icon meant. A better approach would be to use a more modern-looking set of icons, increase their size, space them apart from each other, and add labels to each one to ensure employees know exactly what to expect after interacting with them.

On DIRTT's intranet, icons on the top right corner of the screen were presented without text and made the intranet's design look dated.

An employee's understanding of an icon is based on previous experience. Most icons lack a common, standard usage, aside from common things such as a mobile menu icon for navigation and a magnifying glass icon for search, so text labels are always necessary to communicate the icon's meaning and reduce ambiguity.

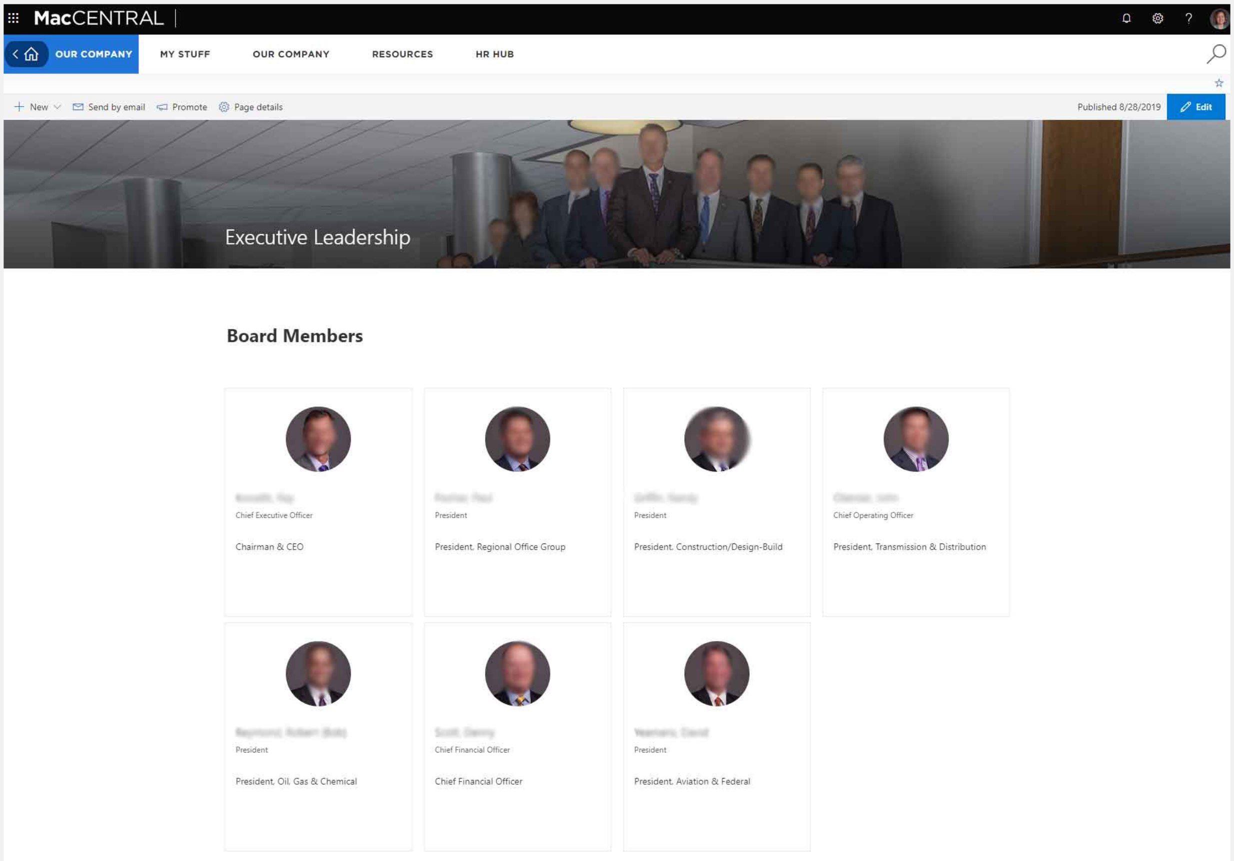
24. Provide a professionally shot photo of each employee on the intranet.

Displaying photos of employees on intranets can contribute to a feeling of community and can help people recognize and get to know each other. Seeing someone's face before starting to work with them or stepping into a meeting with them can help employees feel more comfortable and confident about who the other person is, which is especially important in enterprise organizations where people may not work together often or even get the opportunity to meet their other coworkers.

Professionally shot and consistently styled employee headshots can elevate the intranet's visual design and ensure that the photos uploaded to represent employees look like them instead of showing a picture of their dog, for example. We often see intranets with poor quality or inconsistent headshots, which makes the intranet look sloppy and unprofessional, and it carries over to how people perceive the organization and their peers. It's not worth damaging a company's professional reputation with amateur headshots or leaving it up to individual employees to upload their own photos. Use headshots that are photographed in a consistent style and a high photographic quality, ensuring people's expression, wardrobe, location, and background looks pulled together and recognizable.

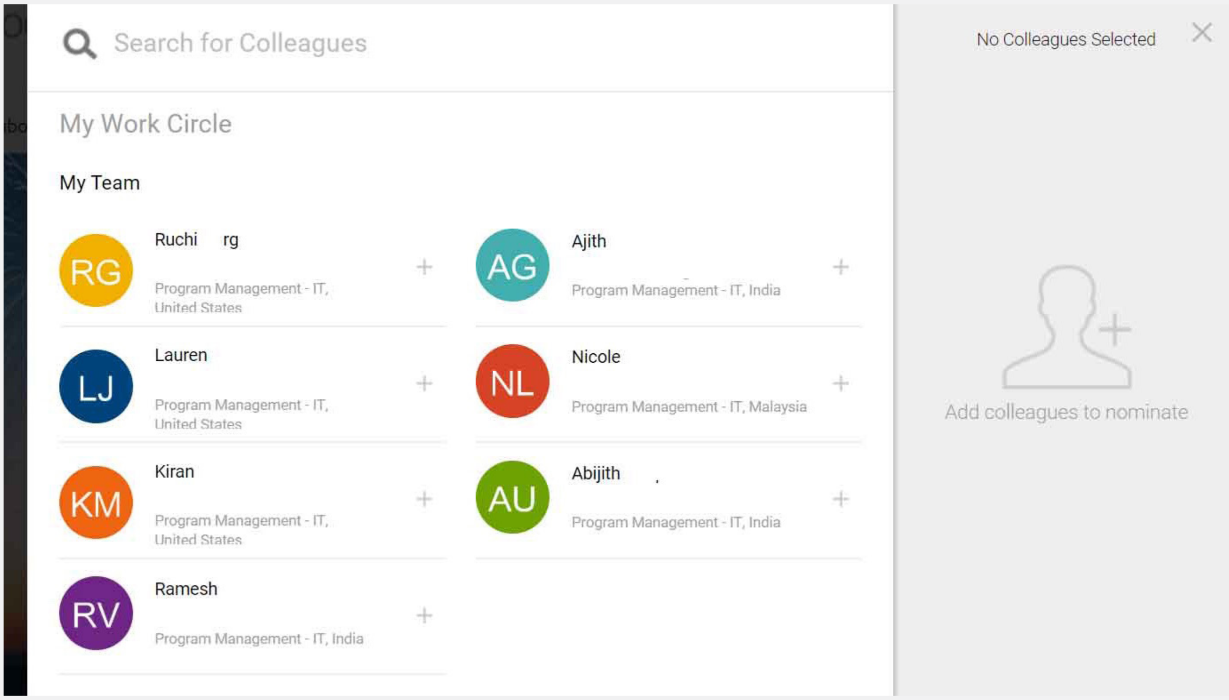
For example, each employee at Burns & McDonnell, including senior leadership, was represented by a professional and consistent-looking headshot on its intranet. These photos appeared alongside the employees' names wherever they appeared, including team pages, organizational charts, full employee profiles, and alongside comments the employee added to news articles and other content types.

Burns & McDonnell chose a more professional business style for its photos, but casual dress may be more appropriate if your organization's culture is a bit more laid-back. In any case, establish some wardrobe standards for the headshots and use a consistent style and background. Crops and angles are critical. If you don't have internal people with photography skills, enlist the help of a professional photographer or branding agency to take the headshots. As new people join the organization, include a task in their onboarding activities where they have their professional headshot taken.



Burns & McDonnell included professionally shot and consistent-looking employee photos on its intranet, which helped employees recognize one another and improved the intranet's overall appearance. The way the photos were shot and cropped also lends favorably to either a circle or square shape. This flexibility is ideal.

If it's not possible to shoot employee photos, a viable stopgap until photos can be taken is to use employees' initials overlaid on colorful backgrounds, along with their names and titles, which provides a visually interesting placeholder and is a more optimal approach than using a standard avatar or person icon, as those have much less meaning. For example, Dell had a newer platform for employee recognition, and the tool included a "work circle" (similar to a team). It gave employees quick access to recognize the people they work with most often. While the eventual goal was to integrate this space with the master directory, where employee photos were stored (so they would also populate here), in the interim, employees' initials appeared within colorful circles instead.



If professionally shot photos of employees are not feasible, a good alternative that helps keep the intranet's visual design clean and interesting is to use employee initials overlaid on colorful backgrounds, such as what Dell did on its employee recognition tool.

25. Use infographics and data visualization to translate abstract data, ease understanding, and drive engagement.

Infographics and data visualizations are powerful storytelling tools that allow employees to comprehend, analyze, and explore data related to the organization they work for, their role in it, or their personal well-being. The distinction between **data visualizations** and **infographics** is subtle but important. Infographics often contain data visualizations, but a data visualization is not an infographic.

Data visualization

Definitions, Principles, and Methods

A **data visualization** is a graphical representation of a data set. Charts, graphs, and maps are the most commonly used types of data visualization.

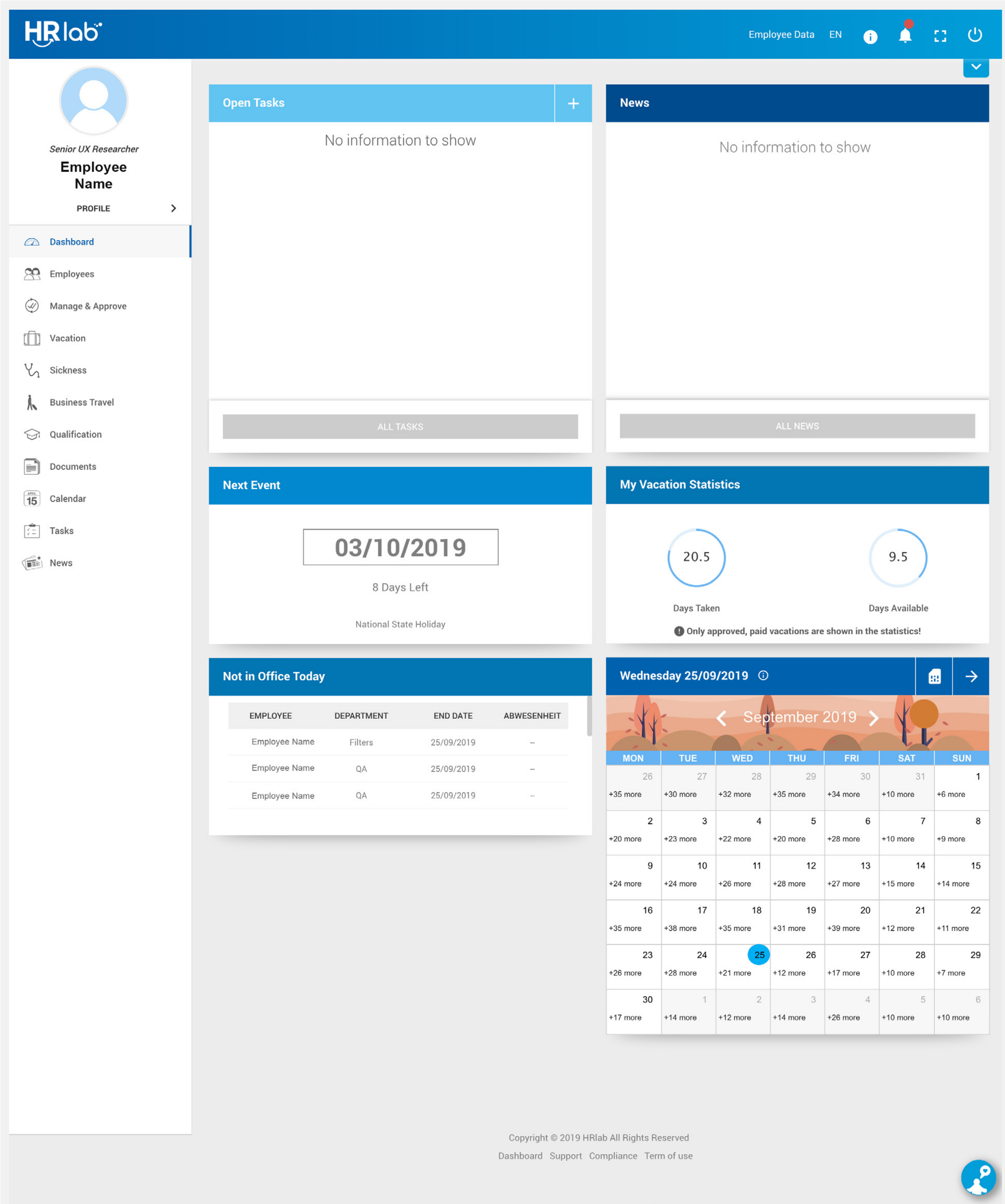
Infographic

Definitions, Principles, and Methods

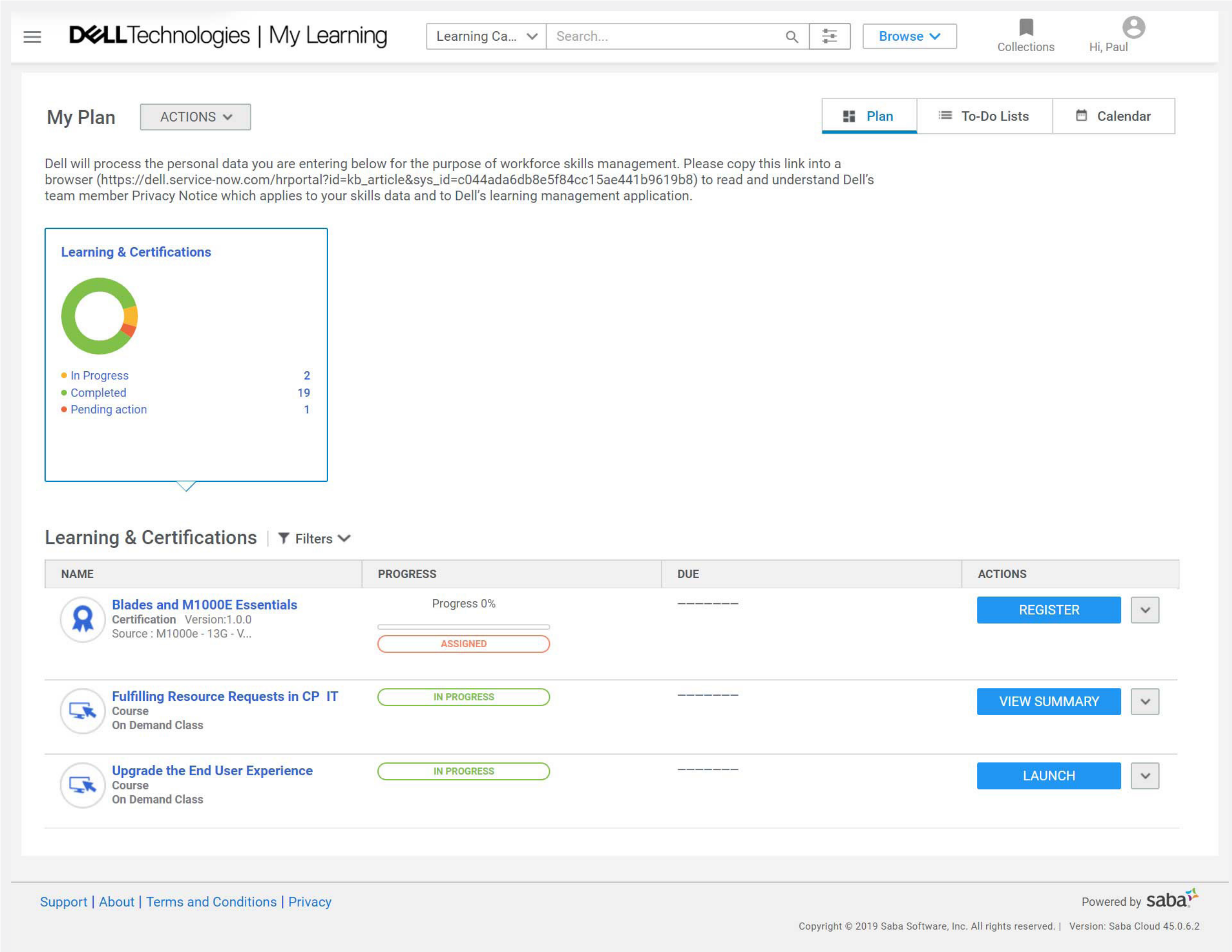
An **infographic** is a multimedia graphic used to present complex information and data in a way that is easy to understand. Infographics often include data or information visualizations but must also provide context through illustrations, facts, quotes, and captions.

An infographic can stand on its own as a separate piece of content or can be shown in the context of an article with additional text.

We commonly see infographics and data visualizations on intranets used to represent and communicate quantities and comparisons. For example, in the case of Eyeo's HR platform, vacation time used versus vacation time accrued, or on Dell's learning platform to show training courses required versus those already attended. And in many other cases, infographics and data visualizations are used to communicate and show progress against quarterly or annual company goals.



Eyeo's HR tool used a data visualization to show employee vacation statistics. The scale between the two charts accurately represents the differences between data points, days taken vs. days available, giving employees an immediate and correct impression of the data.

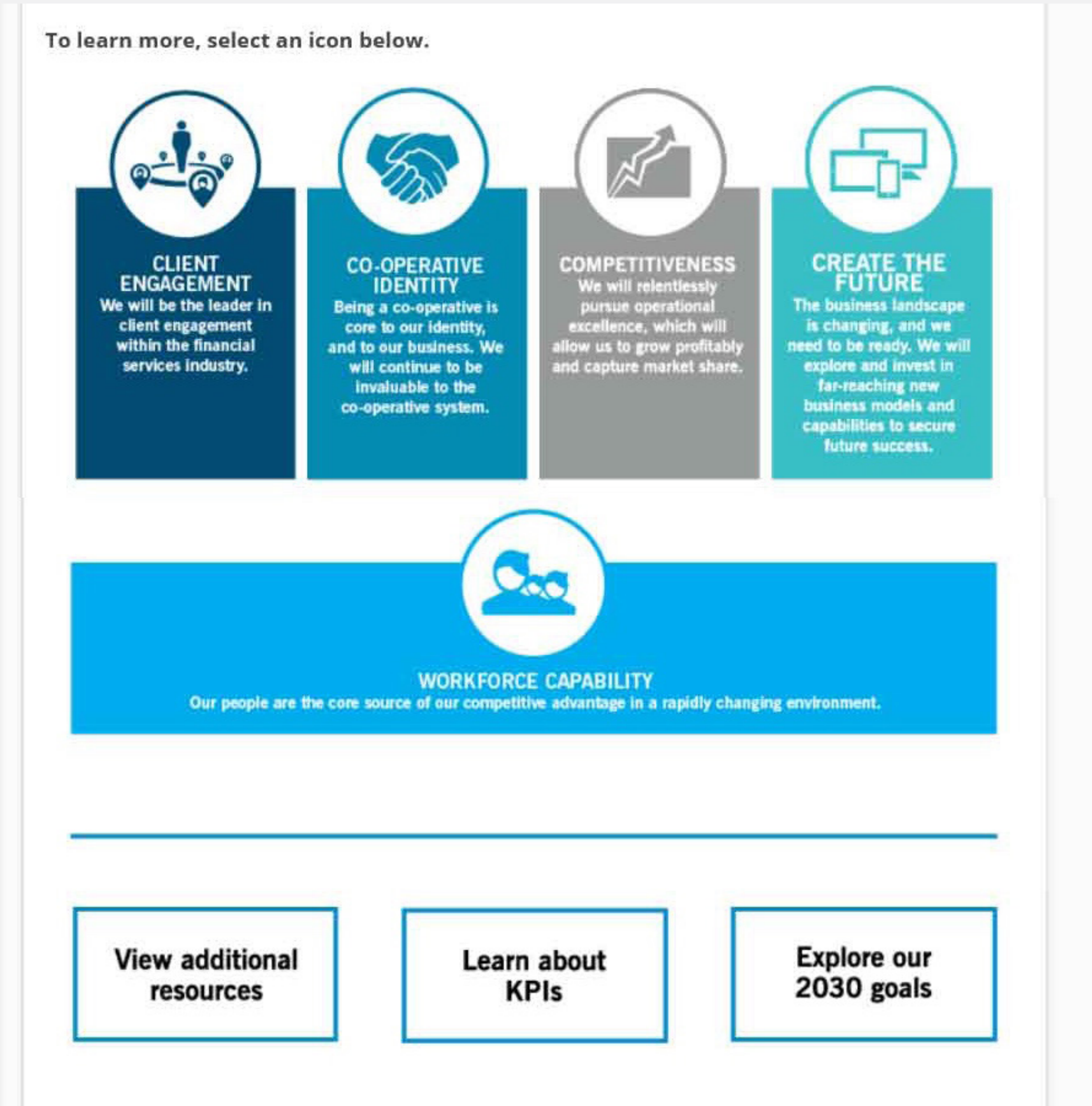


Dell also used a data visualization on its learning platform to show employees their ongoing learning and certifications in progress, completed, and pending action. Glancing at the chart informed employees of how much more training they needed to complete compared to what was already done.

On the Co-operators' intranet, employees liked informational pages that included infographics. The graphical elements in the infographics were modern and minimalistic. Also, a few employees liked when strategic efforts and key figures were presented visually, especially those they had heard called out in briefings from annual reports. Two study participants commented on this:

> "I have an interest in our current strategy. . . . The four pillars, this infographic is very familiar to me."

> "I like the visual of this. It's just easy to read. It takes some of what's in the annual report and distills it to make it easier to understand."



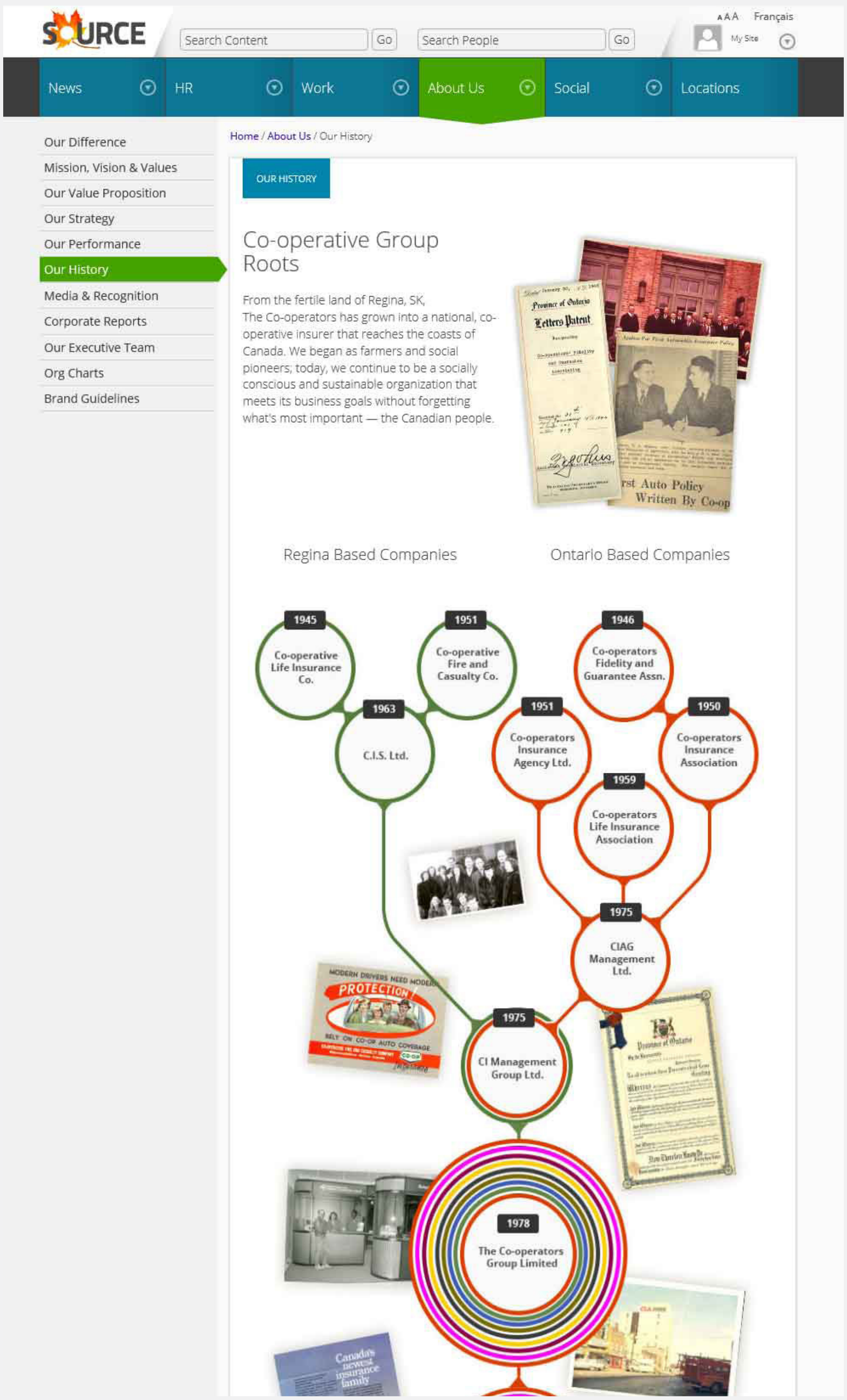
Employees at The Co-operators appreciated the clarity and simplicity of an infographic that summarized the organization's strategic pillars. Clicking on the lower elements in the infographic led to data visualizations that communicated information shared in the company's annual report.

Employees also commented on an interactive infographic in the *Our History* section of The Co-operator's intranet. Unfortunately, employees didn't know the history image was clickable. They scanned the image but never clicked to get more information because no signifiers indicated that parts of the image were clickable links. One user said she was finished with a task related to finding historical information about the company but continued to look at the image as though she was interested in the content. She said she did this because she didn't have enough information from the image alone:

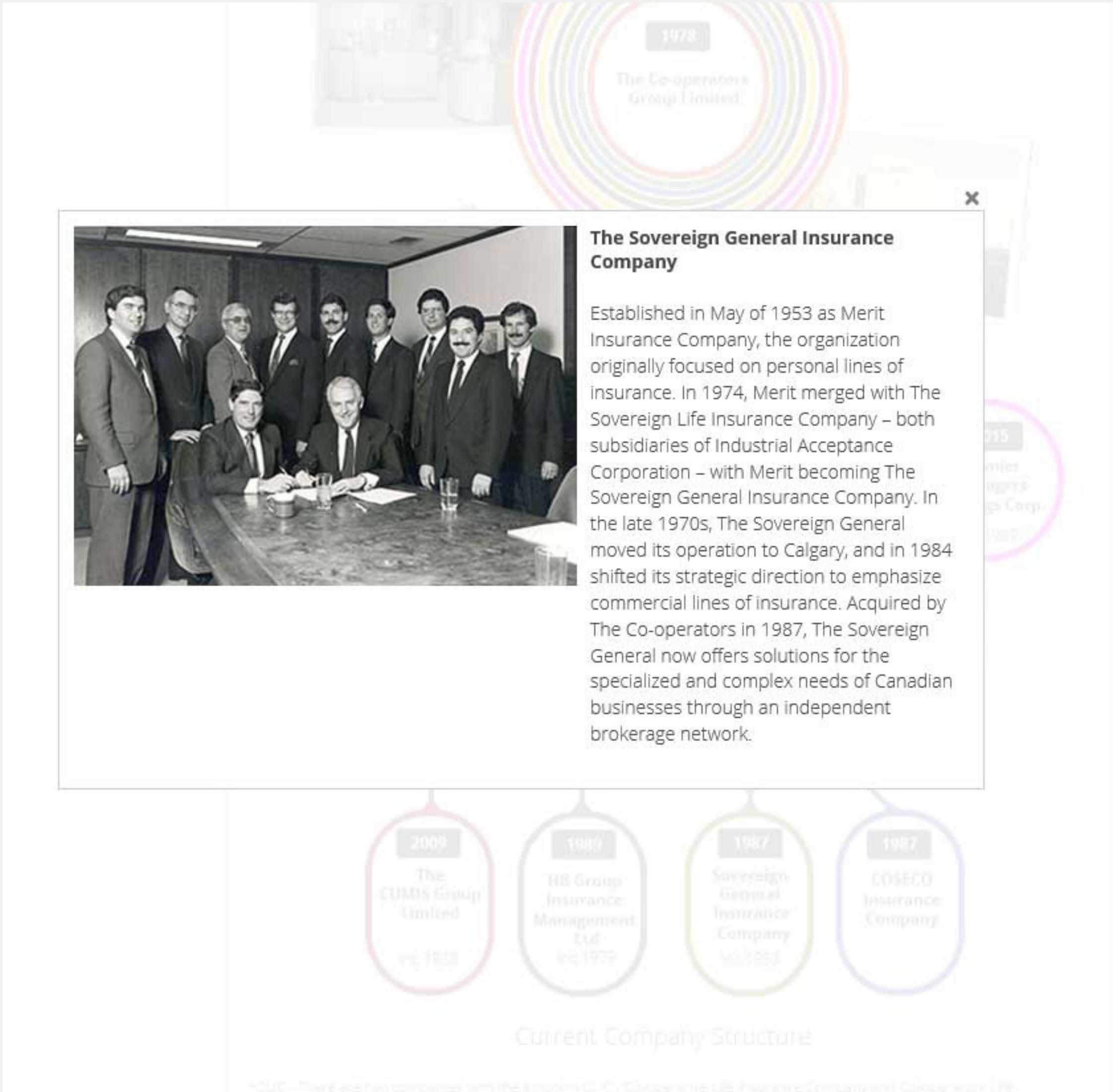
> "I'd be making some assumptions here on the answer to this task. I might ask someone . . . It's a snappy little photo, but I might go validate with other people. Otherwise, this is on Source, so I think it's true. I have never seen this page. And actually, now that I'm here and seeing this, this is nice actually, it's a nice little flow chart. I didn't know that this was here, and I like it. It's a cool chart."

A key benefit of interactive infographics is that they provide context and narrative while allowing users to control what aspects of the data they see. However, ensure that link affordance — visual signifiers that indicate that things are clickable — is strong.

Consider the needs of the piece you are creating before adding interactive elements. What aspects of the data will employees be interested in? A static visualization may be enough if you simply want to make a point. If you'd like employees to interact with the information to get a deeper understanding of the different aspects of the dataset, an interactive infographic may be more appropriate.



This interactive infographic on The Co-operators' intranet communicated the company's history, but employees didn't know they could click on each circle representing a year to read more about what happened at the organization during that time. The circles lacked visual clues to indicate they were clickable.



Had the Co-operators used a rollover state on the circles to slightly animate and enlarge them, along with a color fill and a tooltip, employees would likely have understood they could click on the circles to read more.

Every item on an infographic or data visualization — from the charts to the imagery that illustrates them — should convey meaningful information. The goal is to make abstract concepts easier to understand and grasp at-a-glance. It's also important to present data clearly and truthfully. When using charts, scale them in a way that shows the differences in the data and communicates the range of values accurately. If you include summary statistics in your graphic, clearly indicate the information source you used to calculate those figures.

Choose fonts that are readable and scalable rather than decorative and use a limited color palette. Use clean fonts for titles, headings, quotes, statistics, and captions, all sized differently to establish a clear hierarchy within the graphic. Avoid script fonts and overly complex serif fonts, as they often distract from the key points of visual information. A few distinct colors are more visually inviting and focus attention better than many colors. Color can be an excellent way to communicate differences quickly or highlight various infographic sections, but too many colors are overwhelming.

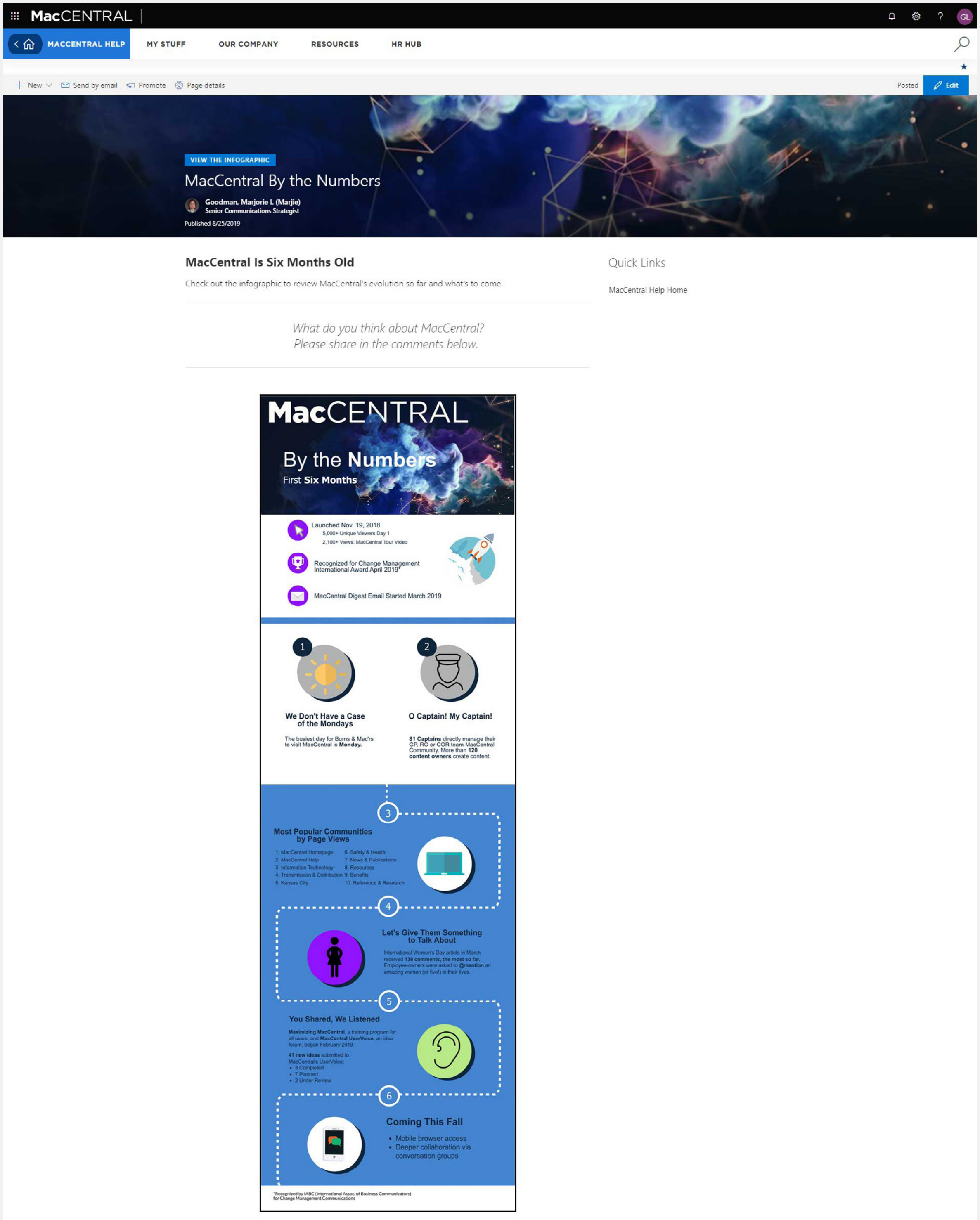
Avoid using color as the only visual distinction.

Timeless Design Tips

Although color is a powerful communication tool, colorblind and visually impaired users will struggle to understand infographics that communicate important points using color alone.

A minimal palette forces designers to be conscious of how they use color and encourages them to explore other visual tools, such as scale and hierarchy, to express information.

For example, on Burns & McDonnell's intranet, simple and clean illustrations within infographics allowed the focus of the infographic to remain fixed on data used to describe the intranet's evolution over its first six months. The illustrations used simple, concise text and graphics, both of which supported the overall messages of the piece.



The visual hierarchy on this infographic from Burns & McDonnell's intranet guides employees through the variety of information presented. Items are sized appropriately and sequenced intentionally so the key messages of the infographic are easy to discern.

Prioritize communicating complex information in a digestible way through data visualizations and infographics. Ensure infographics are of high resolution (not pixelated) and that any text within is legible. Also, always provide substantial ALT text for screen readers.

26. Use high-contrast text for link headlines or place links next to or below images to visually indicate they're clickable.

Many intranets we studied used visual designs incorporating images and graphics to represent links to news articles, tools, events, and other areas. A well-chosen visual adds interest and can set the tone for an intranet, in addition to hopefully conveying some meaning or prompting an emotional response. Because images play such an important role, intranet designers often place text over an image to leverage the attention-grabbing aspect of the photo while providing text to communicate information.

One factor that isn't always considered when designing an intranet is that if you place text over a background image, you must ensure it's readable, which means providing adequate contrast and font weight. This can be accomplished through subtle tweaks that increase contrast without affecting the overall site aesthetic. According to color contrast accessibility requirements, text that is not purely decorative or part of a logo should have a contrast ratio of at least 4.5:1 (or 3:1 for large characters, defined as an 18-point font or a 14-point bold font).

Ensure images are also clickable, not just headlines or links that lead to content.

Timeless Design Tips

Especially with hero images or main header banners, teams sometimes only linked the headline text, buttons, or links that appeared in the space. This caused issues when employees clicked on an image expecting it to send them to the section of the intranet the image represented.

In addition to linking buttons, text links, and headlines, ensure any corresponding images are linked to the same destinations.

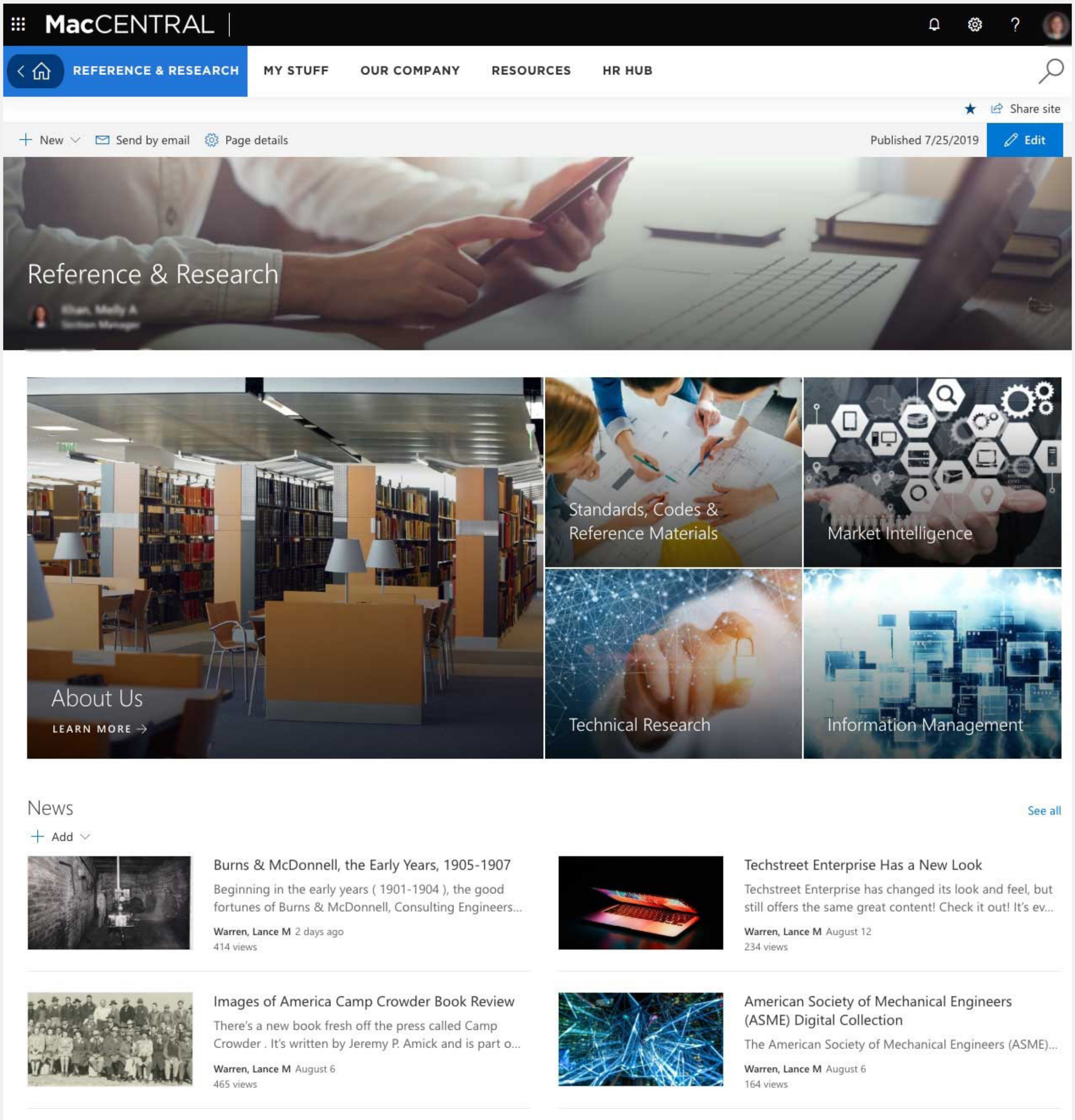
At Burns & McDonnell, there were legibility issues with text overlaid on images. Some image backgrounds were too busy and colorful, which obscured the title text and made it more difficult for users to read. For example, in the hero space of a landing page, the phrase "Wear College Colors This Friday" was overpowered by the multicolored college pennants in the background image behind the text. Though the pennants meaningfully reinforced the message, a better approach, in this case, would be to ensure that any background images are simple enough to allow the overlaid text to be legible. Redesigning the templates so that images are to the side of the title, not underneath it, blurring portions of the photo, darkening the photo, or adding a semitransparent black box behind the text (but in front of the image) are all techniques that would help make the text easier to read.

On Burns & McDonnell's intranet, text over busy images in the hero space was difficult to read.

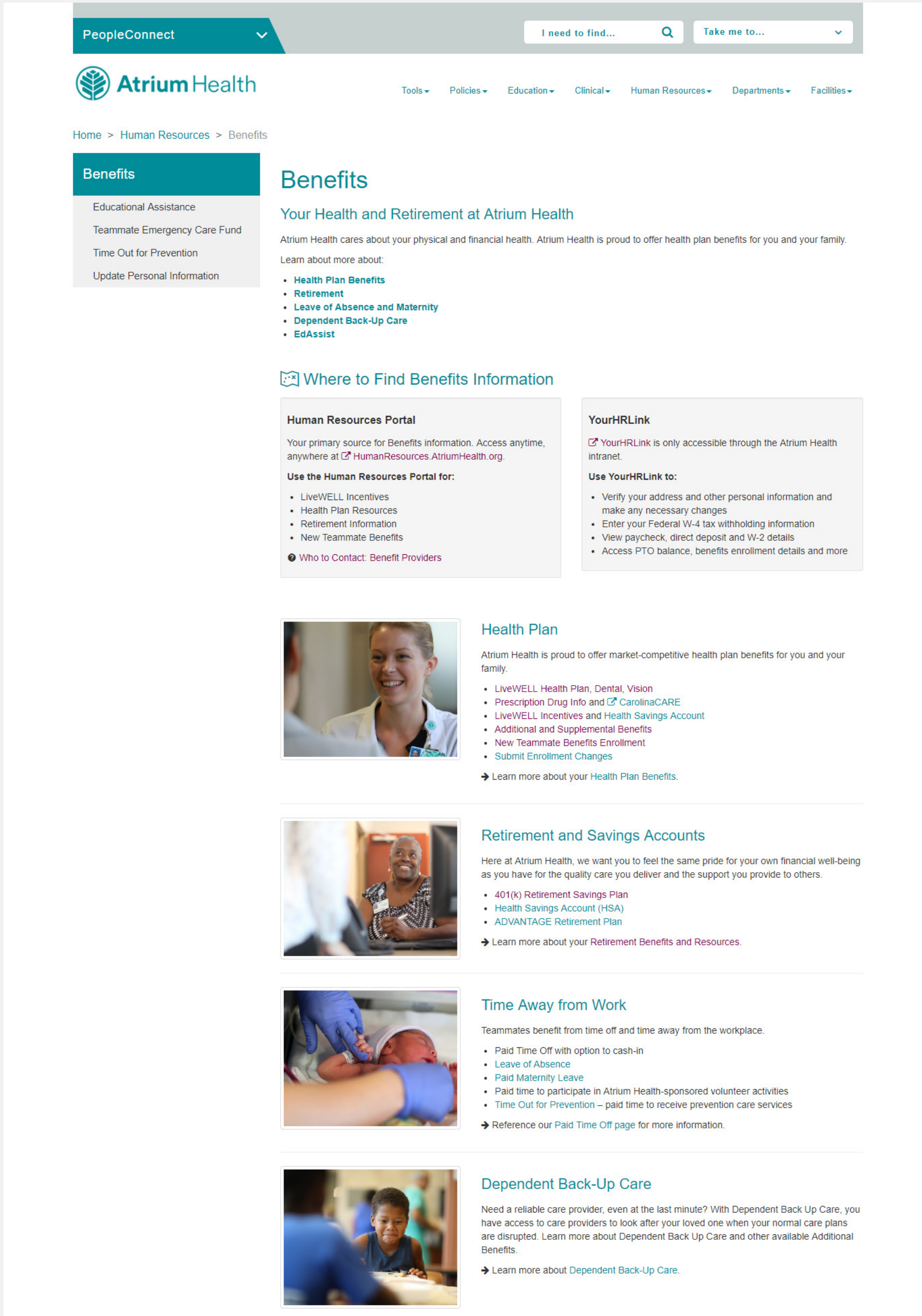
An alternative approach to overlaying text on images is to place linked headlines, short snippets of body copy, and buttons or links to the side or underneath the images. This way, there's less risk of the text becoming distorted or difficult to read on top of the images, especially as the page layout scales from desktop to mobile and vice versa. This is a viable approach as long as all elements, including the image, headline, and link or button, click through to the same area of this intranet.

For example, on the *Reference & Research* page on Burns & McDonnell's intranet, a grid of six images with overlaid text appeared at the top. While most images had a dark enough background to render the text legible and readable, the photos for *Market Intelligence* and *Information Management* with text overlaid were not; the section names were too hard to read because of the busy and low-contrast background.

A better approach could be seen further down on the same page of Burns & McDonnell's intranet and Atrium Health's *Benefits* page, where four images stood alone to represent contextually relevant topics or content types. And instead of using overlaid text, it appeared to the right of the images, as did clear headlines, short excerpts of body copy, and links. The image and the space containing the headline, subtext, and links were all clickable so that no matter where employees clicked or tapped in the space, they'd make their way to the right place.

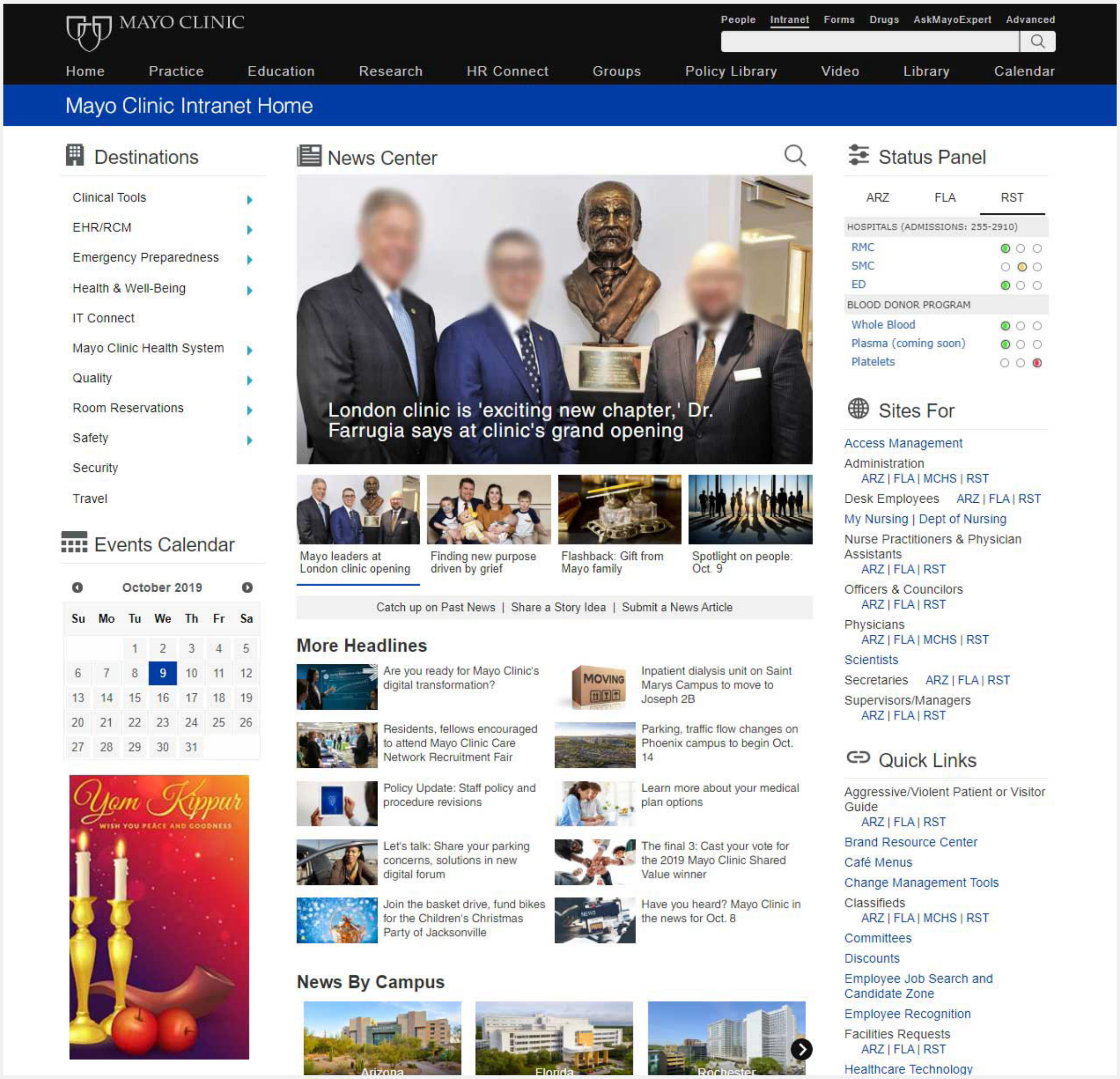


Some of the text overlaid on the images at the top of Burns & McDonnell's Reference & Research *page was hard to read because of the background images. A better way of handling imagery and text is shown in the* News *section below, where images were placed to the left of text-based content, but both the image and the text linked to the news articles they featured.*



Atrium Health took a similar approach on its benefits page. Rather than having text on top of the images, they were stacked vertically to the left of text-based content and links, which all linked to the benefits subsections they highlighted.

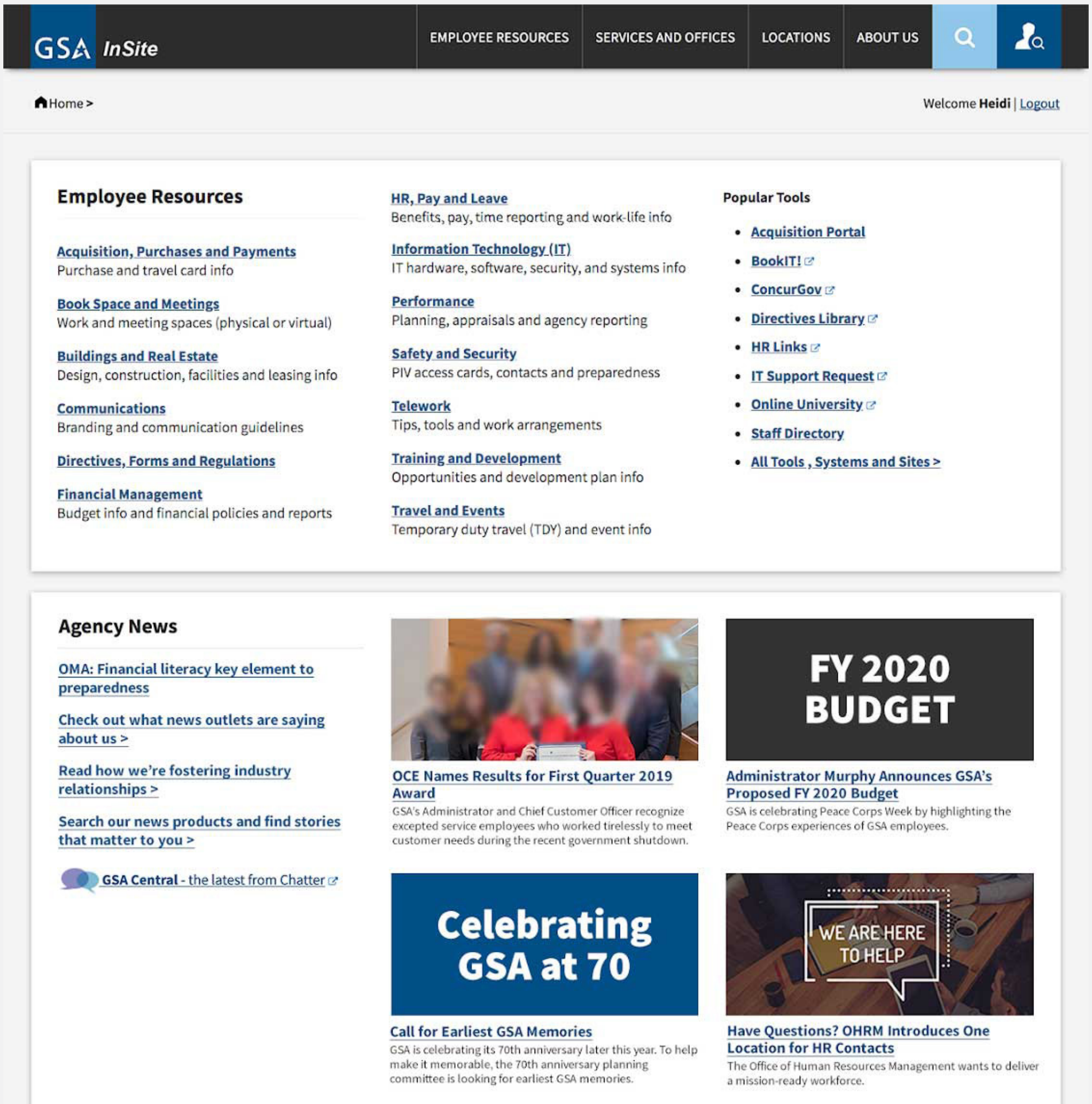
On the Mayo Clinic's homepage, careful consideration was taken to place text in darker areas of photographs, where it would be easy to read. The main feature image always had text overlaid and placed near the bottom. Sometimes the photos were blurred at the bottom edge to ensure the background had high enough contrast with the text.



The Mayo Clinic used a medium bold font overlaid on top of its main homepage image and carefully placed the text to ensure it was clear for employees to read at first glance.

Consider the full range of possible images that may be used before deciding on a technique to ensure contrast when overlaying text. Often, a solution may work for one type of image or page layout but not for others. If both dark and light images are included in an intranet design, ensure that the chosen overlay method will provide a high-enough contrast for the worst-case background image and text placement. Just because you did something to help increase the contrast on one image doesn't necessarily mean you've added enough contrast to make the text readable.

We observed another approach to text overlaid on an image background on the General Services Administration's intranet. A list of text-based headlines that looked clickable appeared under its *Agency News* component. To the right, four featured images were displayed along with a similar headline style and subtext, all of which were clickable to the news articles. Two of the photos were simply bright white, bolded text overlaid on a darker-colored background, which is a viable approach to use when the design's layout requires an image, but one isn't available. It is also much better than placing a busy image behind text.



The General Services Administration used a combination of approaches on its homepage to ensure images were present where required but that any overlaid text was still readable. This mix of methods preserved a consistent look and feel.

There is no need to choose between creating a usable intranet design or an aesthetically pleasing one. Both can be achieved if attention is paid to both goals. When combining emotion-provoking and meaningful imagery with informational text, ensure it is readable by creating a high-contrast ratio between the text and its background.

Use effects such as a semi-opaque overlay by either covering the entire image or just the text portion; add a blur, a text shadow or outline, or a combination of these techniques. Or place linked text next to images or underneath, but make sure all elements are clickable.

TABLES AND CHARTS (INCLUDING ORG CHARTS)

27. Design intranet tables to support scanning and comparison.

On pages with distinct cells of content, employees often scan those cells in a **lawn mower pattern**. The pattern's name is inspired by how a lawn mower sweeps methodically back and forth across a field of grass. The mower moves from one side of the lawn to the other, then flips around and mows the next row of grass in the opposite direction. In our eyetracking research, we have observed this pattern on many types of pages and tables. We were surprised to find this pattern as we expected users to scan each row from left to right, starting with each row label, but that's not always the case.

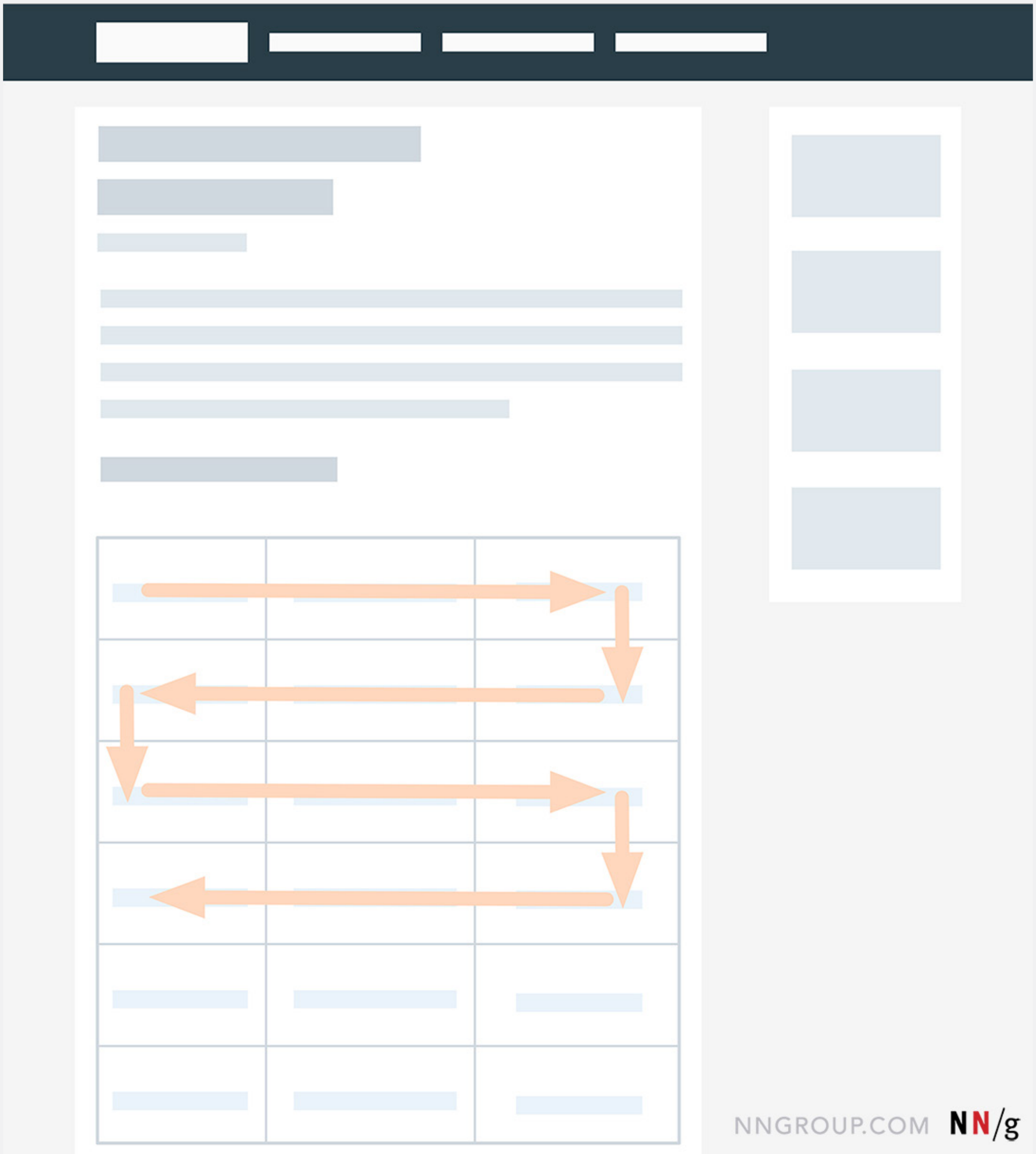
Lawn mower pattern

Definitions, Principles, and Methods

Users scan a table by beginning in the top left cell, then moving to the right until they reach the end of the row, then they drop down to the last cell of the next row and move back to the left until they reach the end of the row, and so on.

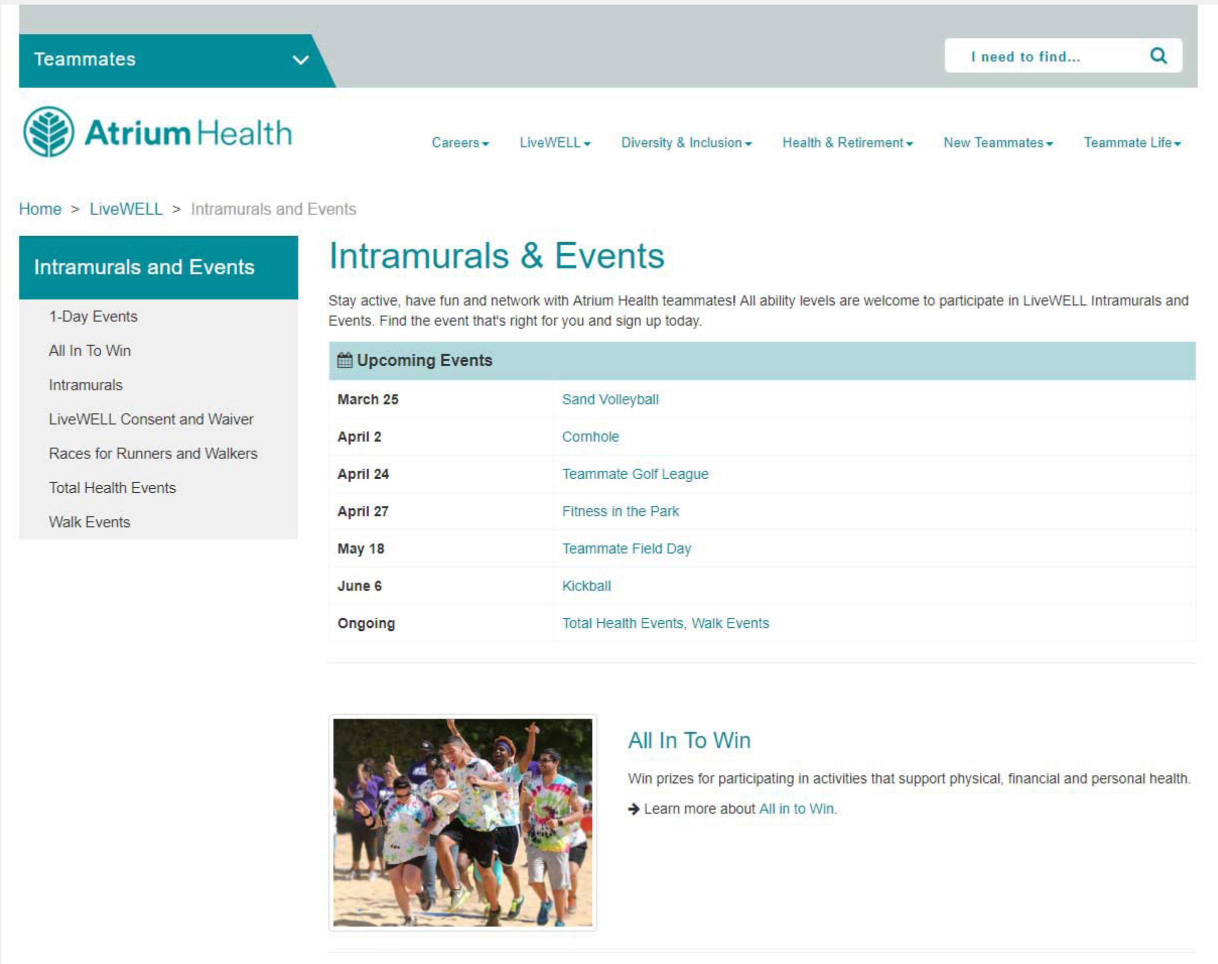
This pattern is an efficient way for employees to process and absorb the differences between two or more pieces of information, as it minimizes the amount of eye movement. However, if the table's design and content are not informative and thoughtfully laid out, it can disrupt the lawn mower pattern and make employees' comparison tasks more difficult.

As intranet designers, it's important to realize that employees are likely to engage in this pattern when actively comparing several adjacent items in a comparison table. The pattern is often proceeded by an appraisal where the user quickly processes the table's layout before reading more closely.



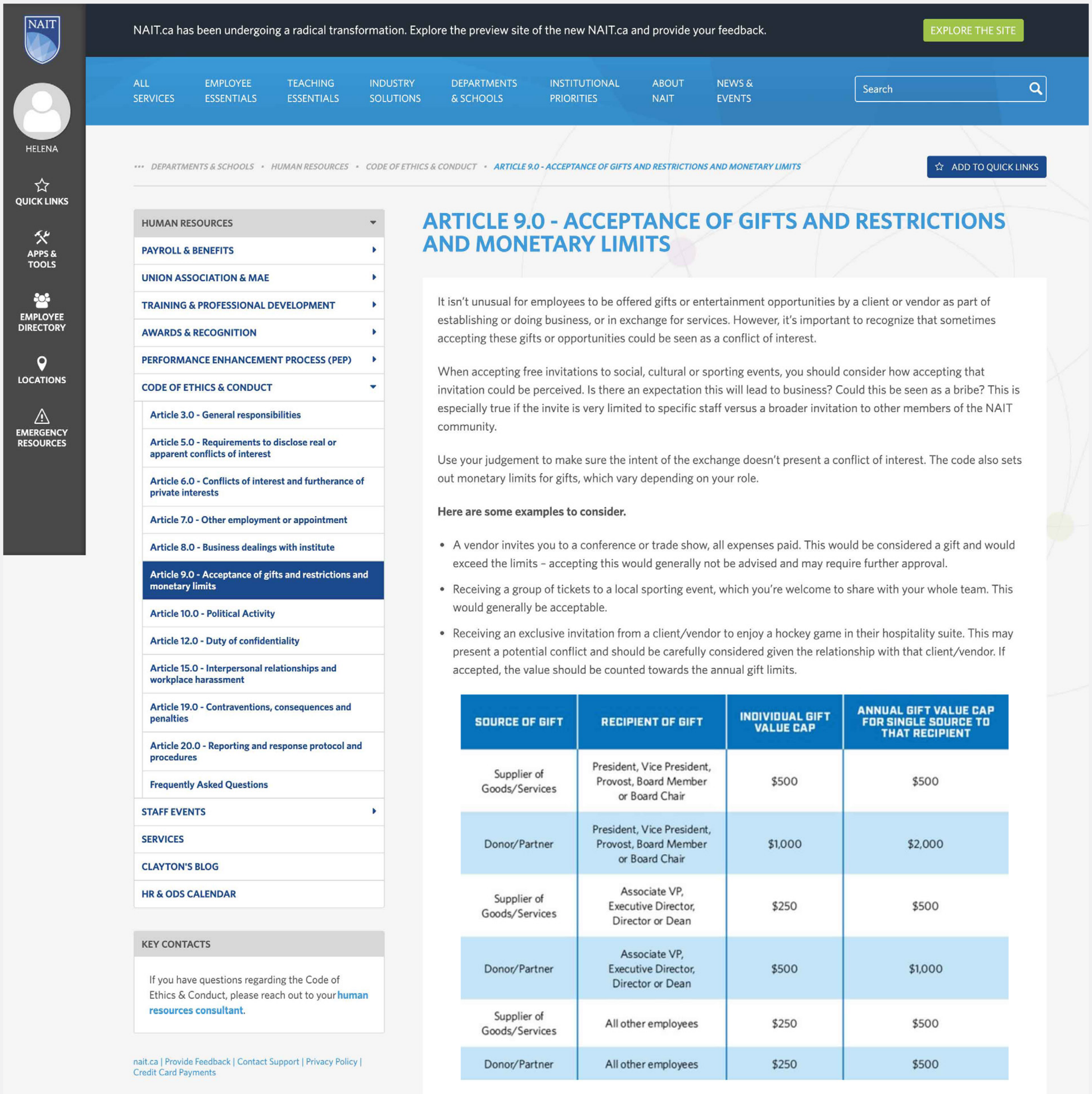
In a lawn mower pattern, the user's gaze moves from left to right, then down, then from right to left, then down.

On Atrium Health's intranet, one employee scanned a table on the *Intramurals & Events* page to see when upcoming activities were happening. Within a few minutes of landing on the page, they appraised the table by glancing at the column and row labels and some of the cells. Because the first row of the table had a light teal background and bolded text, this supported the scanning behavior and drew the employee's eye. Additionally, because the table was well-spaced and had different text treatments for dates versus activities, employees could quickly scan the table to compare the dates to when events were happening.



An employee at Atrium Health skimmed the upcoming events table before reading it to understand the information presented. The light teal header row and different text styles supported their comparison behaviors.

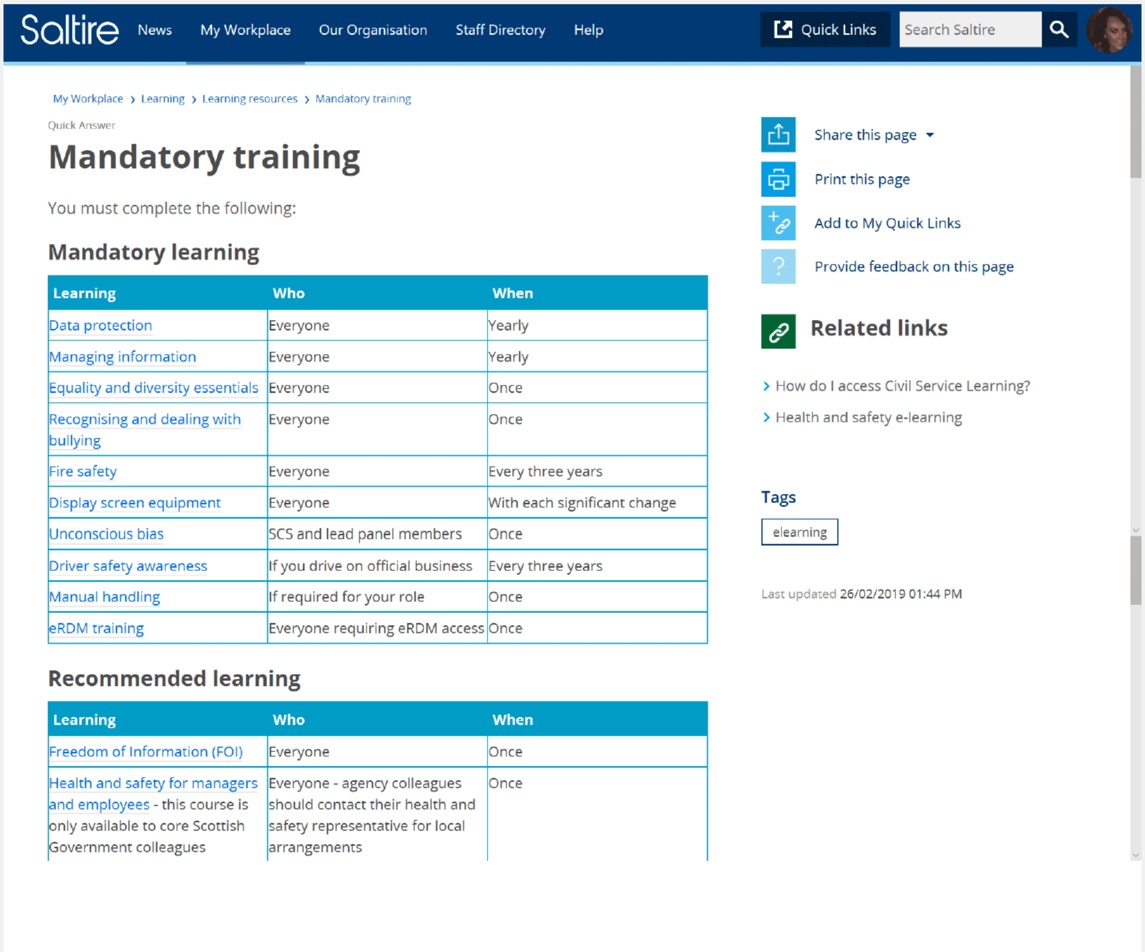
If employees are only interested in comparing a single item in the table, they'll likely focus on a single row or column and won't engage in this pattern. In those instances, it can be helpful to alternate the table's background colors, for example, using light gray and white in either rows or columns to drive focus.



The Northern Alberta Institute of Technology included a table on its Gifts & Restrictions *page with alternating row colors to help employees focus on the row of interest.*

With table design, it's also important to help employees avoid repetitive cells. When two or more items share an attribute in the table, consider a single content cell stretching between columns. This saves employees from having to read repetitive content by darting back and forth between duplicate cells. Alternatively, offer users a way to show only rows where the offerings differ.

The Scottish Government's table design was clean, consistent, and uniform but could be further improved by merging rows and columns that share attributes. Additionally, the header row's white text overlaid on the bright blue background isn't easy to scan. A better approach would be to use a darker navy blue with white text overlaid for the header row.



The Scottish Government had a clean table design on its intranet; however, merging rows and cells with similar attributes would have helped employees scan this table more efficiently.

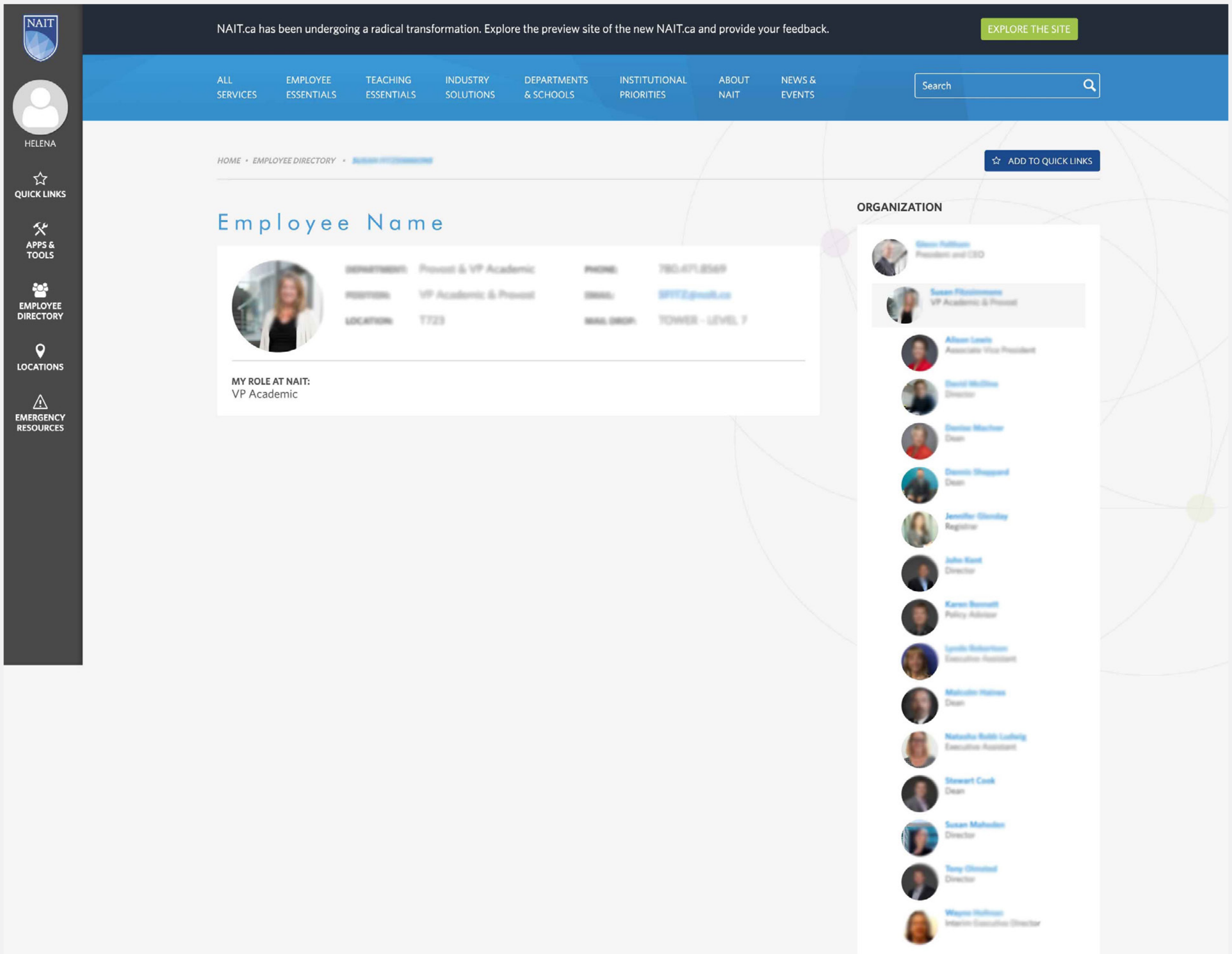
Also, avoid using overly long tables on the intranet. When tables grow too tall, employees can too easily lose track of which items and information are in certain columns and rows. Instead, use fixed header rows, break the content into multiple tables, or use other design and content formatting techniques such as anchor links and accordions. Using a consistent table design across the entire intranet is also important. The table's overall style should be similar but can have slight variances to support what employees are trying to do in their scanning and comparison.

Establish your basic table design with a header row style, border color and weight, and cell text treatments. Design variations to consistently accommodate rows with the same colors, include alternating row colors and cluster related information. To keep the intranet's design tidy, don't show drastically different table designs across various intranet sections. When implemented correctly, tables can help employees make decisions quickly and easily.

28. When designing an organizational chart, include clear names, titles, photos, and reporting structures.

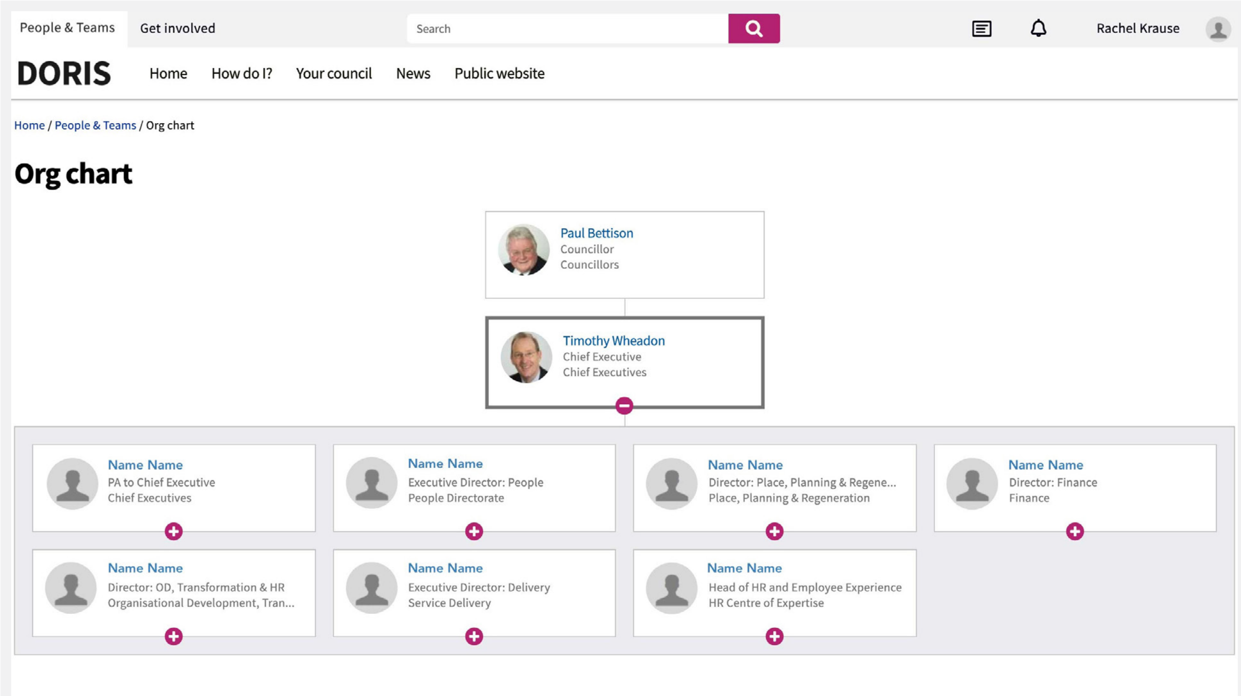
In addition to helping colleagues find each other, either through the main intranet search or a separate employee search and including employee profiles with key details and professional-looking headshots, it's also beneficial to include a nicely designed organizational chart on the intranet (also known as an org chart or organogram). Employees often like to find out who reports to whom and who works together on certain teams and departments.

At enterprise-level organizations, it is even more critical to have access to updated, full-scale org charts. Linking to the full company org chart from an appropriate category in the main navigation or employee directory and linking to department org charts from department pages and employee profiles are all contextually relevant and viable approaches.

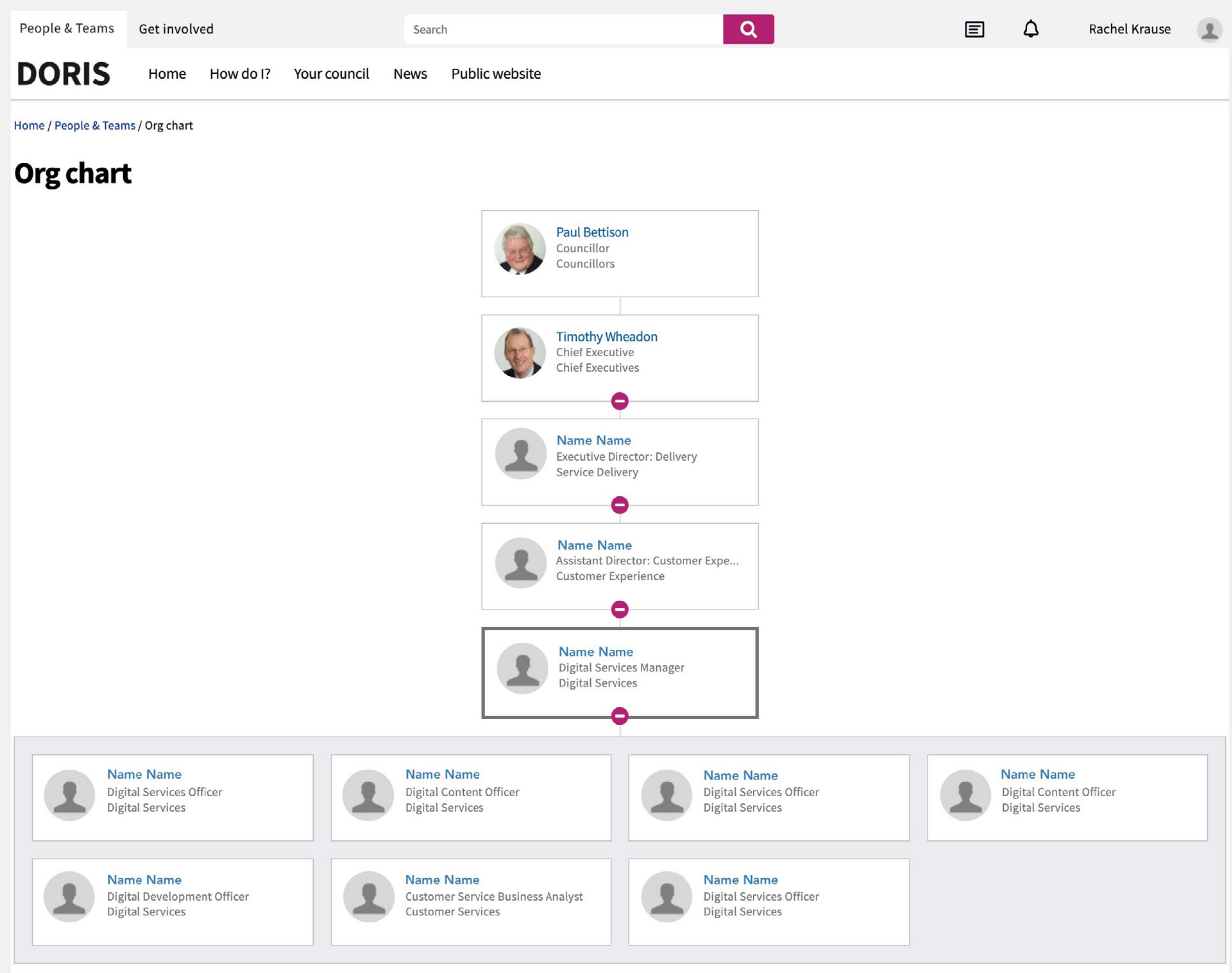


The Northern Alberta Institute of Technology included org charts on its employee directory and profile pages.

Bracknell Forest Council included an interactive org chart linked from the *People & Teams* section of its intranet. Employees were familiar with this feature and used it frequently. The organizational charts also made it easy to find someone's direct reports. A plus sign icon appeared at the bottom of their card for individuals who had direct reports, signaling to employees that they could click to expand it to see their direct reports. Direct reports appeared in a light grey box to visually indicate and contain the reporting structure, which was favorable. As an added benefit, each person's card in the org chart included their professionally shot photo, title, and name, which linked to their employee profile.

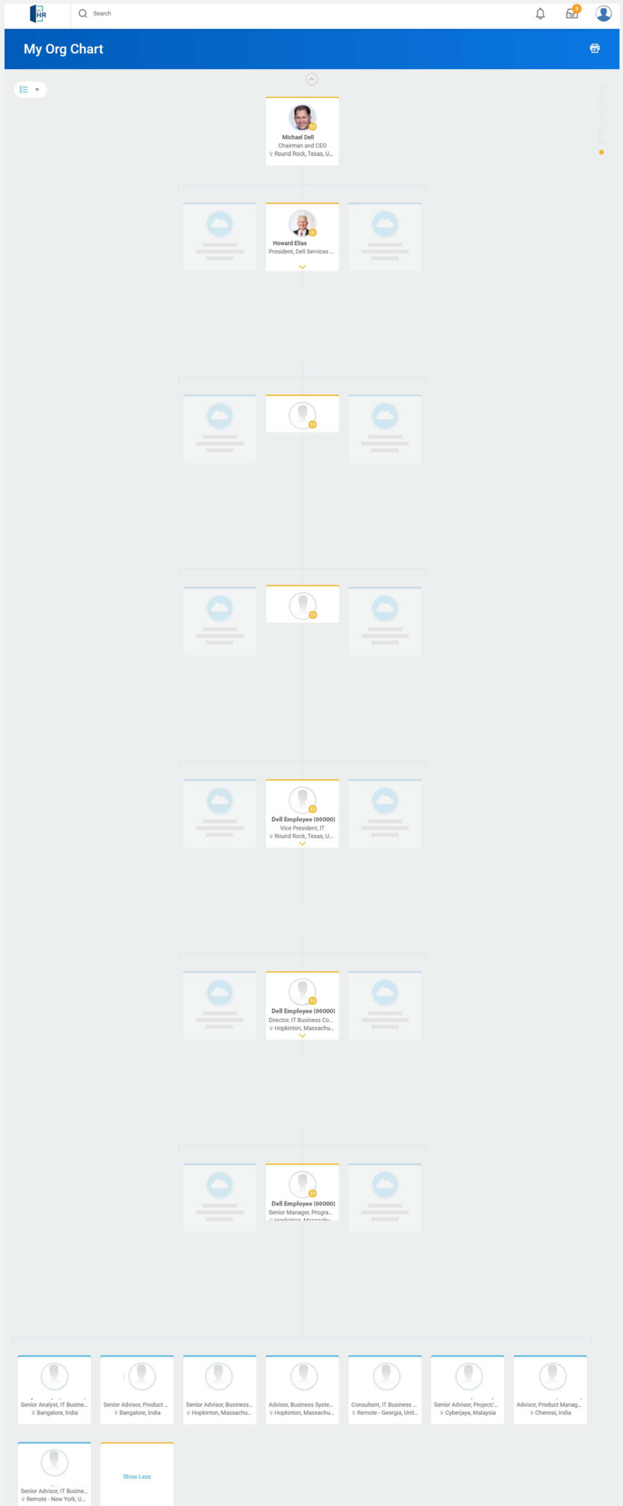


The organizational chart on Bracknell Forest Council's intranet had a clean design and interactive capabilities. The only design improvement we recommend to this org chart is to include clearer labels for team and department names linked to those spaces; they're difficult to decipher from people's titles alone.



Clicking on the small plus sign icon at the bottom of the cards on Bracknell Forest Council's intranet org chart revealed a manager's direct reports in a grey box, which made it easy to see who was on the same team. Employees could collapse the level in the reporting structure by clicking on the minus sign icon.

On Dell's intranet, the department org charts offered a good, high-level overview of the hierarchy, but if employees wanted to see people at the same level, they had to dig deeper and often scroll to the bottom of the page. A better approach would be to use an interactive solution where employees can navigate up, down, or across the reporting structures, especially in such a layered organization. Or the design team could tighten the spacing between each level, still showing hierarchy but with less space in between. This way, employees wouldn't have to scroll as far to see the entire reporting structure and parallel partners.



Dell's org chart could have used a tighter layout with less open space between each level or benefitted from interactive features to allow employees to navigate the org chart vertically and horizontally for more focused browsing.

An HTML org chart is much better than a PDF or PowerPoint version. The optimal approach is if the org chart syncs with a tool such as Active Directory to dynamically update as employees leave the organization, get promoted, or change roles. This way, an administrator or content manager doesn't have to remember to update static org charts regularly. When org charts don't reflect the organization's actual reporting structure and hierarchy, employees become confused and waste time looking for the right people and teams. It's also helpful to include a date on the org chart for when it was last updated, regardless of whether the updating happens manually or dynamically.

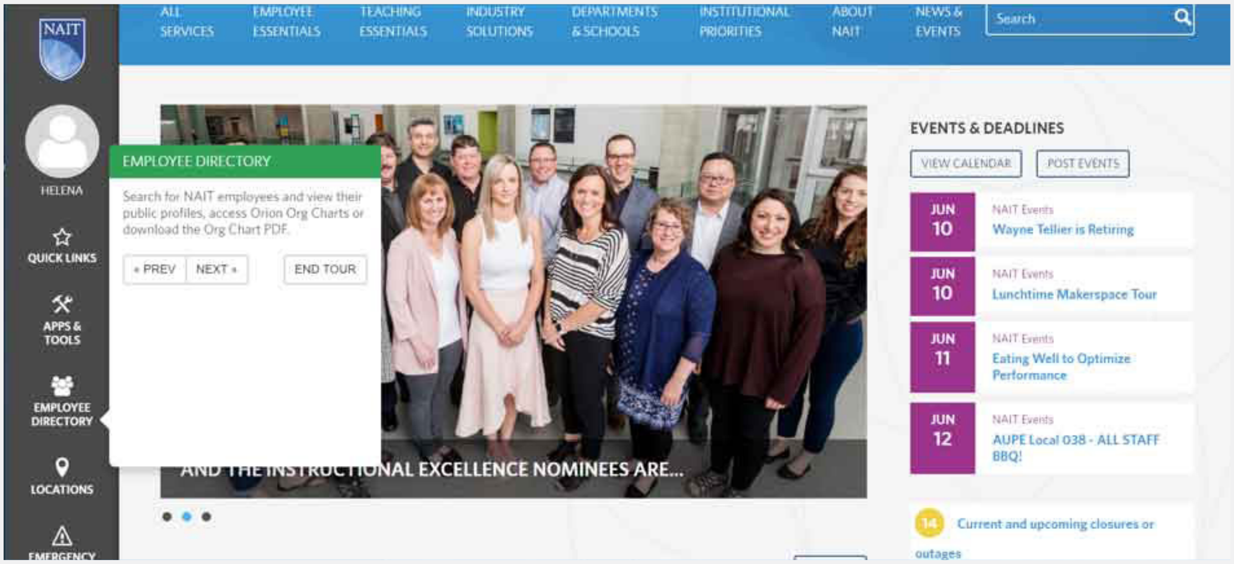
29. Use animations on the intranet to provide subtle visual feedback, support discoverability, and ease transitions.

While you can design animations to draw employees' attention to things that would otherwise be overlooked, don't use animations on an intranet to make up for weak signifiers. When designing animations, it's important to match how attention-grabbing the motion is to the object's level of importance to the employee. Be careful not to overuse animations, as they can easily become overwhelming and distracting.

For example, when expanding and collapsing parts of an org chart to see who reports to an individual, the animation should be a smooth, simple, revealing transition; the cards that show other employees don't need to dance on the page as they come into view. Zooming animations can help employees understand the direction of their journey into a hierarchical information space, such as an org chart, without having to look at a tree diagram. Zooming out shows less detail but more objects, suggesting that the employee traveled up the hierarchy, whereas zooming in shows more detail, but fewer objects, creating the impression of going deeper.

At the time of our study, the Northern Alberta Institute of Technology had recently redesigned its intranet, so many employees were encountering the new design for the first time. On an employee's first visit, a very subtle set of prompts encouraged them to look around and notice various navigation sections and new features as they animated into view. The animations were obvious enough to draw attention but not so jarring that they interrupted employees' tasks as they could simply click the *End Tour* button, and the prompts would smoothly transition off the screen.

For employees who did click through each part of the tour, the prompts animated around the screen in a logical order to align with employees' expectations for discoverability; they didn't frantically jump around the page, which was favorable.



The Northern Alberta Institute of Technology effectively used light-touch animations to communicate and draw attention to noteworthy parts of its newly redesigned intranet.

Animations with a significant shift in position or those that gain speed or seem to be self-propelled rather than merely reacting to some other action are the most attention-grabbing. This is especially true when the animation occurs near the periphery of the screen, such as with toast notifications that slide up from the bottom of the intranet, popup chat bot notifications in the lower right corner, notifications that appear over the top of icons in the upper left corner, or back to top buttons that slide up from the bottom right of the screen. These are all things that would direct employee attention away from their tasks.

Because we know employees are task-oriented when using the intranet, consider whether an object is worthy of distracting the employee and potentially wasting time they could otherwise spend on work-related tasks. A notification about something important related to their job or well-being might be worth it, but that *back to top* button or obnoxious animated gif probably isn't.

Slow transitions, animations that don't change position, and those that simply fade in or out in the same spot are less likely to cause a shift in employees' attention and are less distracting. Favor slower animations for anything indirectly triggered by the employee, such as having a *back to top* button only appear available when scrolling down the page. Animations can quickly shift from helpful to annoying, so choose the most appropriate type of movement based on task context and employees' goals.

30. Design a 404 page that reflects your organization's purpose and personality and provides quick ways to recover.

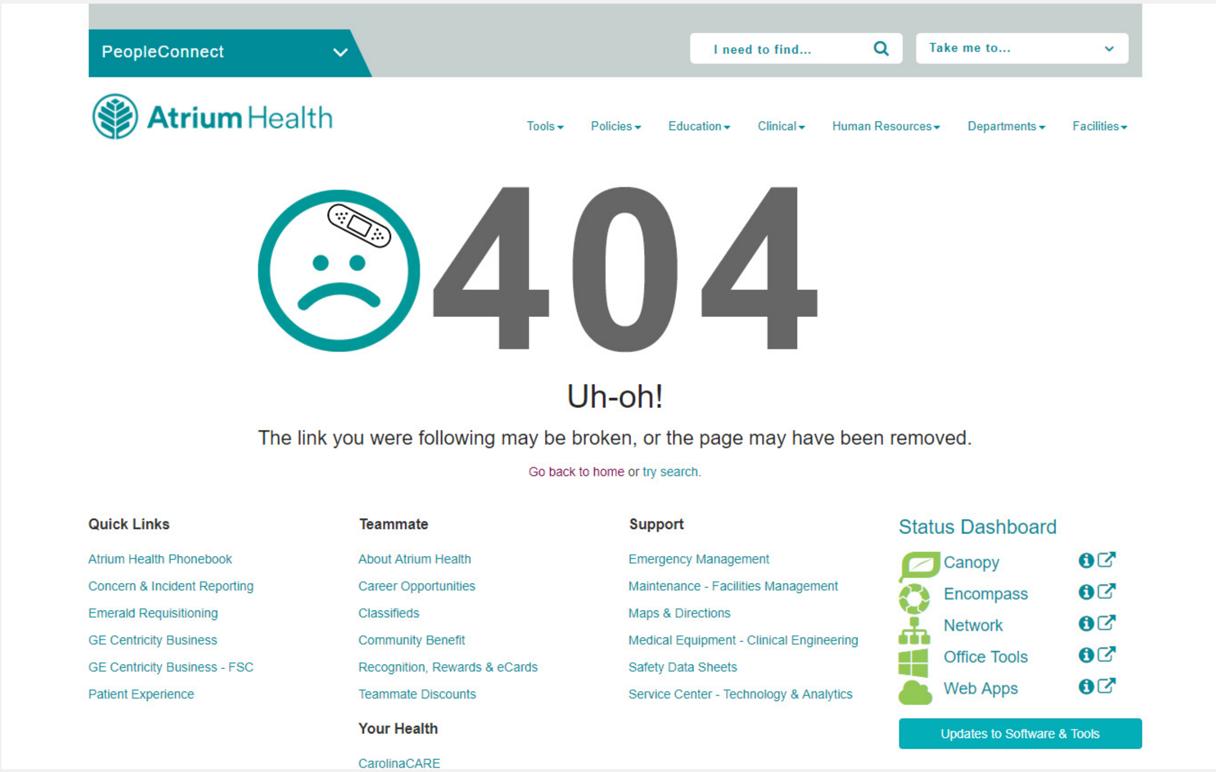
Designing a good 404 page shows you care. When employees land on a 404 page, it indicates they aren't finding what they need on the intranet and that content management practices may be falling short. It's also more likely that employees will land on a 404 page on an intranet than on mainstream, public websites since intranets tend to have much more content, pages, and links to other tools and applications than public-facing sites. Providing links to help employees recover, along with meaningful graphics and copy on the **404 page,** can help get employees back on track toward accomplishing their tasks.

404 page

Definitions, Principles, and Methods

A **404 page** is a server error landing page that tells intranet users the requested page is unavailable or, in some cases, doesn't exist.

On Atrium Health's intranet, the 404-page reflected what they do as a healthcare organization. The graphic of a frowning face with a Band-Aid on its forehead visually indicated that the employee had encountered an error, while a clear and playful "Uh-oh!" headline was shown along with a message indicating the link wasn't available or had been moved. Links directing employees to return to the homepage or try a search helped them quickly recover and find a different route to find the needed information. Some employees even smiled and said, "Aw, how cute!" upon viewing this page.

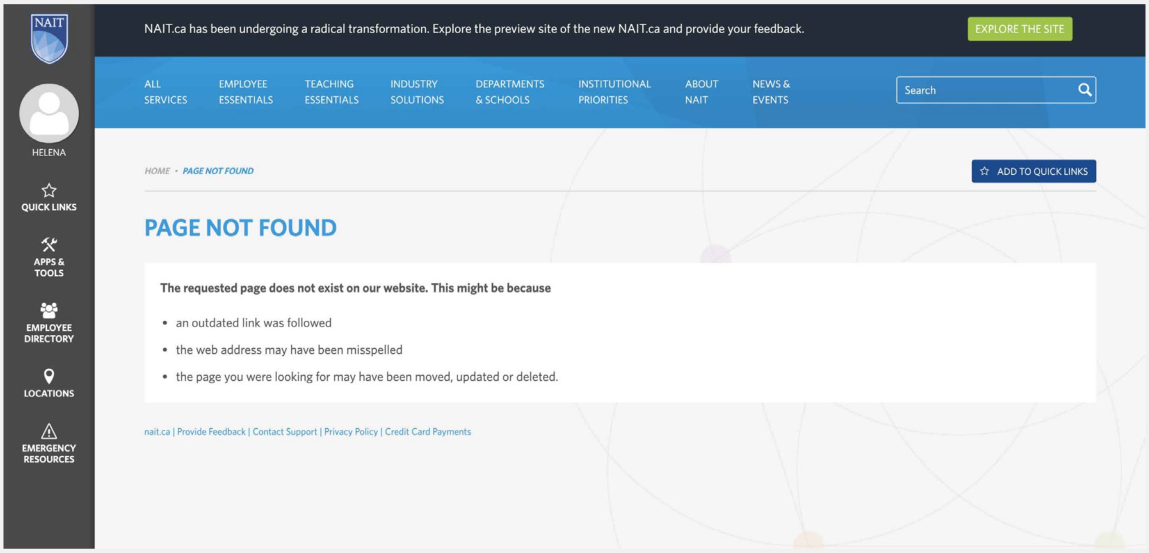


While encountering a 404 page is never fun, Atrium Health's intranet reflected the organization's purpose and personality, made employees smile, and helped them quickly resolve the error.

An employee might encounter a 404 error on the intranet for many reasons, including:

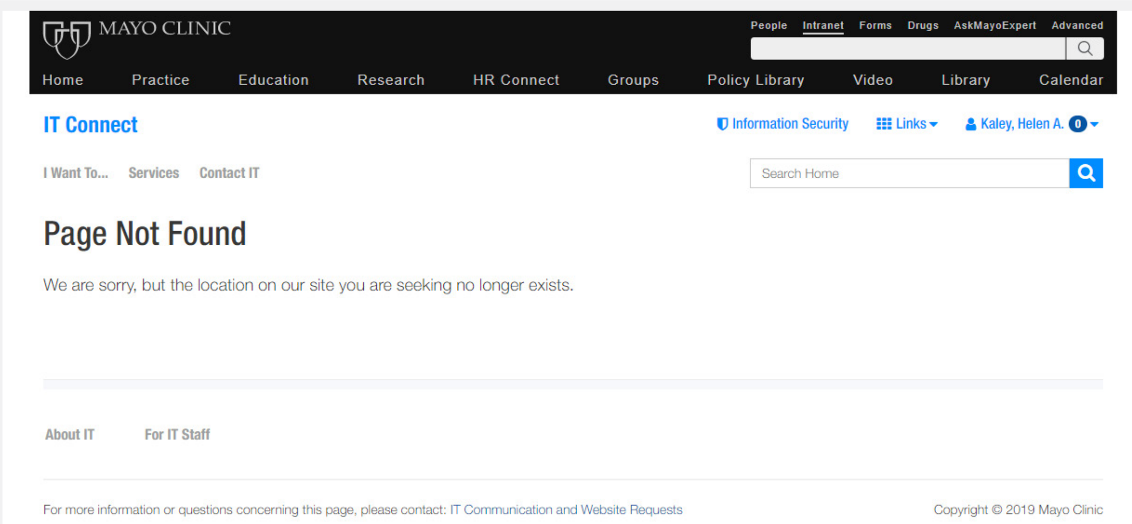
- Server is down.
- Page was moved and wasn't redirected.
- Page never existed.
- User typed the URL incorrectly.
- URL is broken.

On the Northern Alberta Institute of Technology's intranet, the 404-page provided context and included reasons why they might be encountering the error, which was favorable. The team could improve the page further by adding links to help employees quickly find what they need to recover from the error. Adding a touch of personality or graphics that align with the organization's mission would also elevate the design.



The Northern Alberta Institute of Technology's 404 page clarified why an employee might land on the page.

The 404 page on the Mayo Clinic's intranet, specifically in its *IT Connect* tool, used plain language in the page headline, stating *Page Not Found* instead of 404 error, which was good. However, the body copy below the headline was difficult for employees to understand. There were also no links to help employees recover from the error. Though the search field is exposed in the upper right corner, it would be better to prompt employees to try search or provide links frequented by employees directly on this page.



The 404 page in the Mayo Clinic's IT Connect *tool would benefit from clearer body copy and directions to help employees overcome the error.*

The best intranet 404-pages maintain the overall tone and design of the intranet and help direct employees to the information they are looking for, which reduces the need for them to interrupt another colleague (to find the answer they're looking for) by chatting with them, calling, or emailing to get an answer, which wastes both people's time. A great 404-page can even make employees smile during their workday, but most importantly, it should help them recover quickly and help them find what they are looking for.

COPY AND CONTENT, DESIGN AND FORMATTING

31. Choose fonts and styles that are clean and create a visual hierarchy.

The intranet can certainly use the same color palette and typeface dictated by the organization's broader brand guidelines. However, as intranet designers, it's easy to forget that employees won't devote their full time and attention to the intranet, nor do they always use digital workplace tools in neutral, quiet environments. They are often distracted, stressed, or multitasking. Employees often scan new pages rather than reading word for word.

Choosing legible fonts and styles can significantly improve an employee's intranet experience, particularly in suboptimal conditions. For example, while we all know it's dangerous to use a smartphone while walking down the hallway to a meeting, we also know that employees do it anyway. If we can design digital workplace tools and intranets that allow employees to read important information quickly and effortlessly, we can help them be more productive with content. Good design choices can support scanning and multitasking, encourage employees to pay attention to important intranet content and save them the embarrassment of bumping into another colleague.

Text-based content must be highly legible and easy to comprehend. Consider these key factors when choosing **typefaces** and **fonts** for the intranet:

Design for glancing and accommodate distracted consumption:

- **Use larger font sizes** for anything that needs to be **glanceable**, meaning employees will likely only look at or read only one to two words, as is the case with alerts, headings, and subheadings.
- **Avoid all-lowercase** text for anything that needs to be glanceable.
- **Avoid condensed or thin typefaces**, especially for applications that may be used in distracting environments.
- **Use larger fonts in non-condensed variants** to promote quick readability for notifications, toasts, and feedback presented to employees.

Avoid the all-lowercase design trend. Avoid using all-lowercase text, especially with:

- **Headings and titles**, which need larger text in wider variants
- **Small font sizes** (and typefaces that inherently have a small x-height), as the combination of lowercase and small size, exacerbates the problems inherent in either attribute

Glancing

Definitions, Principles, and Methods

Glancing refers to quickly reading short text (often just one or two words long) in microsessions as a person is engaged in other complex tasks. Glancing often happens in response to alerts, which is a different reading behavior than skimming a longer passage of text.

Typeface

Definitions, Principles, and Methods

Also known as a font family, a **typeface** is a family of letters and characters designed to be presented together to form words and numbers. Arial, Calibri, and Helvetica are examples of typefaces. There are often subsets of fonts within typefaces from which designers can pick.

Font

Definitions, Principles, and Methods

Font is a specific set of distinct, stylized letters within a typeface, such as:

- Garamond Regular, bold, 15px
- Arial, italic, 13px

Font should not be confused with typeface or font family. A font describes the specific size, style, and weight of text that designers can use. A typeface is the group to which a specific font belongs.

We generally don't recommend using ALL CAPS text for longer passages, such as news articles, where employees will consume multiple words. When users are skimming longer passages or reading full sentences, ALL CAPS text can reduce legibility and create greater letter confusion.

Using more than one or two fonts can make the intranet design look sloppy and should also be avoided. Stick to clean, simple fonts with no more than four levels in the CSS, as it gets confusing to know when to use an H4 vs. an H5. You can use only sans serif fonts, with bolded, uppercase headings and regular, sentence case body copy, or a serif font for main headings and sans serif font for body copy.

Font styles can have an impact on the intranet's tone. Sans serif fonts often carry the connotations of being modern, hip, cold, and impersonal; while serif fonts may carry connotations of being traditional, warm, expensive, and old-fashioned. Choose styles that fit with your organization's overall culture and branding.

Sans serif fonts	Serif fonts
✓ Modern	✓ Traditional
✓ Hip	✓ Warm
✓ Cold	✓ Expensive
✓ Impersonal	✓ Old-fashioned

Typography

GSA.gov uses the open-source font family Source Sans Pro as recommended by the US Web Design Standards. Designed for legibility, it provides a variety of visual styles.

This, along with clear and consistent header styles, highly legible tables, maps and body paragraphs, clear labels, captions and buttons creates a site that is contemporary and accessible.

Source Sans Pro

Aa

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789

Default Paragraph Style

"Body copy" font size is 17px, line-height is 1.5 and there is 10px space following each paragraph.

Heading Styles

These are the attributes of the headings used on GSA.gov

Heading	Font Size	Font Weight	Letter Spacing	Line Height	Space before/after*
h1	40px	500	-0.9px	1.3	0px/30px
h2	34px	500	-0.9px	1.3	20px/20px
h3	24px	400	default	1.1	20px/20px
h4	19px	600	default	1.1	10px/20px
h5	25px OR 1.5625rem	bold	default	1.1	10px/15px
h6	13px	bold	default	1.1	10px/15px

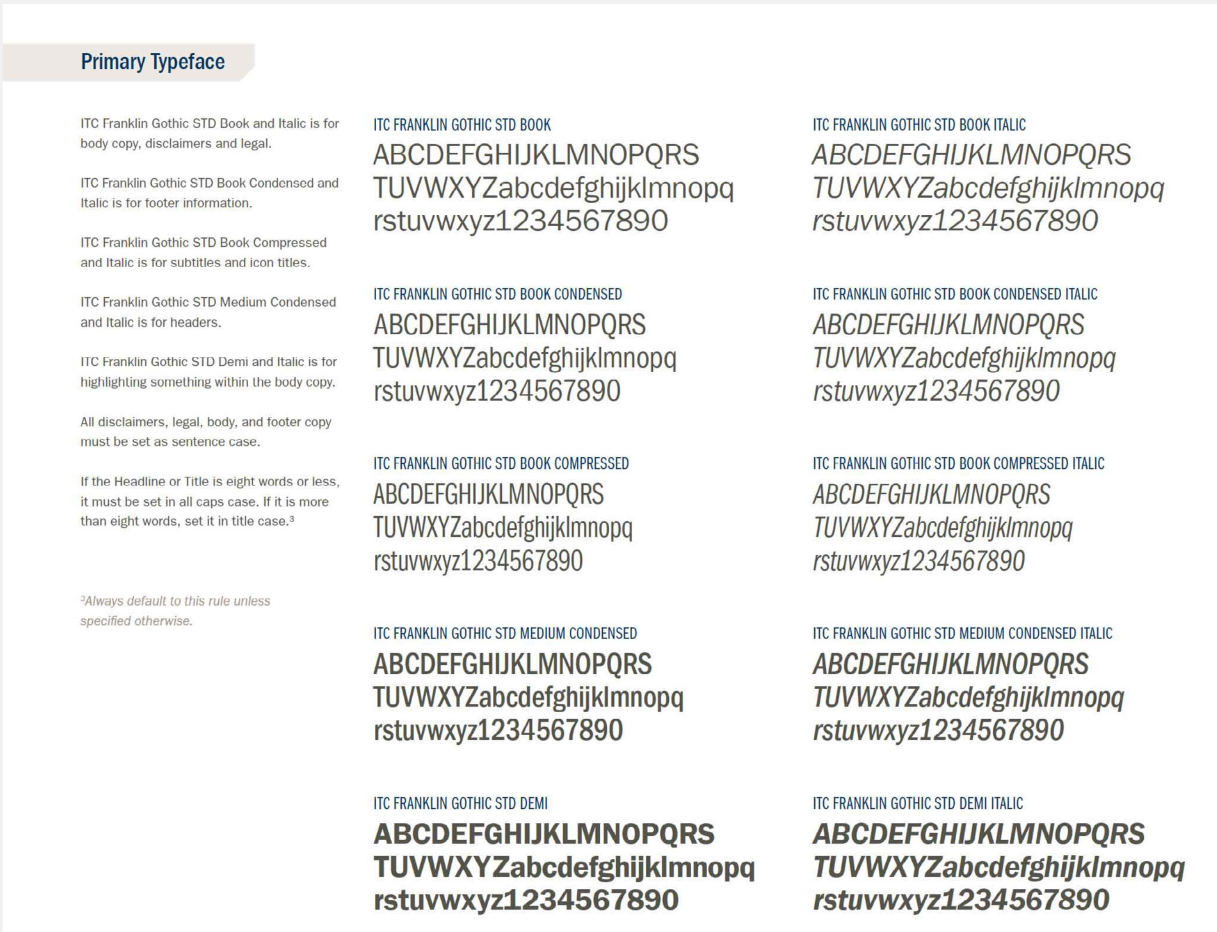
The General Services Administration used only one font family on both its public-facing website and its intranet, Source Sans Pro, which resulted in a clean and legible experience on both channels. Clearly defining when to use each heading style in the style guide would also be favorable and would ensure a consistent visual hierarchy is maintained.

Avoid embedding text within a graphic.

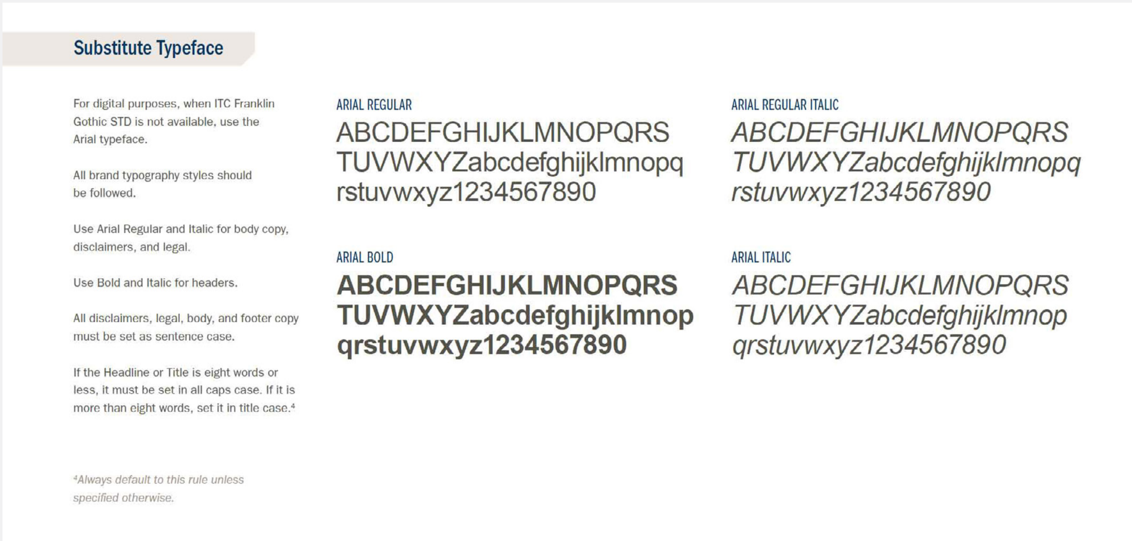
Timeless Design Tips

If you must use pictures of text, make sure the font size is especially large, and you use high-contrast colors. Include descriptive ALT-text so that screen readers can communicate what the image represents and what information is stated in the graphic.

It’s also important to choose web-safe fonts; if a typeface is not web-safe, the text may not load as desired. For example, First Solar used Franklin Gothic as its primary typeface. However, Arial was used as the fallback if the font wasn’t available.



First Solar outlined its typefaces and intended use criteria in its style guide, including body copy choices, footer styles, icon titles, headers, highlighting within body copy, sentence vs. title case, and when to set headlines in ALL CAPS. This level of detail is excellent and necessary to ensure a clean and consistent design.



If, for some reason, the primary typeface isn't available, Arial is the web-safe fallback font.

Use variable fonts to preserve intranet performance.

Process and Strategic Considerations

Rendering text in a custom font can significantly increase the intranet's visual appeal, but it results in delays due to the extra time browsers need to load the custom font files. The delay is even greater when the text requires different weights (such as bold or light weights), as each weight involves a separate font-file download. Font-file compression and caching help, but these techniques don't completely solve the problem.

It is more favorable to use **variable fonts,** which allow the use of a single font file but adjust the weight of the characters to achieve the desired visual aesthetic. Make sure the browsers your employees use to access the intranet support variable fonts. If they don't, employees should see a fallback, browser-safe font, and up to one custom font.

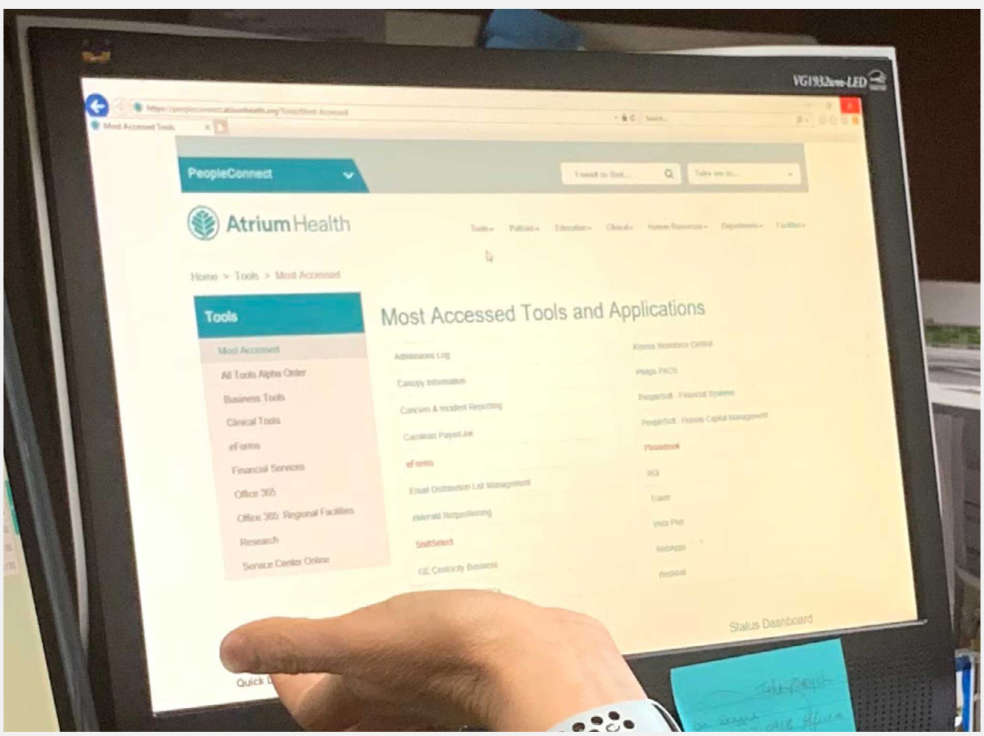
Visual hierarchy and font choices control the delivery of the experience. If employees struggle with where to look on a page, the layout and typography may lack a clear visual hierarchy. Use different text styles and bright colors to draw attention to important items and muted colors for less important areas. Pages look cluttered when text, graphics, or space are not used properly. Also, scanning becomes difficult as links, headings, and subheadings are not easily distinguishable from normal text, and employees have trouble determining which page elements are relevant.

32. Position important and frequently used content near the top of the page.

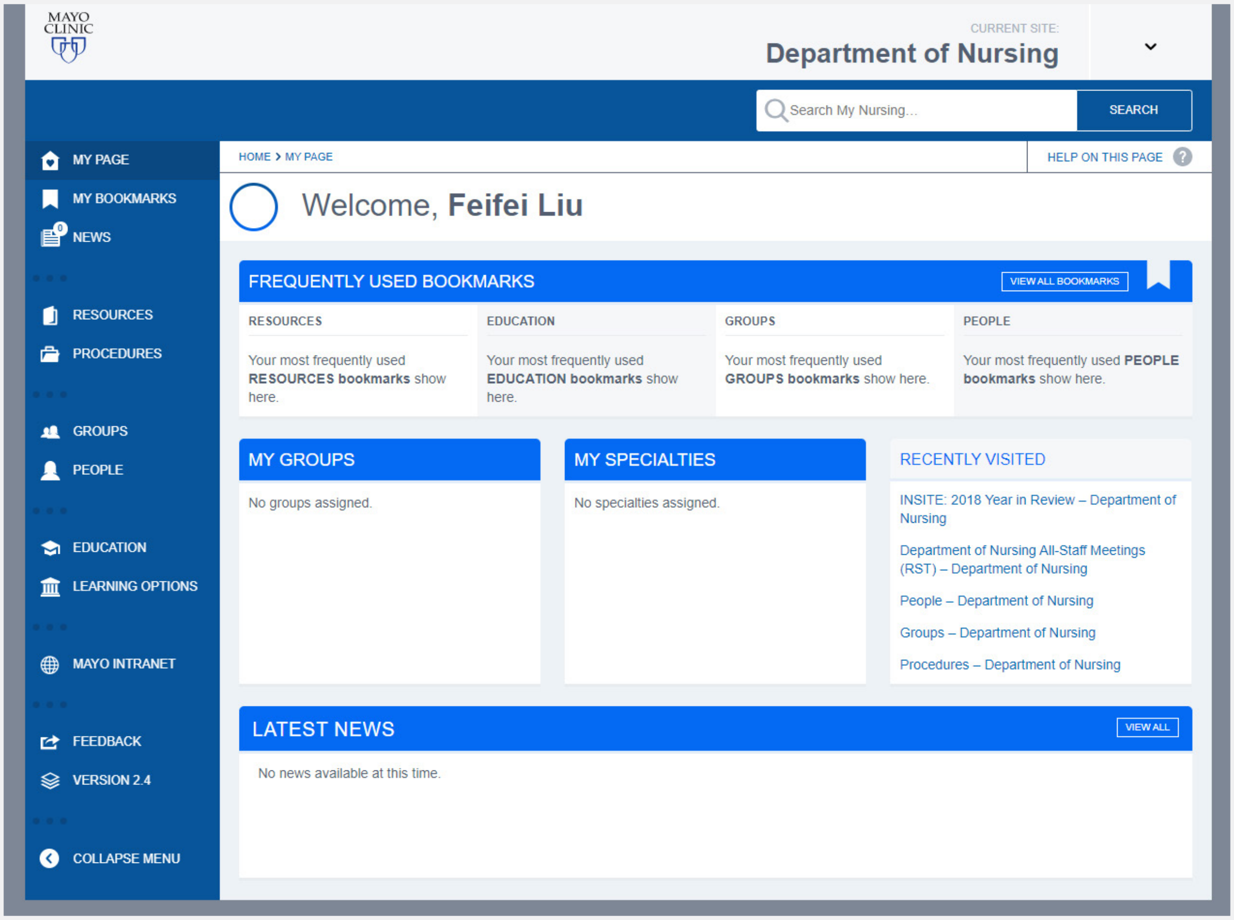
A frequent mistake intranet designers make is not to provide sufficient content or place valuable information high enough in page layouts. Too often, we see landing pages with a big image and very little text on the first screenful. Even when those pages contain the right information, they often don't provide enough context to tell people whether they're in the right place or on the right track.

As a result, employees don't bother scrolling down in search of the right information or clicking on any visible links; they quickly decide the page is not worth exploring and leave with a negative impression of the intranet. Even if the link that led the employee to that page had good information scent (for example, a link from a search results page or the navigation), the employee's time is wasted by the poor context and content positioning on the page where they arrived.

When employees have a question, they decide which page or area of the intranet to go to based on how likely it is to provide an answer to their question and how long it will take to get that answer. Atrium Health knew this and positioned the most frequently accessed digital workplace tools at the top of a dedicated page.



Atrium Health placed links to important information at the very top of the page, knowing employees would be looking for specific tools after navigating to the Most Accessed Tools and Applications *page.*



The Mayo Clinic took a similar approach when prioritizing frequently used bookmarks for resources, education, groups, and people, by placing this information at the top of its nursing department's intranet.

Employees don't scroll mindlessly or click on every link on a page. In their information foraging, they're attempting to maximize their **rate of gain** to acquire as much relevant information in as little time as possible. That's why it's important to understand what employees want to do or what information they seek on any page and then prioritize placing that at the very top. On the Scottish Government's intranet, the design team knew employees would be looking for instructions on how to request annual leave on the *Annual Leave* page. So, they placed this content at the very top, in short, well-formatted, and highly scannable bullet points. Then, subheadings drew employees' attention to other relevant sections of the page that might pertain to those with different information-seeking needs. Even though it's not at the top, that information is still easy to find.

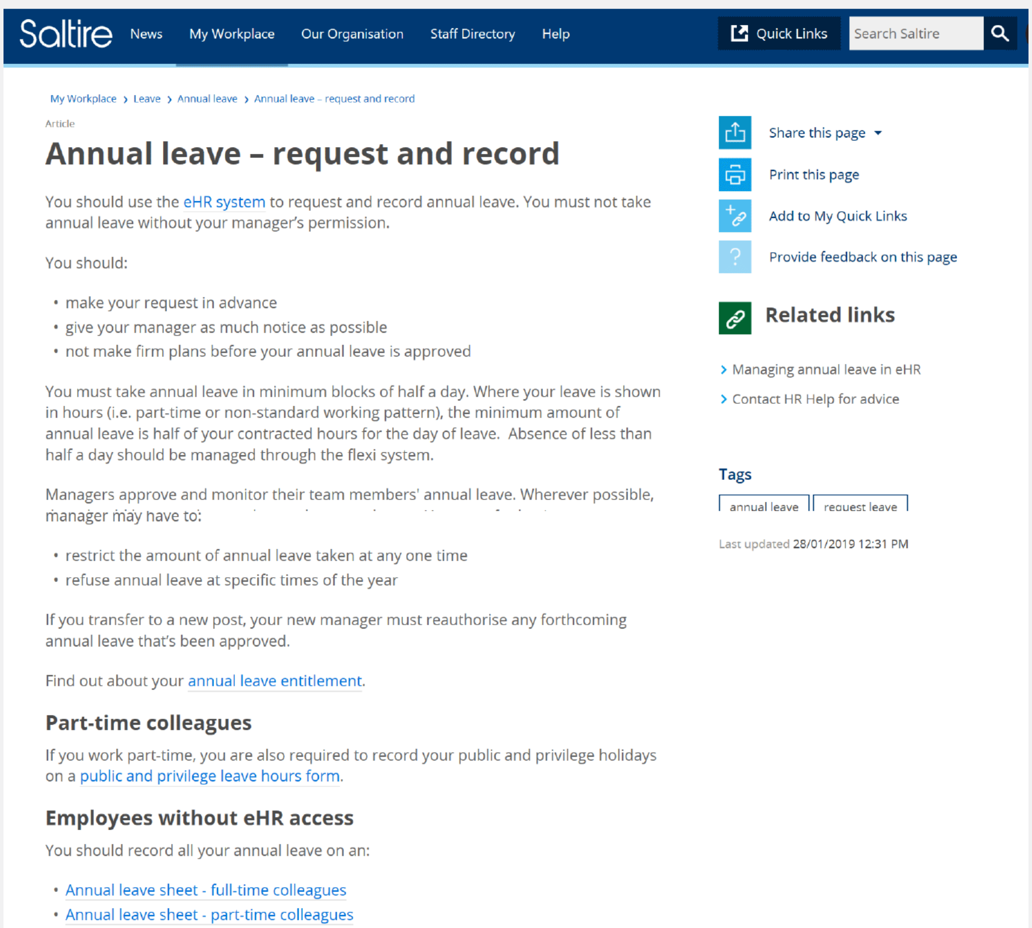
Rate of gain and information foraging

Definitions, Principles, and Methods

If people have a question, they will decide which web page to go to based on (1) how likely it is that the page will provide an answer to their question, and (2) how long it's going to take to get the answer if they go to that page.

They assess the information that they can extract from any candidate source of information relative to the cost involved in extracting that information and choose one or several candidate sources so that they maximize the **rate of gain ratio**:

Rate of gain = Information value / Cost associated with obtaining that information



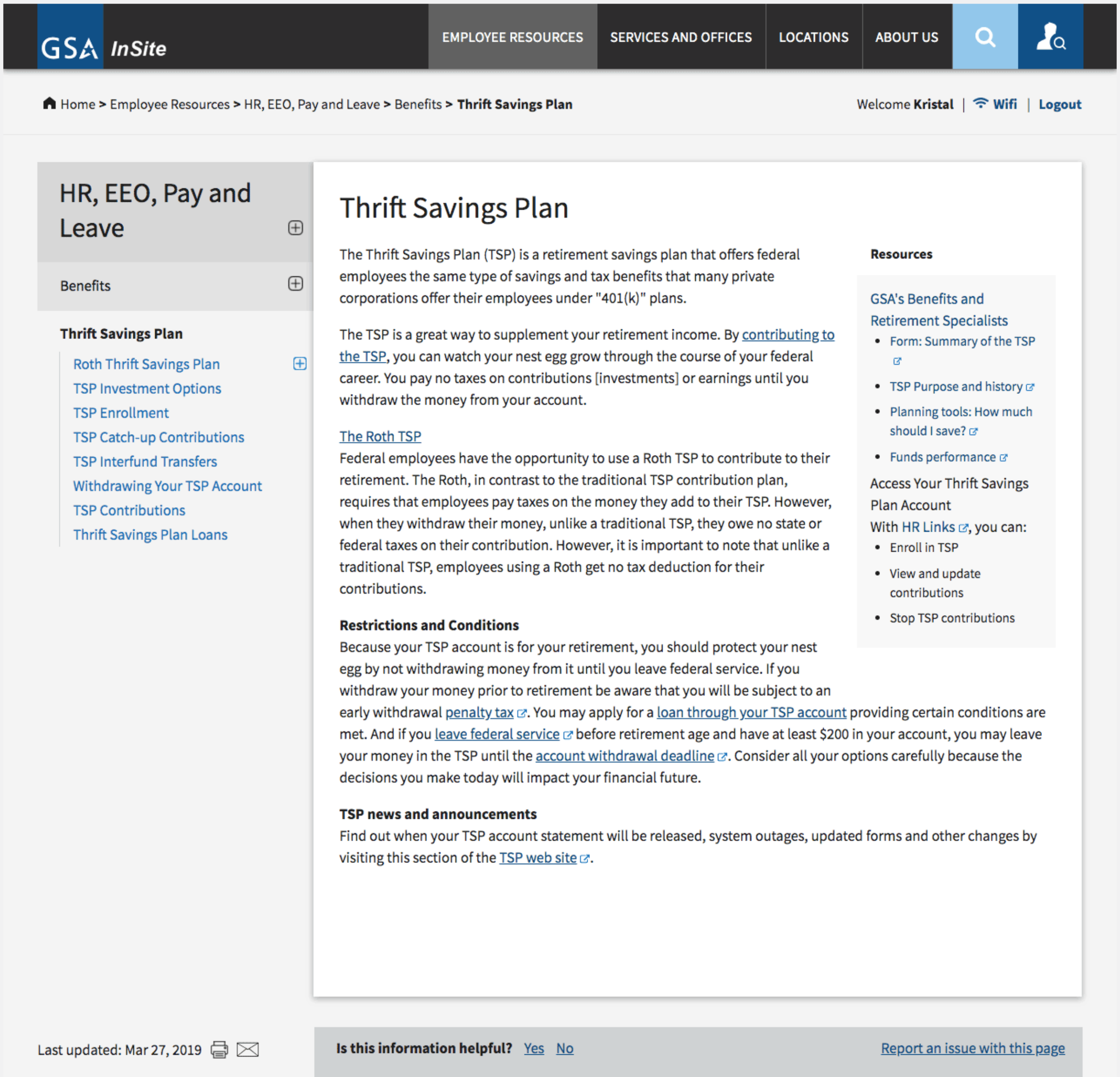
On the Scottish Government's Annual leave *page, the layout and design prioritized the exact content employees needed to find at the top. And it wasn't full of fluffy introductory details or a hero image of someone on a beach.*

At the page level, the way information is laid out and the order in which it is presented suggests what's most likely to be relevant. For example, designers can use scan-friendly formatting such as bulleted lists, bolded keywords, and descriptive headlines to help employees find relevant information. Optimize the content and its position on pages to support the top task the page is meant to address. That will take care of the many employees whose goal is to accomplish that task. It will also take care of other employees attempting to solve a different task for whom the page is irrelevant; they won't be tempted to stick around unless signals on the page lead them to what they need.

When one study participant at the General Services Administration reached a page about the agency's *Thrift Savings Plan*, as they tried to find the how much employees were allowed to contribute to their plan each year, they said, "I'm glossing over all of this information [content in the main body copy]. I don't want to read all this. I just want the website to pop out at me."

The participant went on to scan the page, looking for a number in the text. Once they found a number, they settled on that figure as the answer to complete the task. However, rather than being confident they'd found the *correct* answer, they simply stated they had stopped because it was a number.

When scrolling through the same content, another user said, "Huh, this is just so stressful . . . " because the text wasn't easy to scan. Had the page prioritized this information, placed it at the top, and used clearer subheadings to lead employees to areas of interest, they would have been much more confident and efficient.



Users grew discouraged by this content page on the GSA's intranet, as the content was not easily scannable. Users felt like they had to stop and read each paragraph to find the answers they needed, and this action was counter to how they wanted to consume the content.

Try to stay one step ahead of employees. Adapt content, page layouts, and information positioning to suit real needs and tasks. This way, employees won't need to create special workarounds and can maximize the efficiency of their information-seeking. A good intranet user experience involves web pages designed so employees can get the maximum amount of relevant information in the minimum amount of time.

SUPPORT SKIMMING AND SCANNING

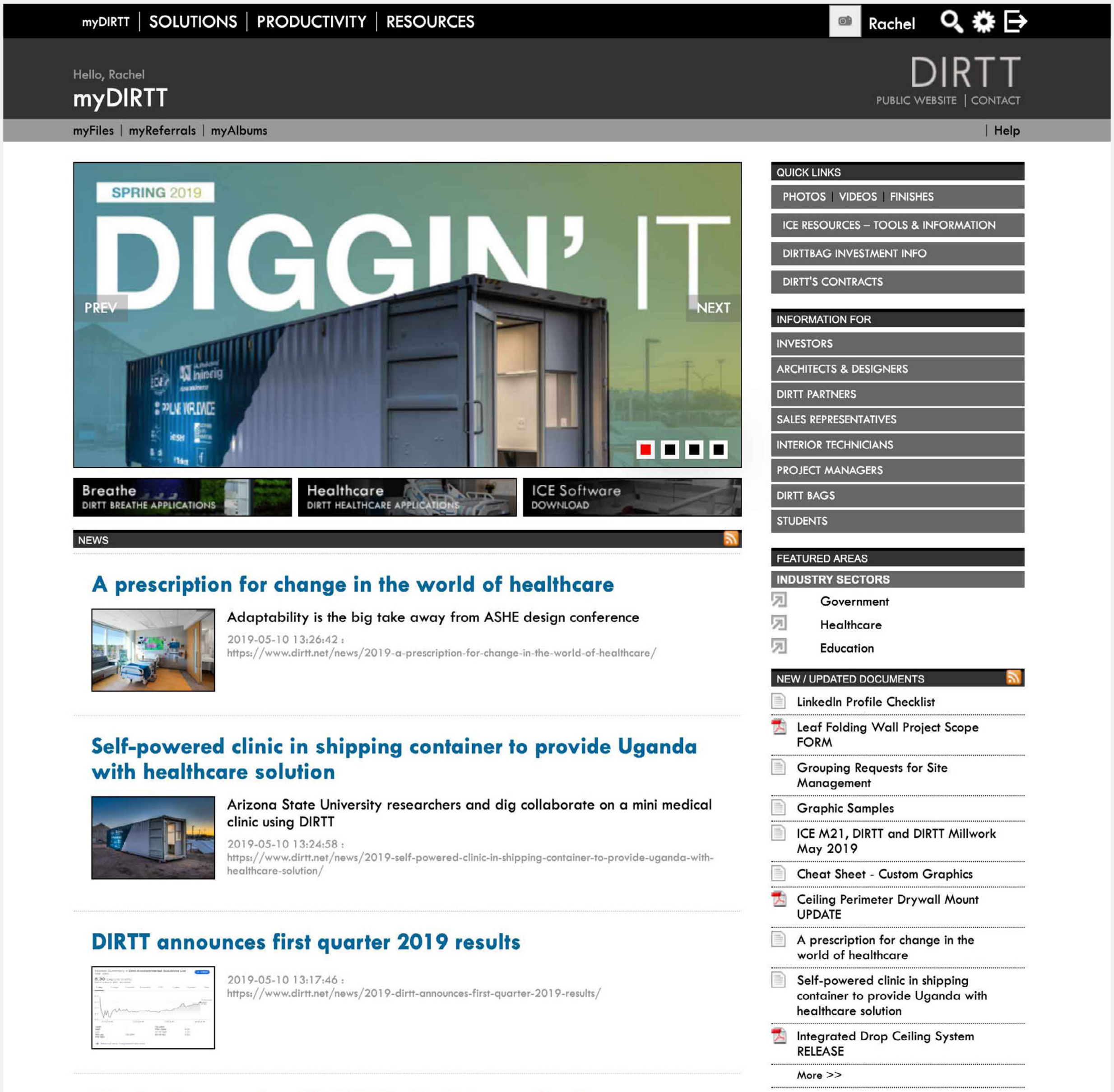
33. Ensure icons and text are legible, scannable, and have proper contrast with the background.

Employees come to the intranet for the content — to get answers and information. In our research, employees didn't read entire pages of intranet content, nor did they want to; they wanted to skim and scan. This is why content formatting is such an important part of an intranet's visual design. Make design decisions that ensure text is as legible and easy to scan as possible:

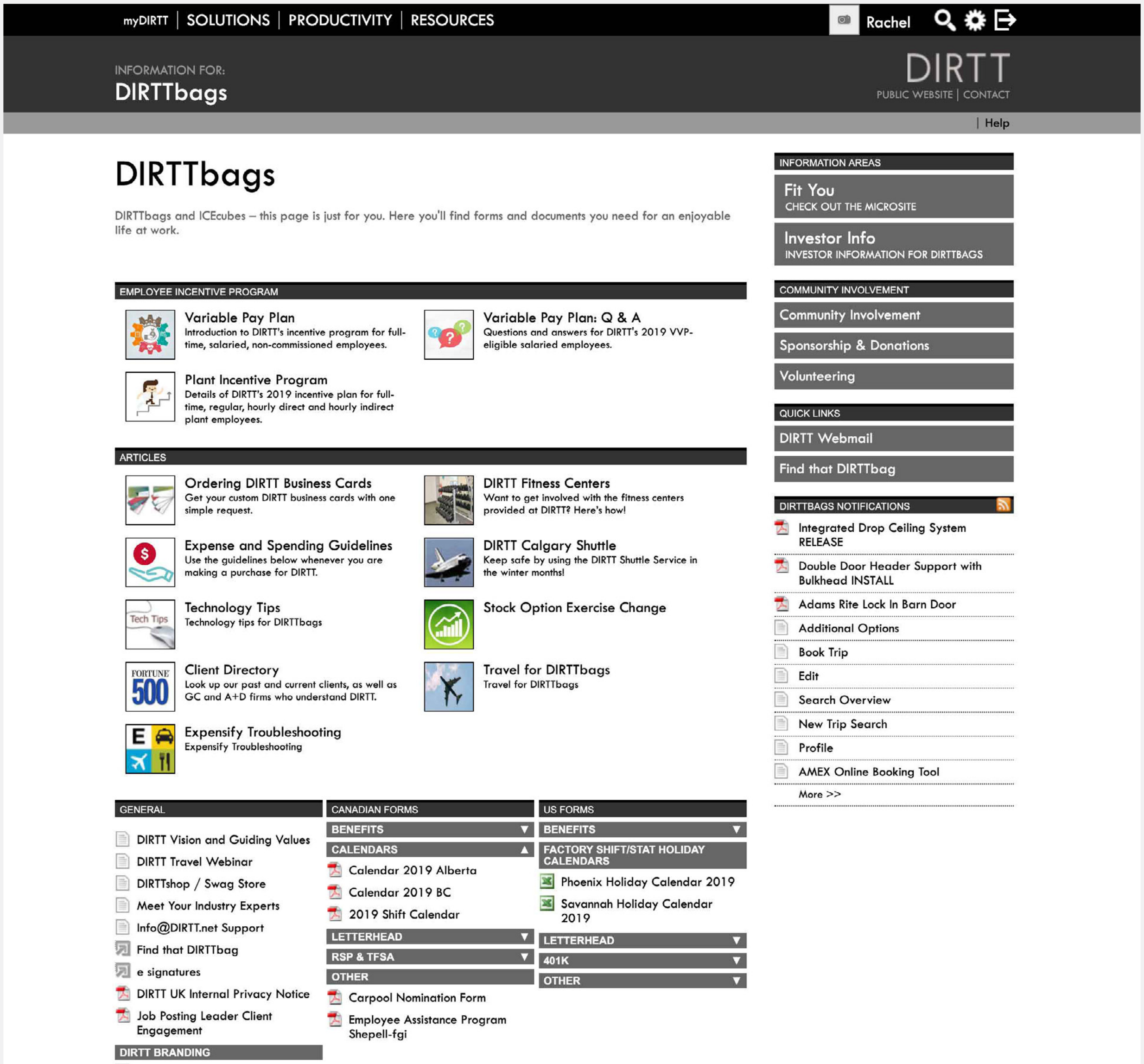
- Choose a clean typeface (usually sans serif for body copy) — reserve serif fonts for headlines and sub-headlines.
- Use a text color that is high contrast with the background.
- Apply proper spacing (also known as leading) between lines of text.
- Size fonts large enough so that users don't have to squint or lean forward to read.

Also, remember that today's intranets are used on various devices, many of them portable; glare due to sunlight can make low-contrast text invisible. Employees shouldn't have to work hard to read the text on a page, whether on a big monitor or a phone.

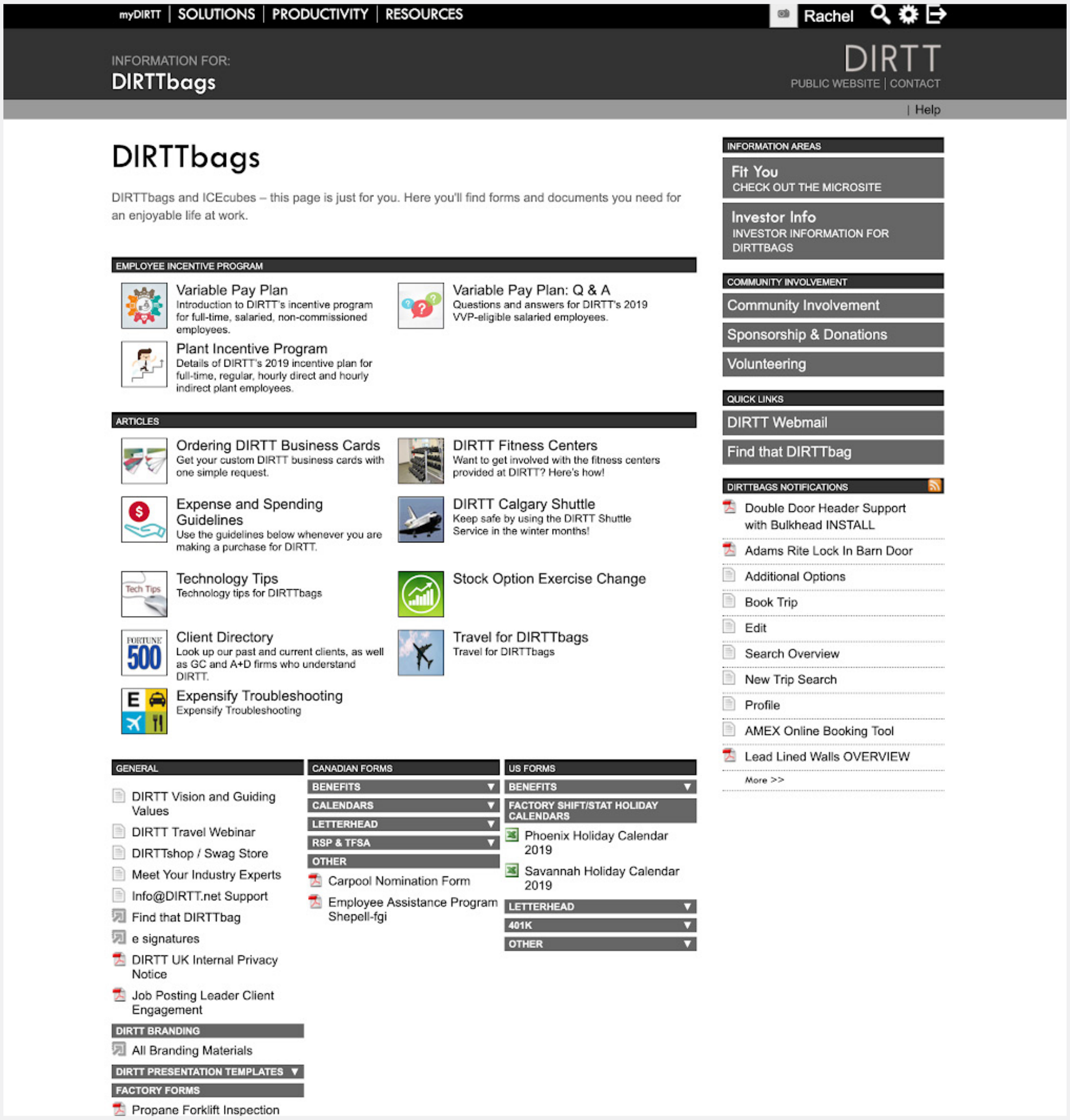
For example, on DIRTT's intranet, the text was small and sometimes had poor contrast with the background, making it difficult to read. In several cases, such as in the summaries under the homepage news items and the links on the *DIRTTbags* page, the text was tiny to the point where employees leaned in to read it. The typeface used on the intranet — TW Cen — wasn't easy to read. Updating it to a more readable font for body copy and links would be a better approach.



Employees struggled to read the small copy underneath news links on the DIRTT intranet homepage because it appeared in tiny, light gray text. Though the text only communicated the date and URL, this is still important information employees needed to scan to decide which link to click.



Though the text on the DIRTTbags *page had proper contrast with the page's white background, it was too small and tightly spaced to be read or scanned easily.*

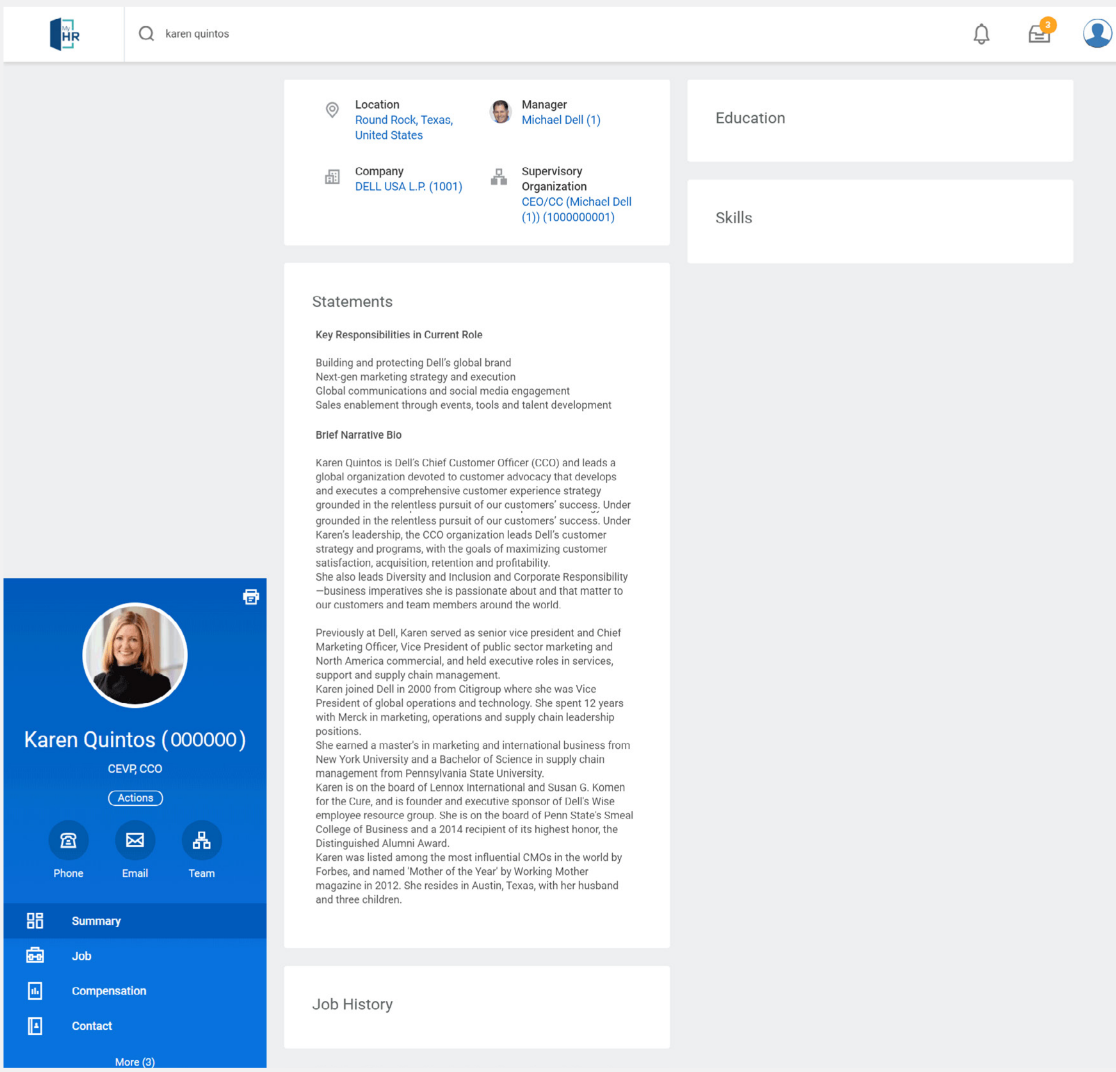


A text improvement on the DIRTTbags *page would be to update links and body copy to Arial font, as shown in this screenshot, and increase the font size and line spacing to help with readability.*

Some of the text on Dell's intranet was also too small and difficult for users to scan. For example, when a participant read the Chief Customer Officer's profile, they leaned forward to get closer to the computer screen to read the text. The employee also followed along each line with their cursor, which indicated the lines of text were too close together. Additionally, the text against the white background could have been in higher contrast to improve readability.

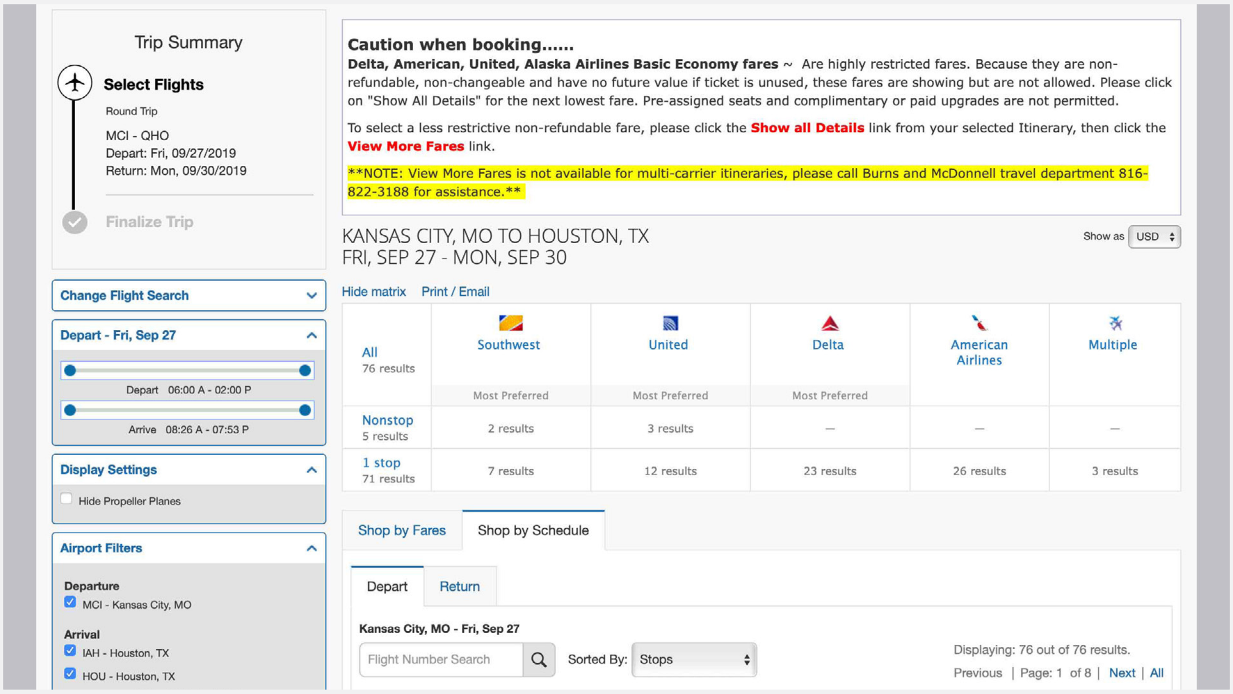
To make the text more scannable and legible, Dell could:

- Chunk like content together on pages.
- Add subheadings within the text to make it more scannable.
- Use bullets when appropriate.
- Increase the vertical line spacing (leading) between lines of text.
- Make the text color slightly darker.
- Make the font slightly larger.
- Bold keywords and phrases.



On Dell's intranet, the copy in the Chief Customer Officer's profile appeared as a wall of text. This content could have been made easier to scan through simple modifications such as adding sub-headlines and using darker text, bulleted lists, and a larger font.

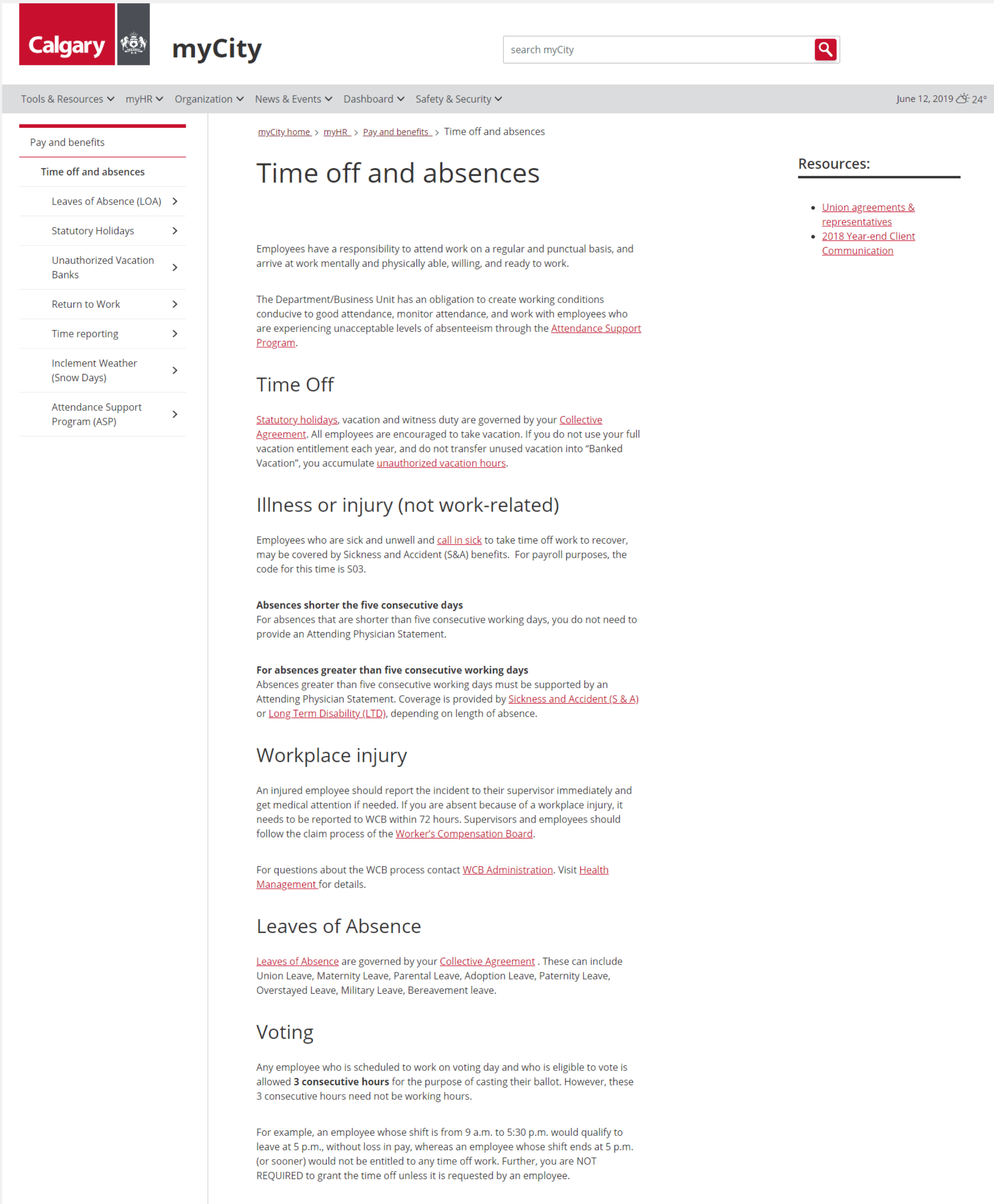
It's important to use formatting techniques strategically. Color and bolding can improve scannability and help draw attention to the most important areas of the page. But when overused, or if everything is bold, it has the opposite effect, and users don't know where to focus their attention. They'll end up overlooking and ignoring the important information you need them to see.



On Burns & McDonnell's travel booking tool, Concur, the use of bolded, red, and yellow-highlighted text made it difficult for users to know where to focus their attention and what to pay attention to. They often ended up ignoring the important details and alerts, which led to confusion and booking errors.

On the City of Calgary's intranet, pages visited by participants during the study had well-constructed text that had proper contrast and was easily scannable. Most pages made good use of headings and bullets, which made scanning the page easy. The only comment one user had about the text being too dense was in a blog post they clicked on. When they faced a wall of text, they said, "I think I struggle with reading with a lot of information on the screen. I think that [the blog about online scams] would put me off. I'm more of a visual person."

However, not all of the intranet's blog posts suffered from this problem. One user commented favorably on the content layout of a different blog post by saying, "So, there's one very recent one, so I'll click on that one. Yeah, so this one is about National Alcohol Awareness Week. Nice use of heading and bullets; it's very scannable."



Calgary myCity

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Tools & Resources | myHR | Organization | News & Events | Dashboard | Safety & Security | June 12, 2019 24°

Pay and benefits
- Time off and absences
  - Leaves of Absence (LOA)
  - Statutory Holidays
  - Unauthorized Vacation Banks
  - Return to Work
  - Time reporting
  - Inclement Weather (Snow Days)
  - Attendance Support Program (ASP)

myCity home > myHR > Pay and benefits > Time off and absences

Time off and absences

Employees have a responsibility to attend work on a regular and punctual basis, and arrive at work mentally and physically able, willing, and ready to work.

The Department/Business Unit has an obligation to create working conditions conducive to good attendance, monitor attendance, and work with employees who are experiencing unacceptable levels of absenteeism through the Attendance Support Program.

Time Off

Statutory holidays, vacation and witness duty are governed by your Collective Agreement. All employees are encouraged to take vacation. If you do not use your full vacation entitlement each year, and do not transfer unused vacation into "Banked Vacation", you accumulate unauthorized vacation hours.

Illness or injury (not work-related)

Employees who are sick and unwell and call in sick to take time off work to recover, may be covered by Sickness and Accident (S&A) benefits. For payroll purposes, the code for this time is S03.

Absences shorter the five consecutive days
For absences that are shorter than five consecutive working days, you do not need to provide an Attending Physician Statement.

For absences greater than five consecutive working days
Absences greater than five consecutive working days must be supported by an Attending Physician Statement. Coverage is provided by Sickness and Accident (S & A) or Long Term Disability (LTD), depending on length of absence.

Workplace injury

An injured employee should report the incident to their supervisor immediately and get medical attention if needed. If you are absent because of a workplace injury, it needs to be reported to WCB within 72 hours. Supervisors and employees should follow the claim process of the Worker's Compensation Board.

For questions about the WCB process contact WCB Administration. Visit Health Management for details.

Leaves of Absence

Leaves of Absence are governed by your Collective Agreement . These can include Union Leave, Maternity Leave, Parental Leave, Adoption Leave, Paternity Leave, Overstayed Leave, Military Leave, Bereavement leave.

Voting

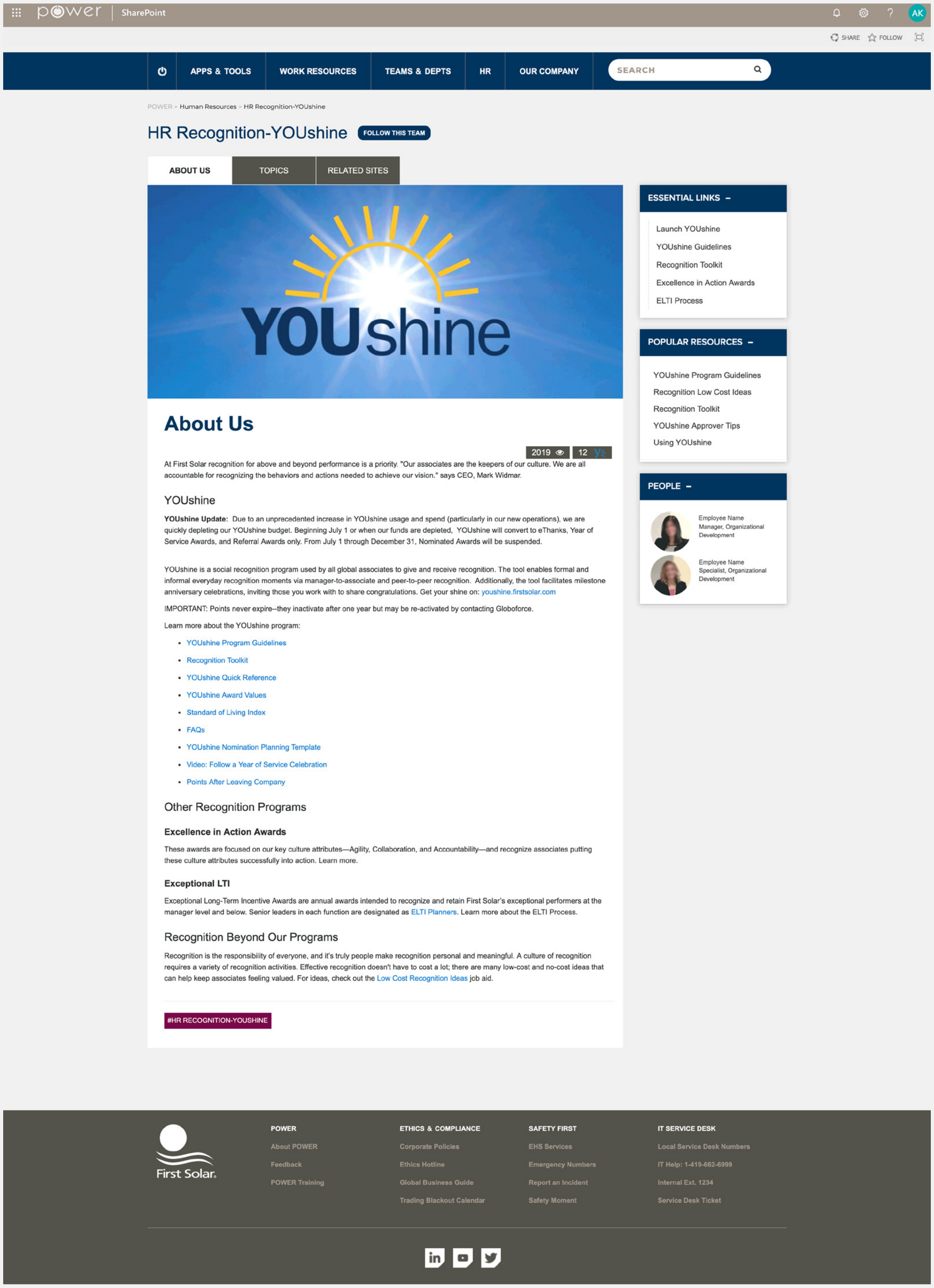
Any employee who is scheduled to work on voting day and who is eligible to vote is allowed **3 consecutive hours** for the purpose of casting their ballot. However, these 3 consecutive hours need not be working hours.

For example, an employee whose shift is from 9 a.m. to 5:30 p.m. would qualify to leave at 5 p.m., without loss in pay, whereas an employee whose shift ends at 5 p.m. (or sooner) would not be entitled to any time off work. Further, you are NOT REQUIRED to grant the time off unless it is requested by an employee.

Resources:
- Union agreements & representatives
- 2018 Year-end Client Communication

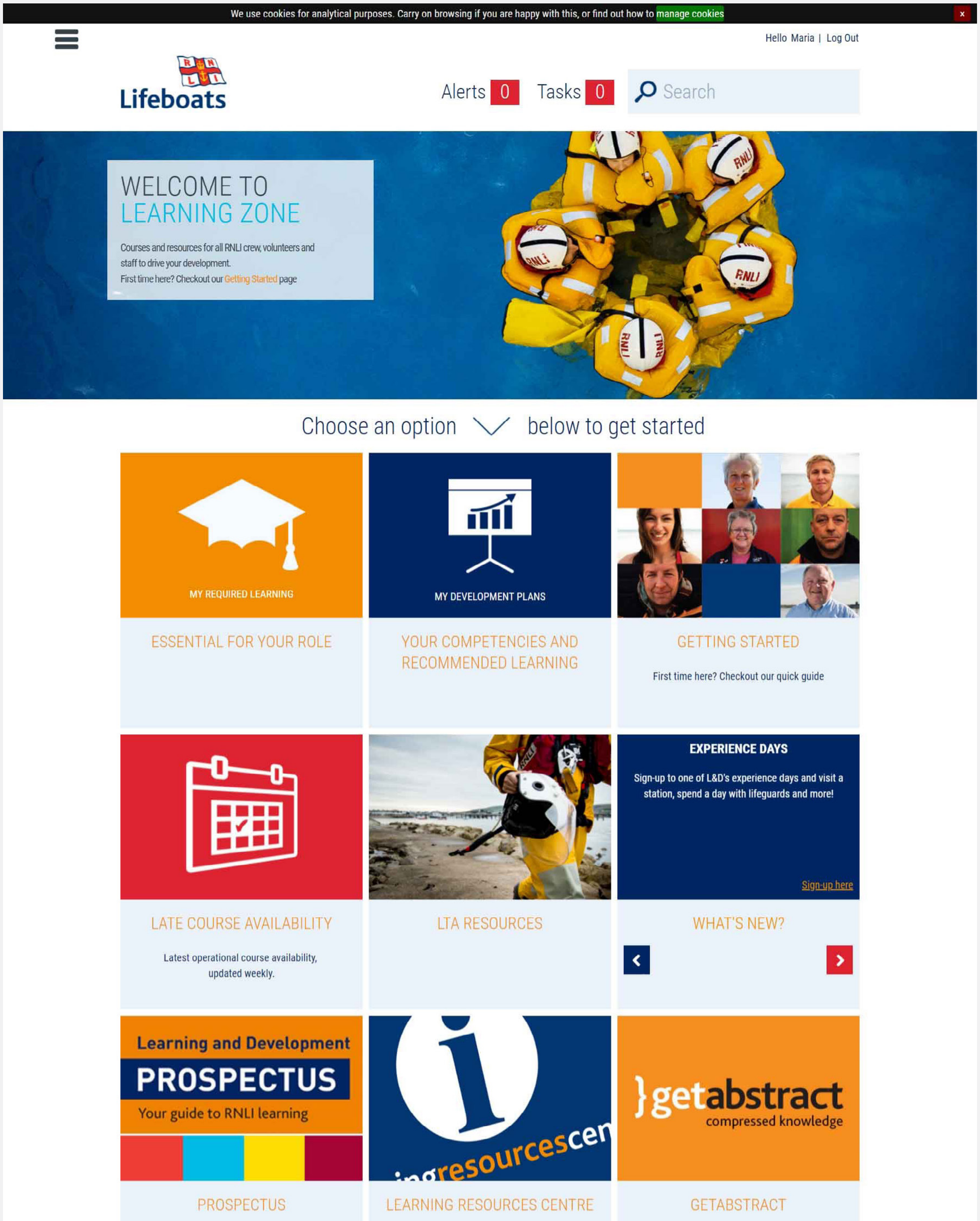
The text and content on the City of Calgary's intranet was well formatted, legible, and easy to scan.

First Solar's content was also easy to skim and scan. The text was dark enough against the bright white background, and headlines, subheadings, bolding, and bulleted lists were used.

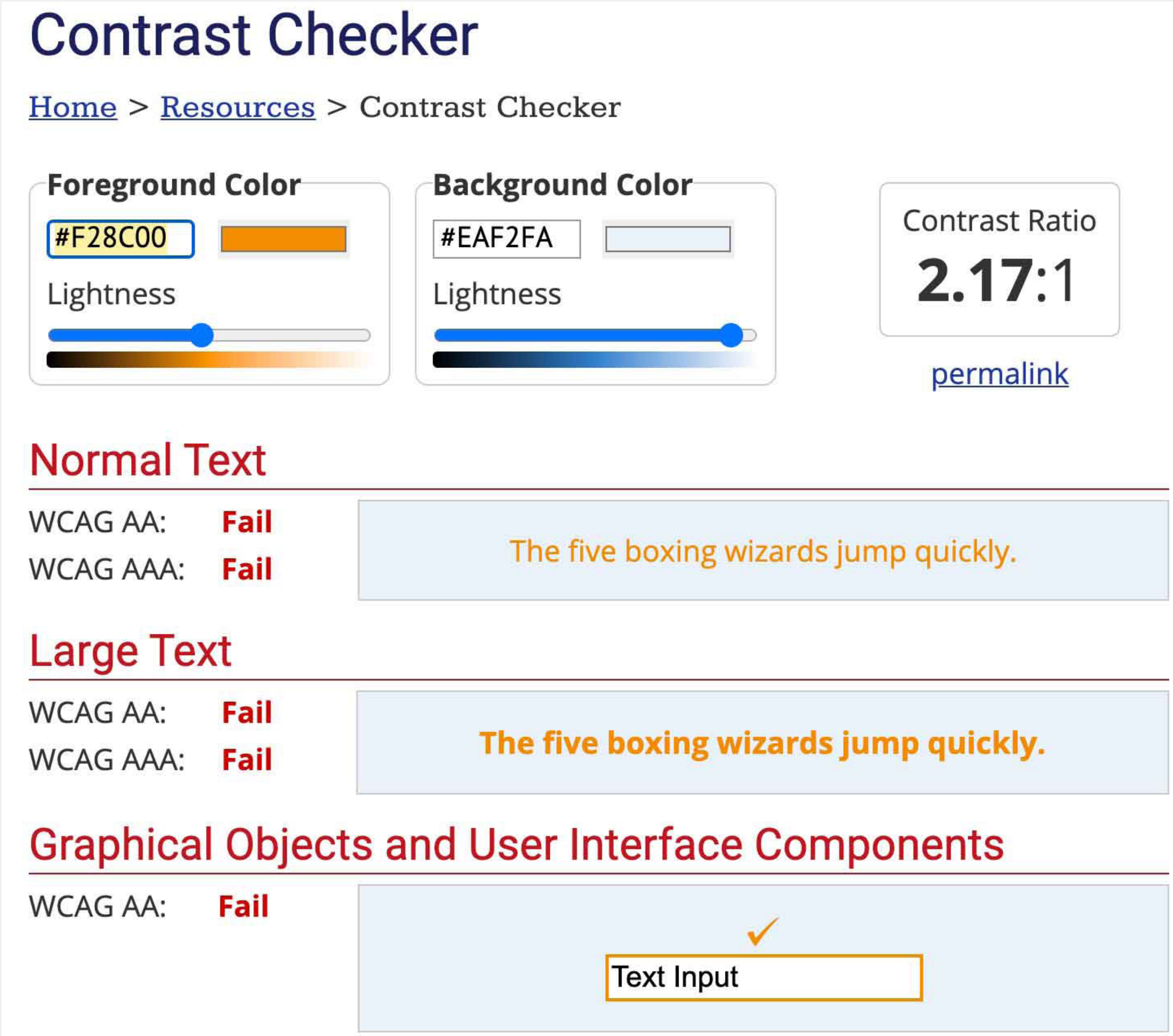


First Solar's intranet also had nicely formatted content that was easy for employees to see, skim, and scan.

The Royal National Lifeboat Institution used a light blue background behind bright orange text on its learning platform homepage, which was not accessible and was difficult for users to scan.

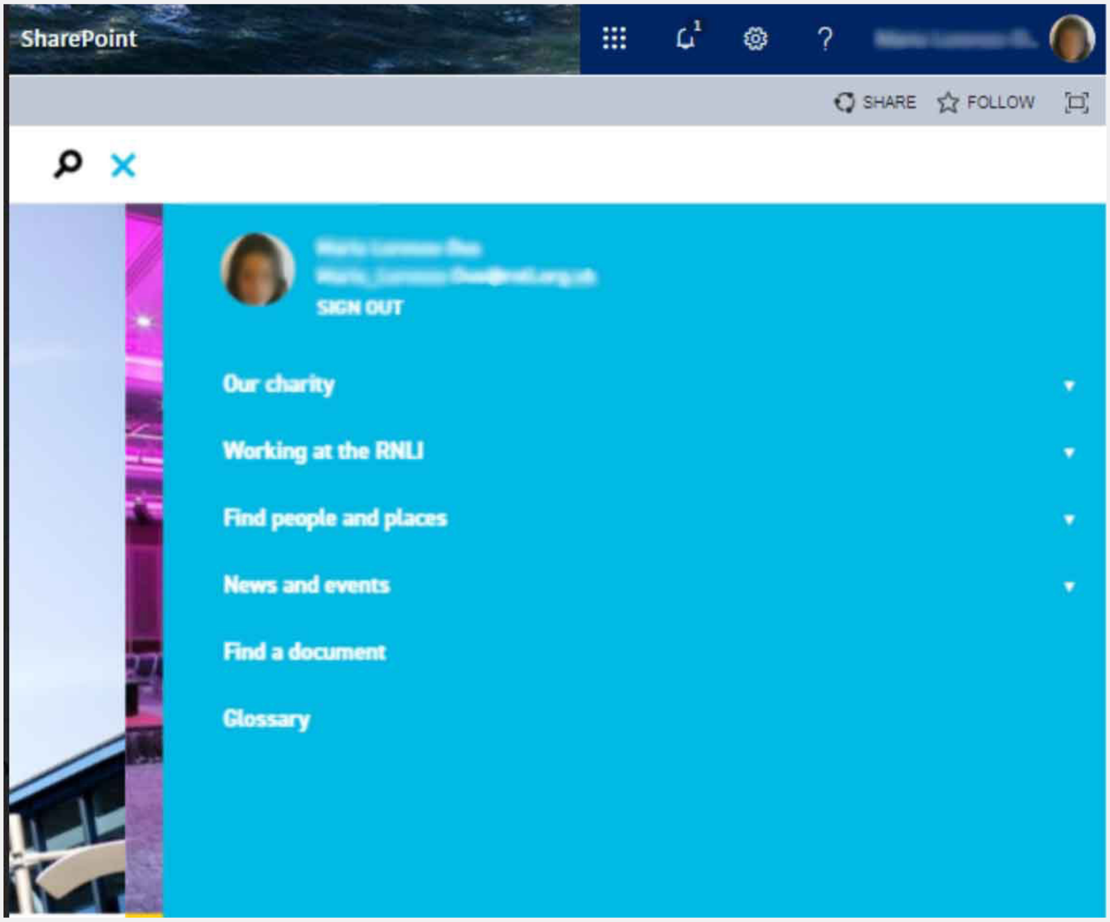


The orange text on the homepage cards on the Royal National Lifeboat Institution's learning platform did not properly contrast with the light blue background. A better approach would be to use dark blue or black text.



Checking the text and background color contrast ratio on RNLI's learning platform homepage using WebAim's contrast checker reveals that this combination fails all accessibility standards.

RNLI used a hamburger menu icon to represent the main navigation on its intranet. Unfortunately, the icon's bright blue color against the white background was not accessible. Additionally, the items were displayed with the same poor color contrast once the menu was opened. Two employees leaned in closely to read the white menu labels on the blue background. For those with visual impairments, this color combination was also too difficult to read, skim, and scan, as the contrast ratio of this color combination was not accessible.

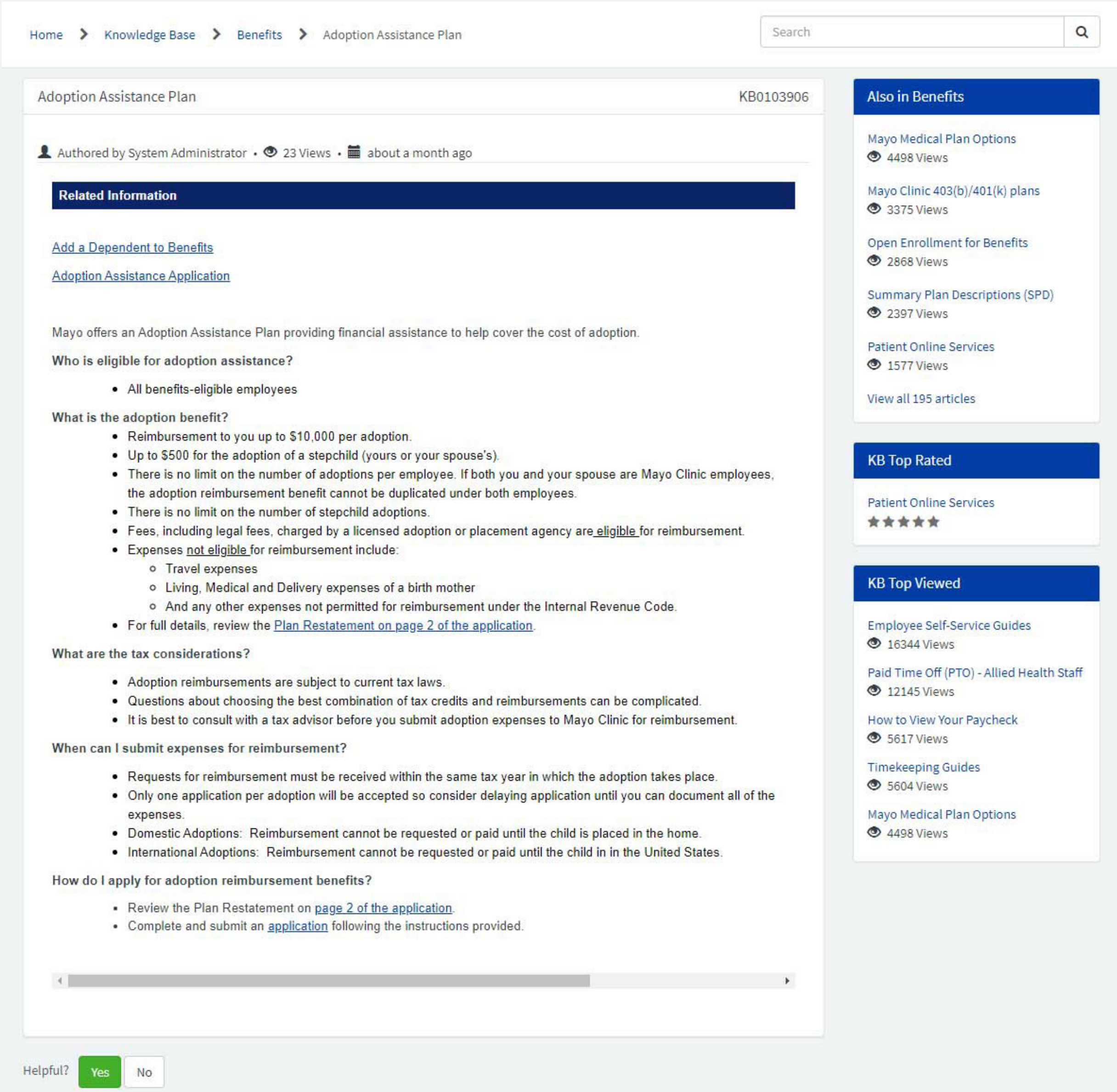


White text against a bright blue background on the Royal National Lifeboat Institution's main navigation menu did not pass accessibility standards, and it strained employees' eyes as they tried to scan the menu options.

34. Design headlines and subheadings so they are visibly different from the body copy.

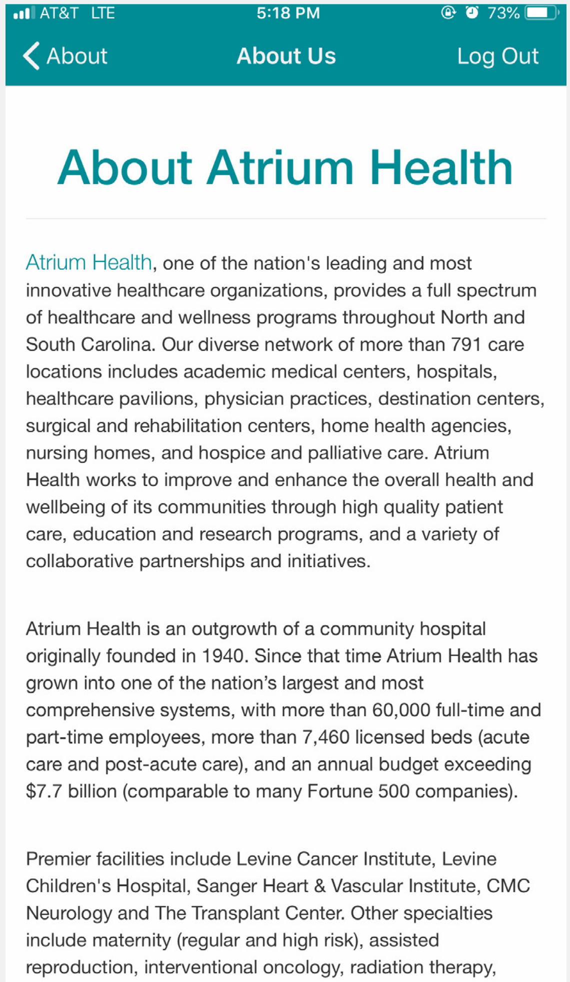
When content pages are not visually segmented with descriptive headings and subheadings, employees have to wade through an undifferentiated mass of text on the page. We call these walls of text. Don't force employees to expend the extra cognitive effort and energy required to understand intranet content with this type of presentation. When designing content, add headings and subheadings to make sure the content is scannable. Subheadings must be visibly different from body copy so that employees can easily tell one section of content from another.

In one example, an employee scanned a page on the Mayo Clinic intranet to find out how much money the company would contribute to an employee who was adopting a child. The page displayed many different types of allowances, but one of the subheadings mentioned the words, *Tax Considerations*. The user skipped that content section entirely, even though the answer to complete her task was there. She found it later, after three minutes and 26 seconds of searching. If the subheading had been more visibly distinct and contained more of the content underneath it, the user would have found her answer much more quickly.



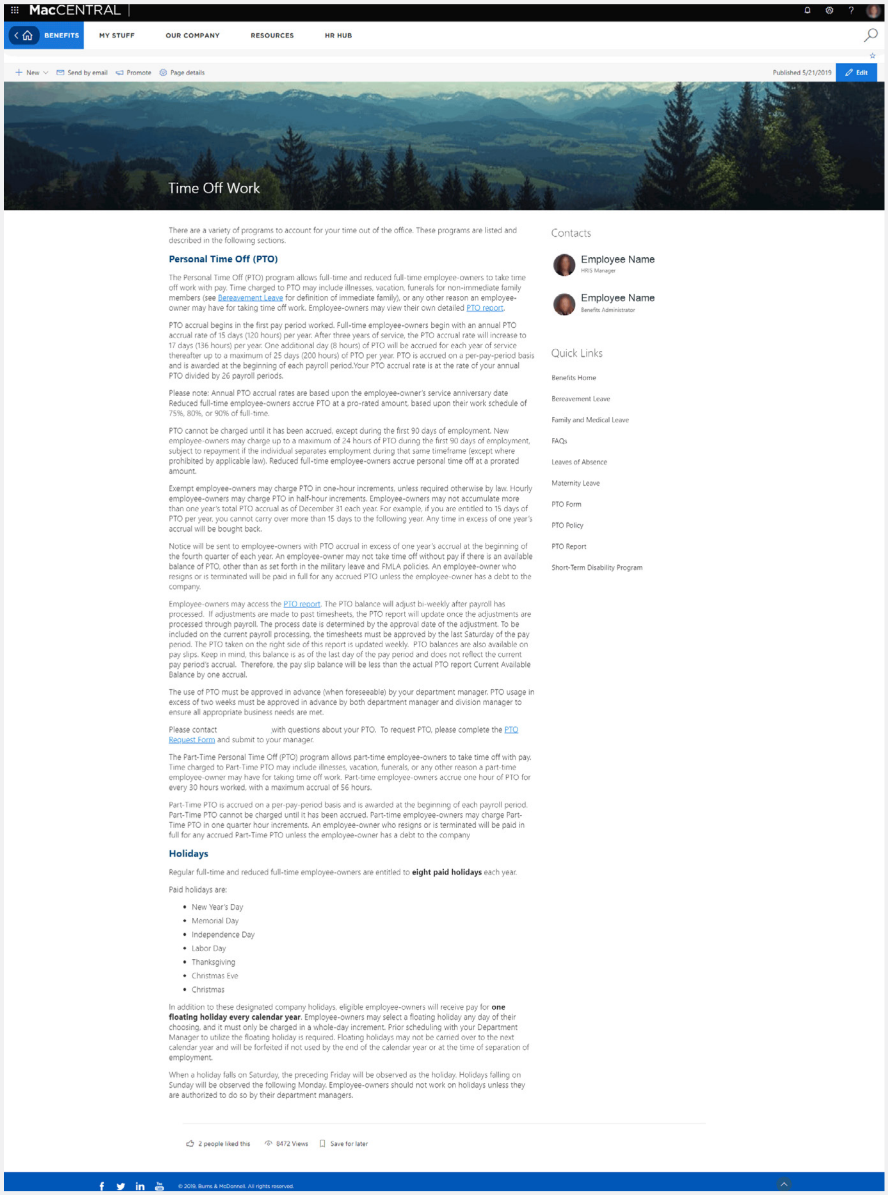
A user at the Mayo Clinic struggled to find the answer to complete a task because the subheadings on the page were not visually different enough from the body copy. This issue could be easily solved by increasing the font size of the subheadings and writing clearer headlines to draw users into key content sections.

In another example, an employee was scanning content on the mobile version of Atrium Health's intranet. Unfortunately, the content appeared as a wall of text without headings or subheadings to break up the content. Including signals and signposts, such as subheadings, in content consumed on smaller screens is even more important as there is less context. By doing so, users will quickly get a sense of what's in each section of copy on the page as they scroll to skip the ones they don't need and focus on the ones they do.



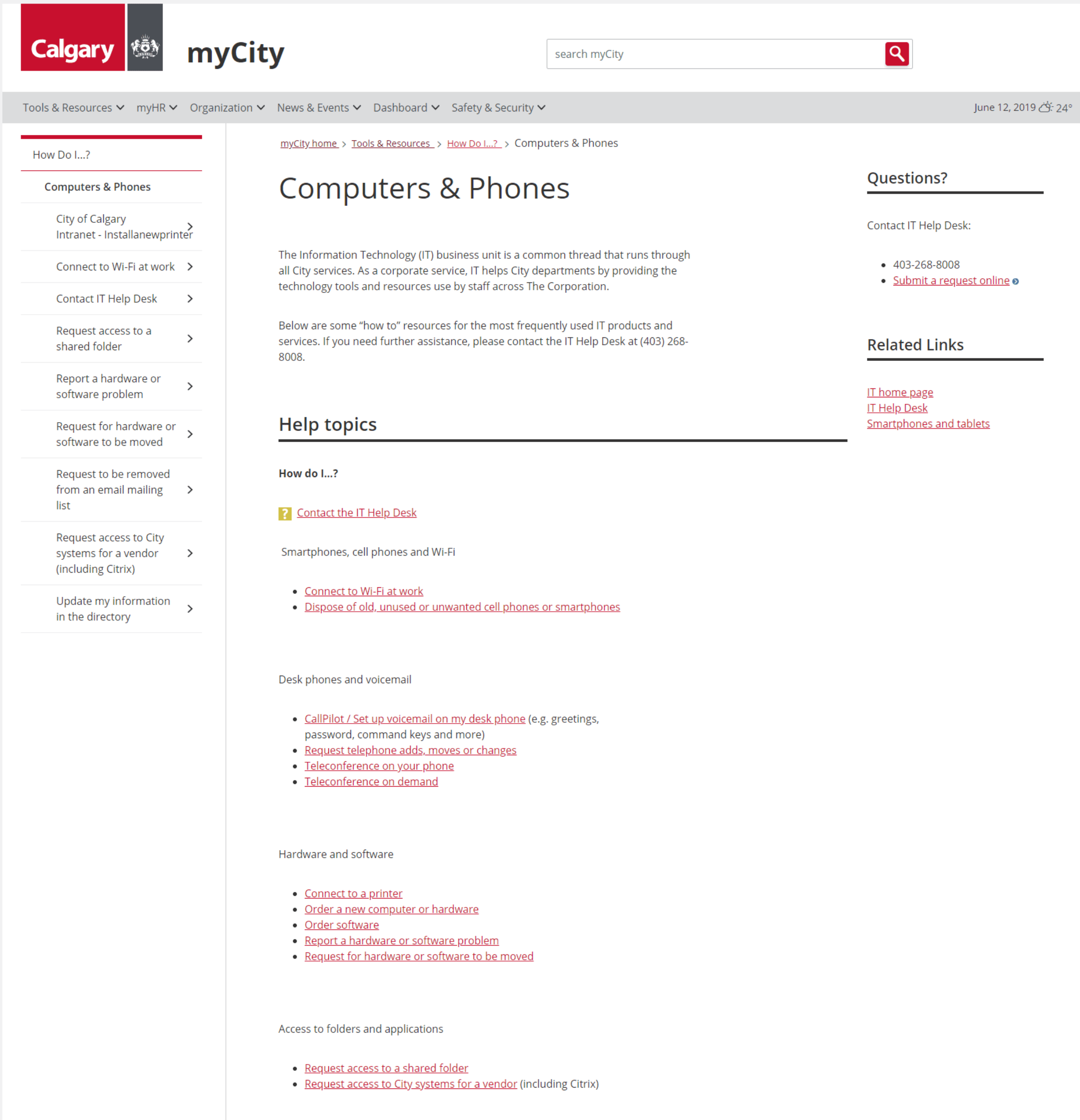
This About *section on Atrium Health's mobile intranet would be much easier to skim and scan by adding subheadings that are visibly different from the body copy, such as in a teal font that's slightly smaller than the main headline.*

On Burns & McDonnell's intranet, a content page with information about requesting time off from work would have also benefitted from larger subheadings. The main headline on the page read *Time Off Work*, which was clear and favorable; however, only one additional subheading appeared. It was bolded and displayed in a navy-blue font, which was visibly different from the body copy, but it could have been slightly larger to stand out sufficiently. Including several more subheadings to summarize what each paragraph communicated would also reduce the wall-of-text appearance.

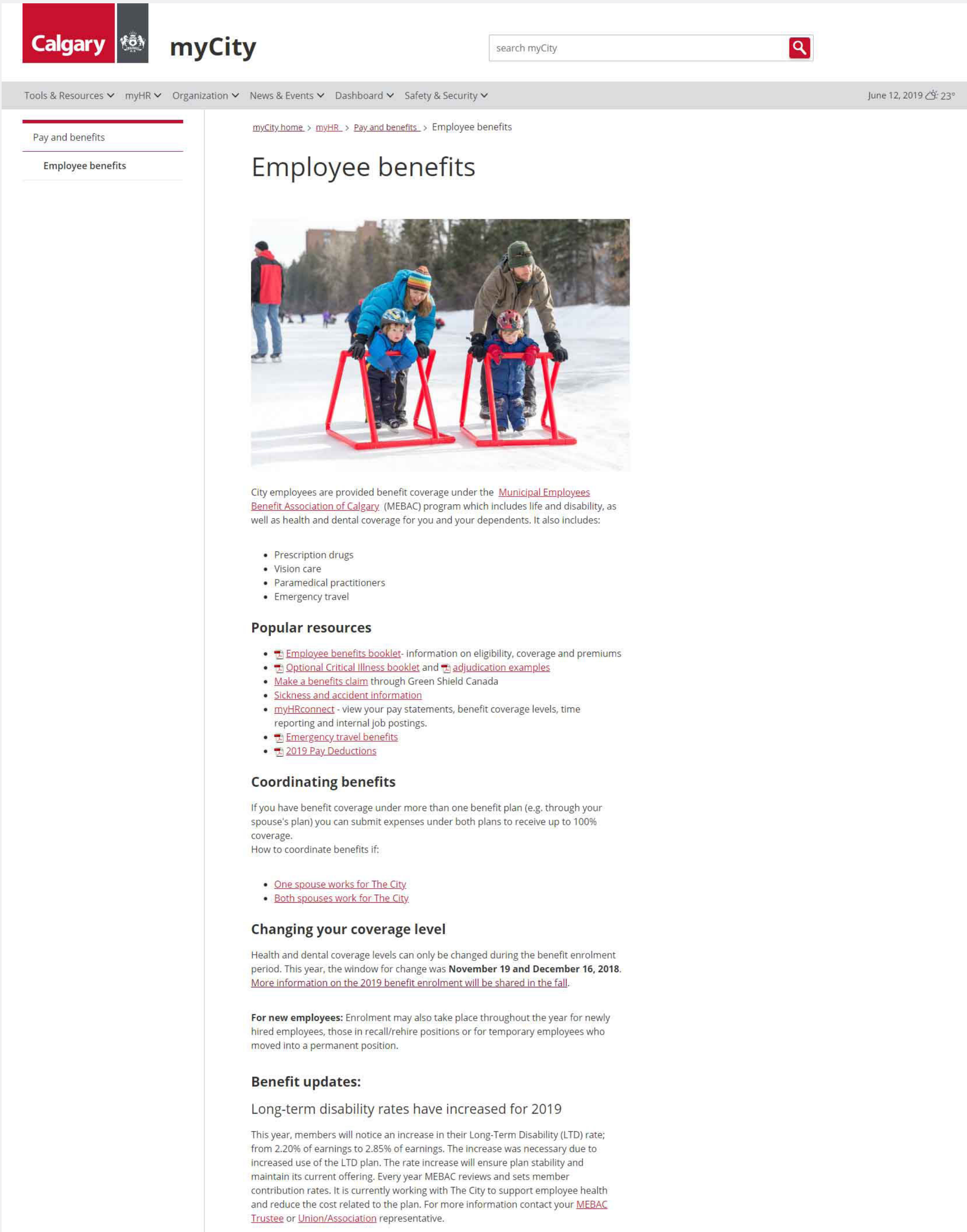


Burns & McDonnell's Time Off Work *page only included one subheading that was not as visually distinct as it could be from the body copy. Increasing the font size and having even more subheadings would help to improve this page.*

While some pages on the City of Calgary's intranet used large subheadings that were visibly different from the body copy, others failed to use consistent formatting and had subheadings that appeared in either bolded body copy or the same font size and weight as the body copy itself. Though the subheadings were spaced apart, they were not visually different enough from the body copy to stand out. A better approach would be to use the same headline treatments as what's used on the *Help topics* subheading or a slightly smaller version of this treatment for the other subheadings on the page.

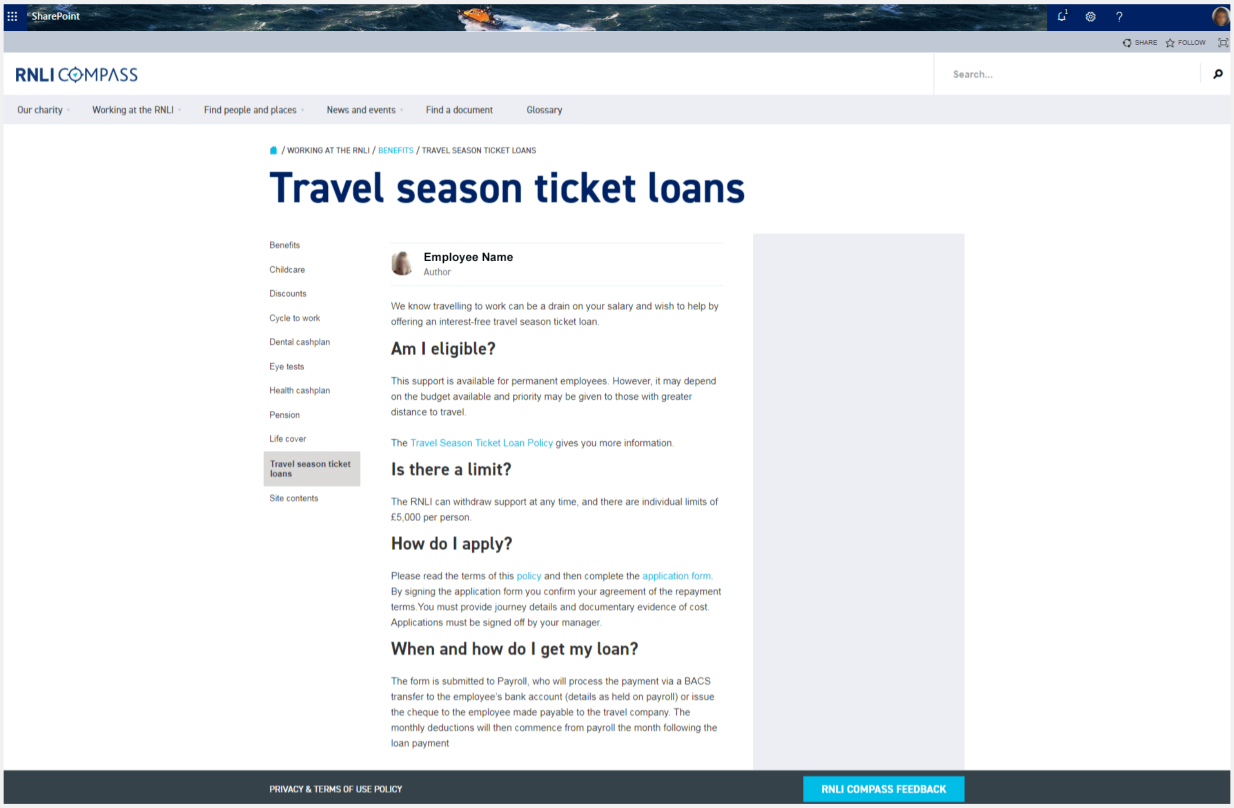


The subheadings on this page from the City of Calgary's intranet were not visually different enough from the body copy on the rest of the page. Increasing the size and weight of the font for lines such as Smartphones, cell phones, and Wi-Fi *would make the page easier to scan.*



The Employee Benefits *page on the City of Calgary's intranet was a much better example of using subheadings that were clear and visibly different from the body copy.*

On the Royal National Lifeboat Institution's intranet, users found the subheadings on the *Travel season ticket loans* page helped them locate the information they needed. In addition to being clear, concise, and descriptive, the subheadings were visibly different from the body copy, which helped draw the user's eye to the specific information they needed.



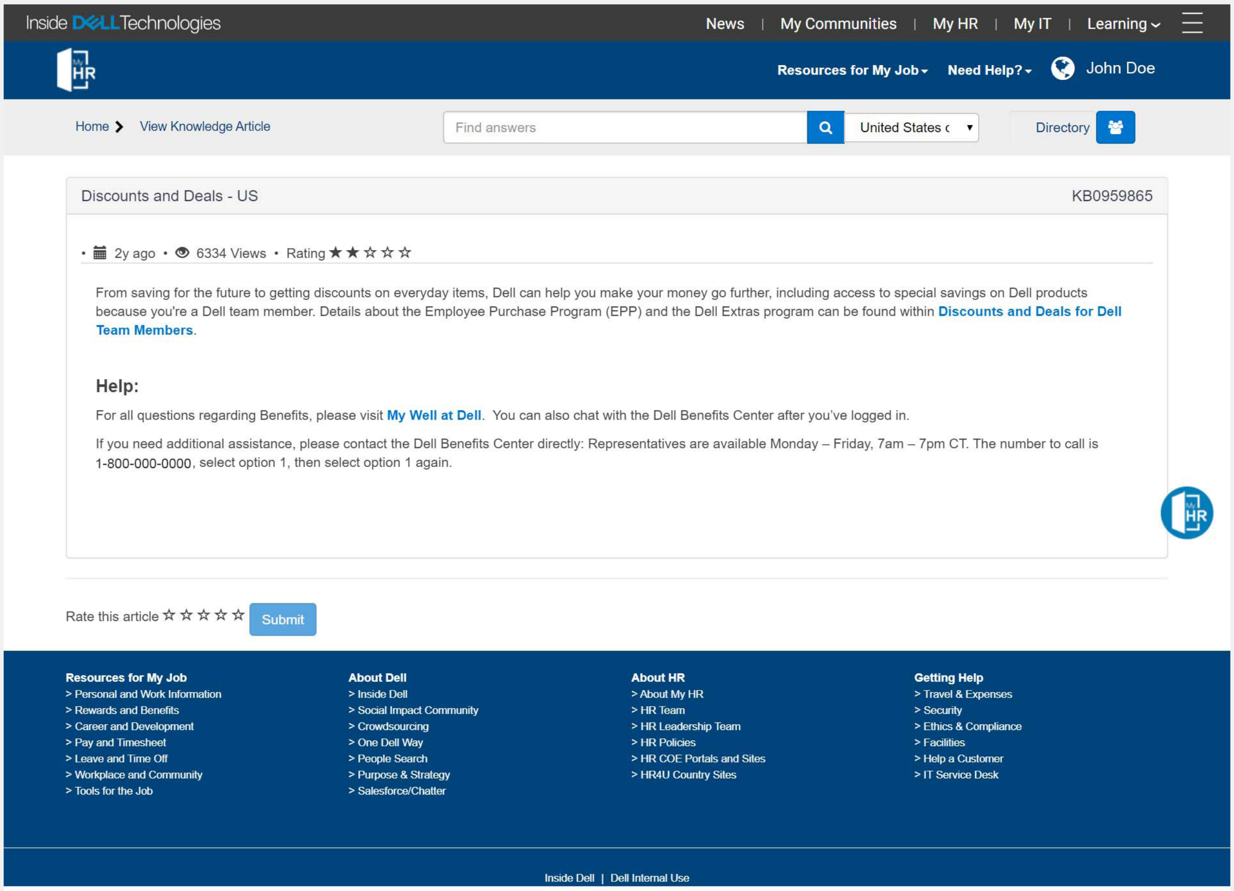
The subheadings on the Royal National Lifeboat Institution's intranet were effective and easily distinguished from the body copy on the page.

35. Use a line length (also known as line measure) of 45–75 characters.

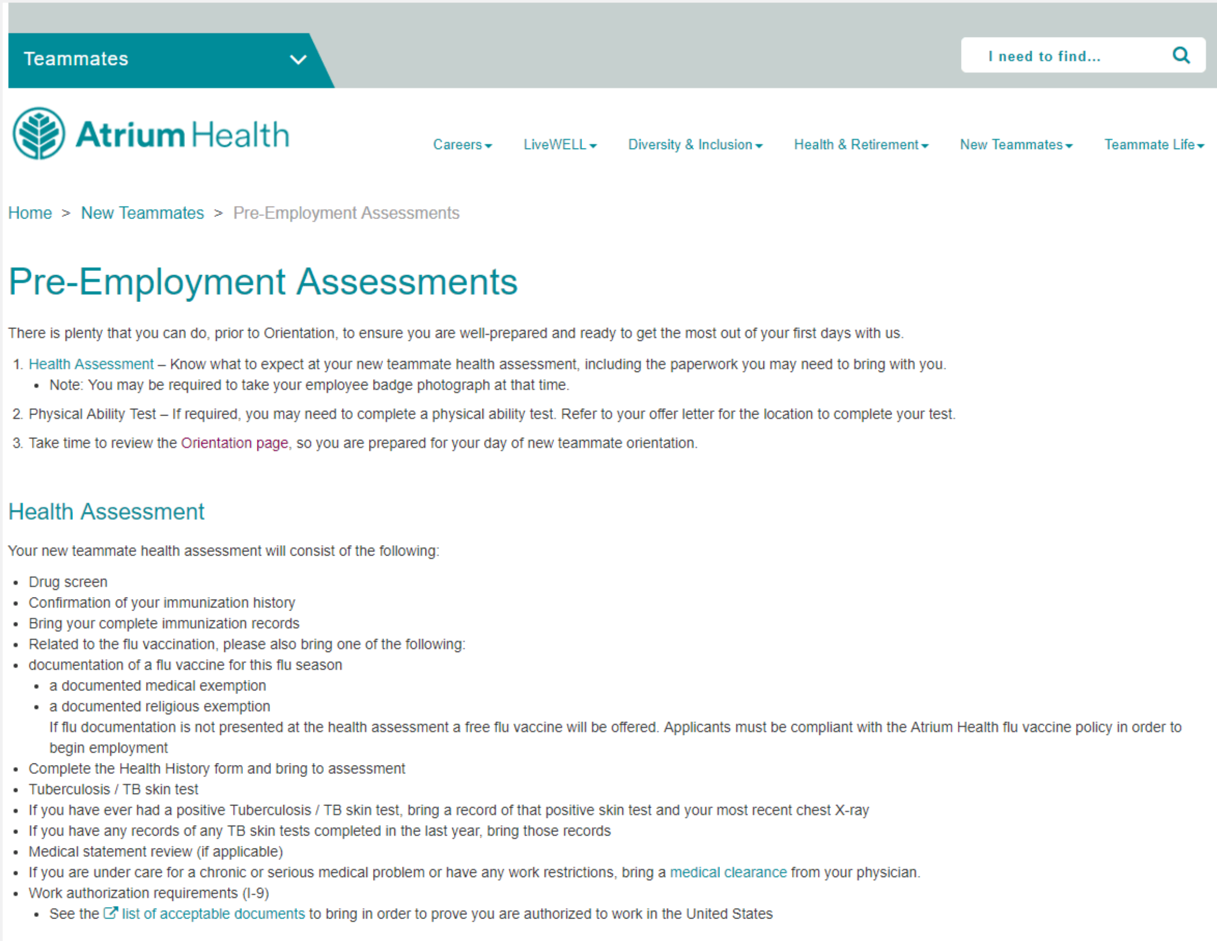
When pages are designed to have wide columns with a lot of text, it makes it difficult for employees to read and scan the content. Their eye is forced to traverse the entire width of the page, then find where to start the next line all over again on the complete opposite side of the screen. This is too much cognitive effort and interaction cost for busy employees.

As such, it's best to use a line length (also known as line measure) that doesn't force employees' eyes to work so hard to consume content. A maximum line length of 45 to 75 characters works best for intranet designs.

For example, *Discounts and Deals*, the employee discounts page on Dell's intranet, had a wide line length. To improve pages with wide columns of text, consider narrowing them.



The line length on Dell's Discounts and Deals *page was too long. Reducing the width of the text block would make this page easier to skim and scan.*



Teammates

I need to find...

Atrium Health

Careers LiveWELL Diversity & Inclusion Health & Retirement New Teammates Teammate Life

Home > New Teammates > Pre-Employment Assessments

Pre-Employment Assessments

There is plenty that you can do, prior to Orientation, to ensure you are well-prepared and ready to get the most out of your first days with us.

1. Health Assessment – Know what to expect at your new teammate health assessment, including the paperwork you may need to bring with you.
   - Note: You may be required to take your employee badge photograph at that time.
2. Physical Ability Test – If required, you may need to complete a physical ability test. Refer to your offer letter for the location to complete your test.
3. Take time to review the Orientation page, so you are prepared for your day of new teammate orientation.

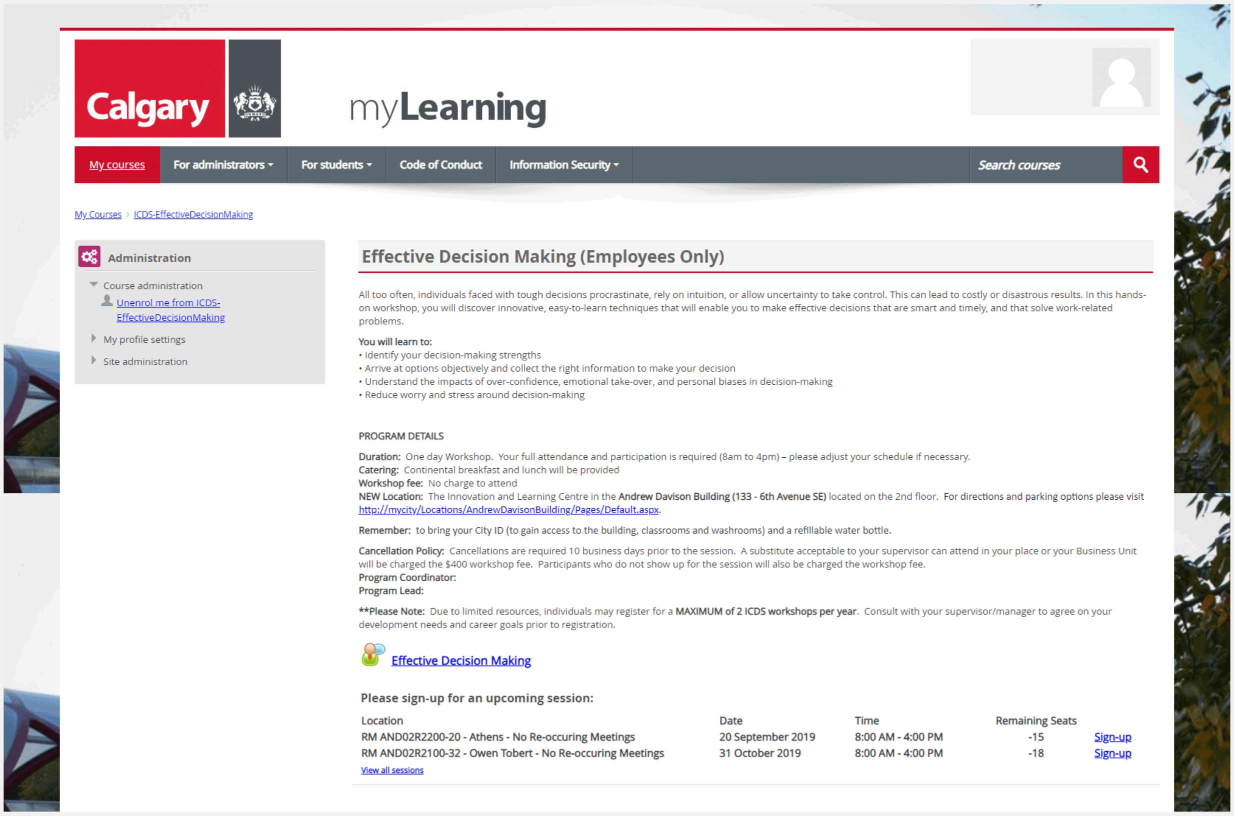
Health Assessment

Your new teammate health assessment will consist of the following:

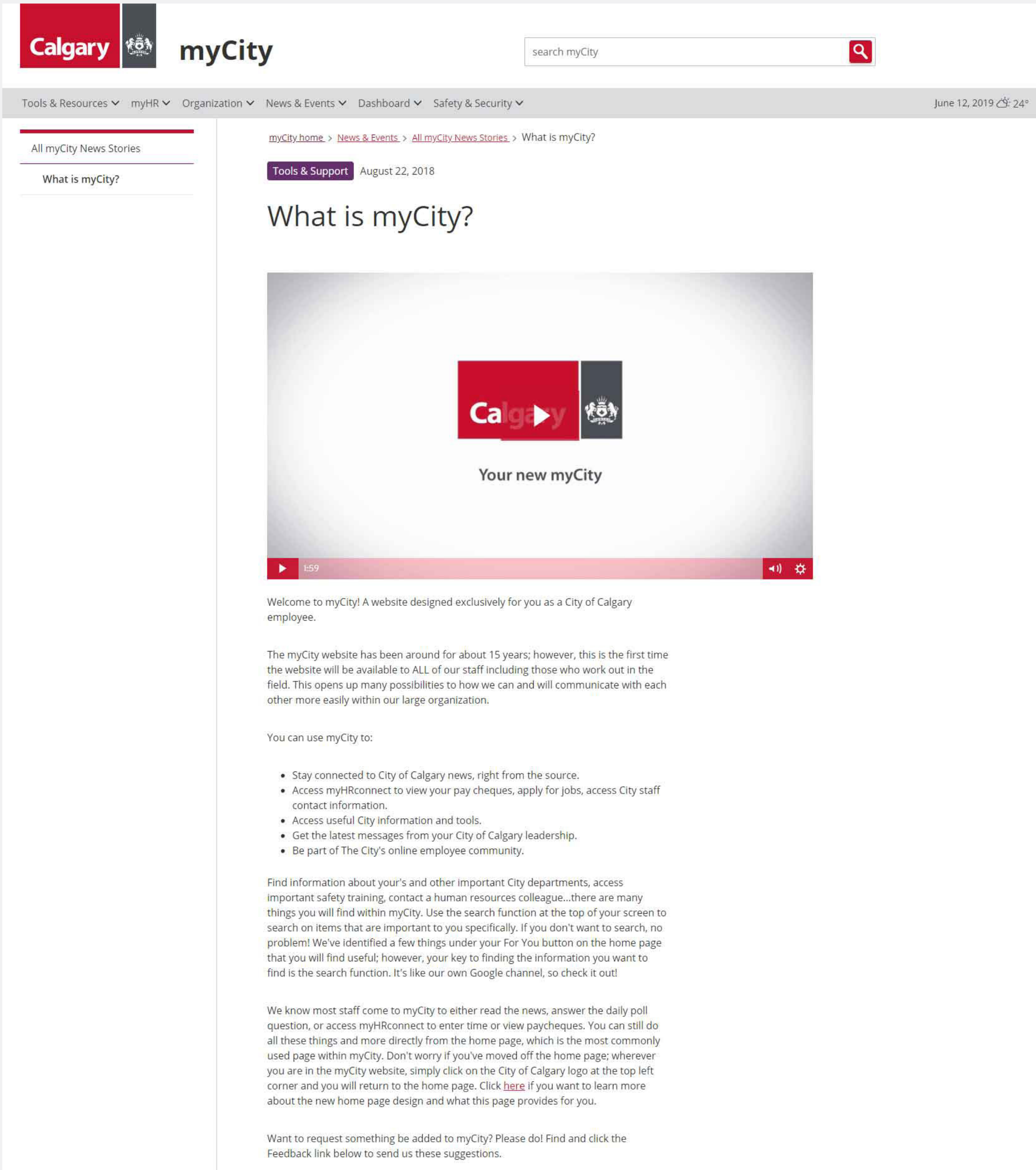
- Drug screen
- Confirmation of your immunization history
- Bring your complete immunization records
- Related to the flu vaccination, please also bring one of the following:
- documentation of a flu vaccine for this flu season
  - a documented medical exemption
  - a documented religious exemption

  If flu documentation is not presented at the health assessment a free flu vaccine will be offered. Applicants must be compliant with the Atrium Health flu vaccine policy in order to begin employment
- Complete the Health History form and bring to assessment
- Tuberculosis / TB skin test
- If you have ever had a positive Tuberculosis / TB skin test, bring a record of that positive skin test and your most recent chest X-ray
- If you have any records of any TB skin tests completed in the last year, bring those records
- Medical statement review (if applicable)
- If you are under care for a chronic or serious medical problem or have any work restrictions, bring a medical clearance from your physician.
- Work authorization requirements (I-9)
  - See the list of acceptable documents to bring in order to prove you are authorized to work in the United States

Atrium Health's Pre-Employment Assessments *page also contained text that was too wide. The bulleted lists on this page would be much easier to scan if the line length was reduced.*

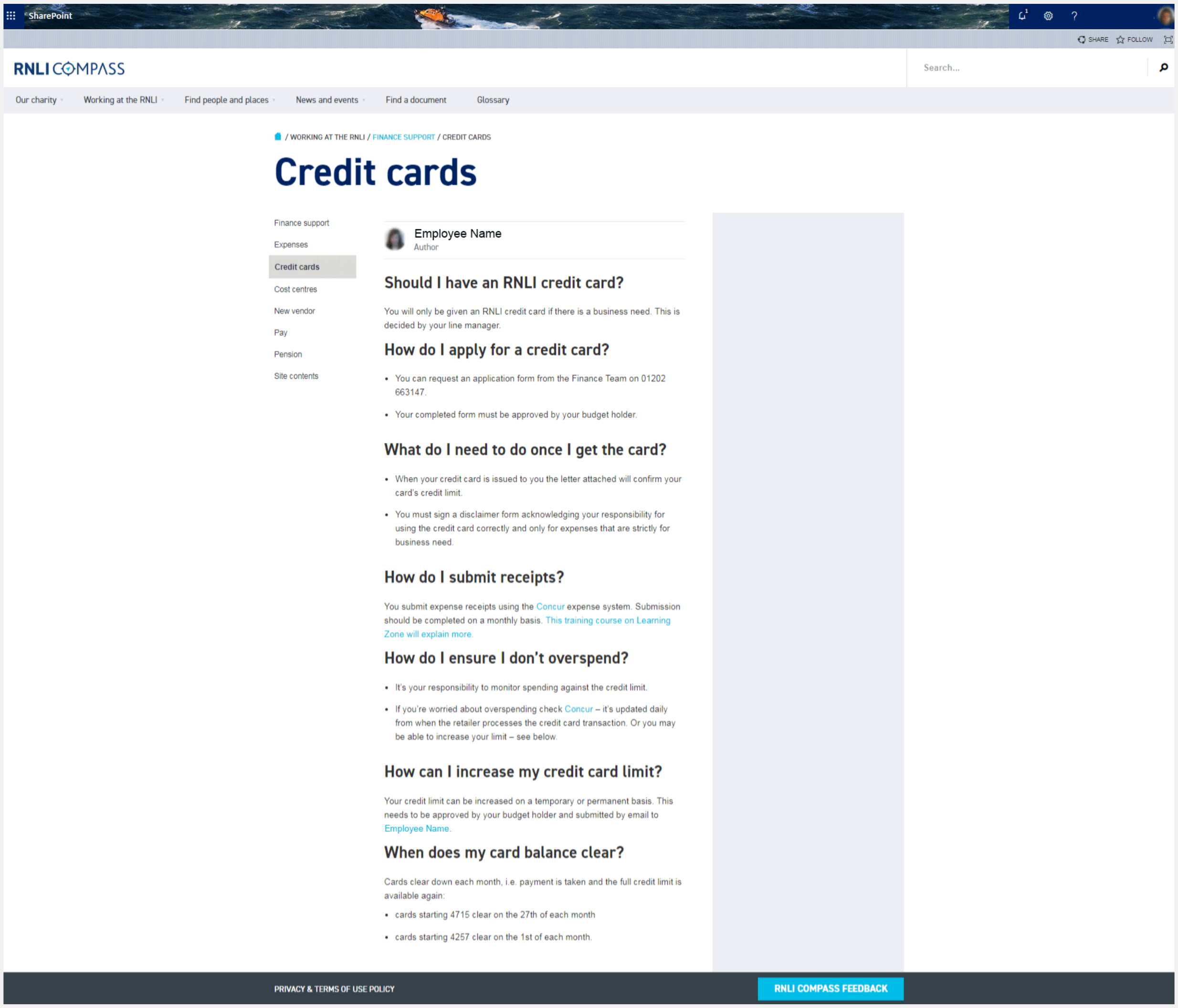


A page on the City of Calgary's myLearning *platform also contained text that spanned the entire page width. To improve the presentation of this content, the City of Calgary should reduce the line length to between 45–75 characters.*



Another page on the City of Calgary's intranet featured a video about the intranet and had a much more comfortable line length. Using a standard line length across the intranet would help produce a more consistent and visually pleasing reading experience.

The Royal National Lifeboat Institution's content had a narrower line length, which made the content easy to skim and scan. When combined with clear and noticeable subheadings, all these factors made the copy very comfortable for employees to interact with.



The line length on the Royal National Lifeboat Institution's intranet was favorable and didn't force employees to expend much energy when skimming and scanning content.

WORKING WITH PDFS AND NATIVE FILE FORMATS

36. Limit the use of PDFs; design HTML gateway pages and provide a link to download a full PDF, if needed.

PDF files continue to be cumbersome for employees to navigate. Even after 18 years of studying intranets, most of the participating organizations in our recent round of research still had a lot of content housed in PDF files instead of on nicely designed **HTML gateway pages.**

HTML gateway pages

Definitions, Principles, and Methods

An **HTML gateway** is a web page that summarizes the information contained in a PDF and offers a link for interested users to download the full PDF.

All links to the information, such as from the intranet's main navigation or search results page, should be to the gateway page; none should go directly to the PDF file.

Also, the gateway page should warn users that they'll get a PDF file and state its page count and download size.

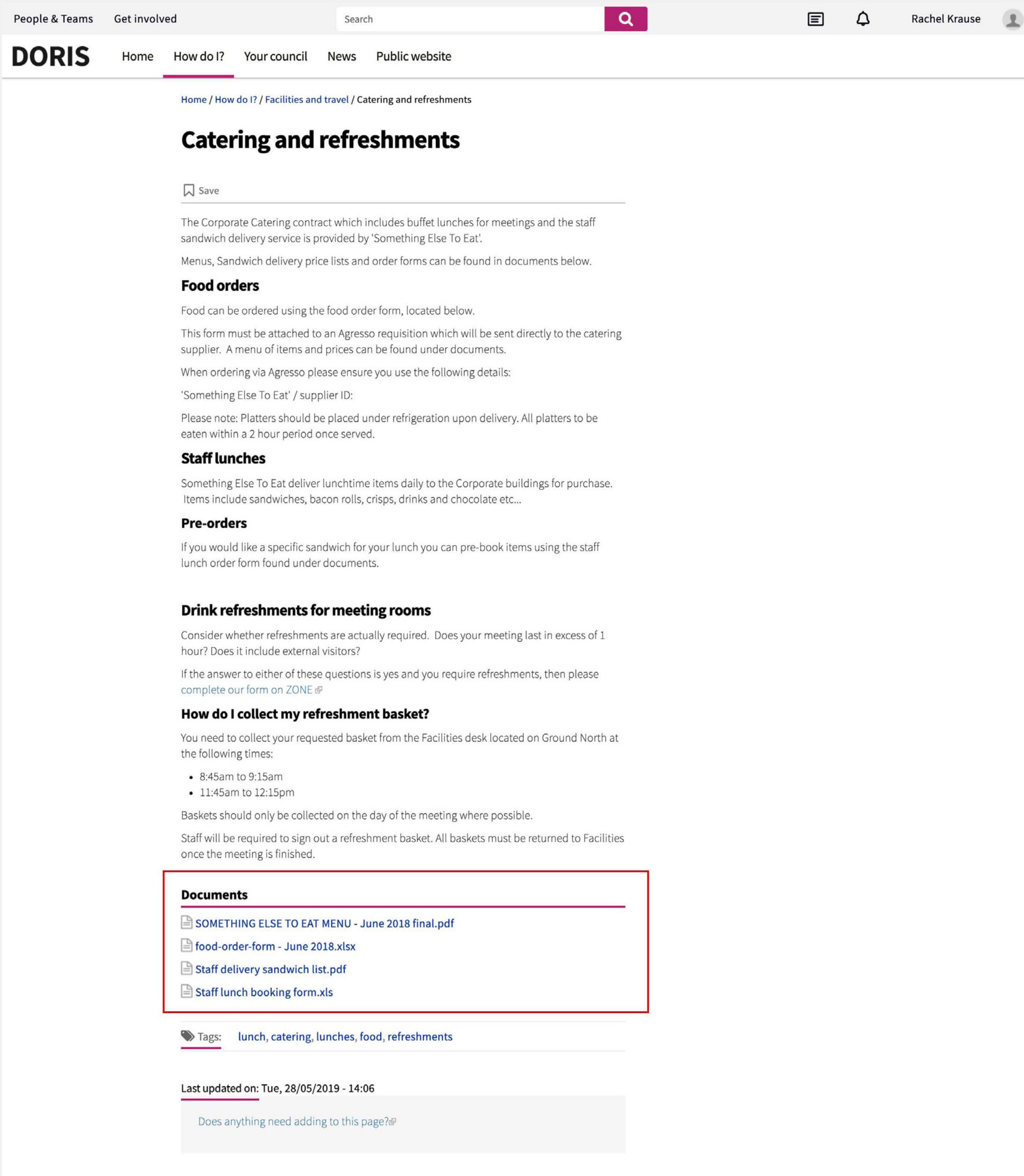
One great example we observed of using an HTML gateway page instead of relying on a PDF alone was on the *Catering and Refreshments* page on Bracknell Forest Council's intranet. All the important information employees needed to know about ordering food for meetings or other events was summarized on the page, but because employees might need to print menus to distribute to colleagues so they can make food selections, the menus and other documents were displayed in their native formats (PDF, spreadsheet, Word doc, etc.) below. As an added benefit, an icon appeared next to each document to indicate the file type and set expectations that clicking on the item would not take them to a web page.

If you're posting a PDF to an HTML gateway page, make the PDF accessible when creating it:

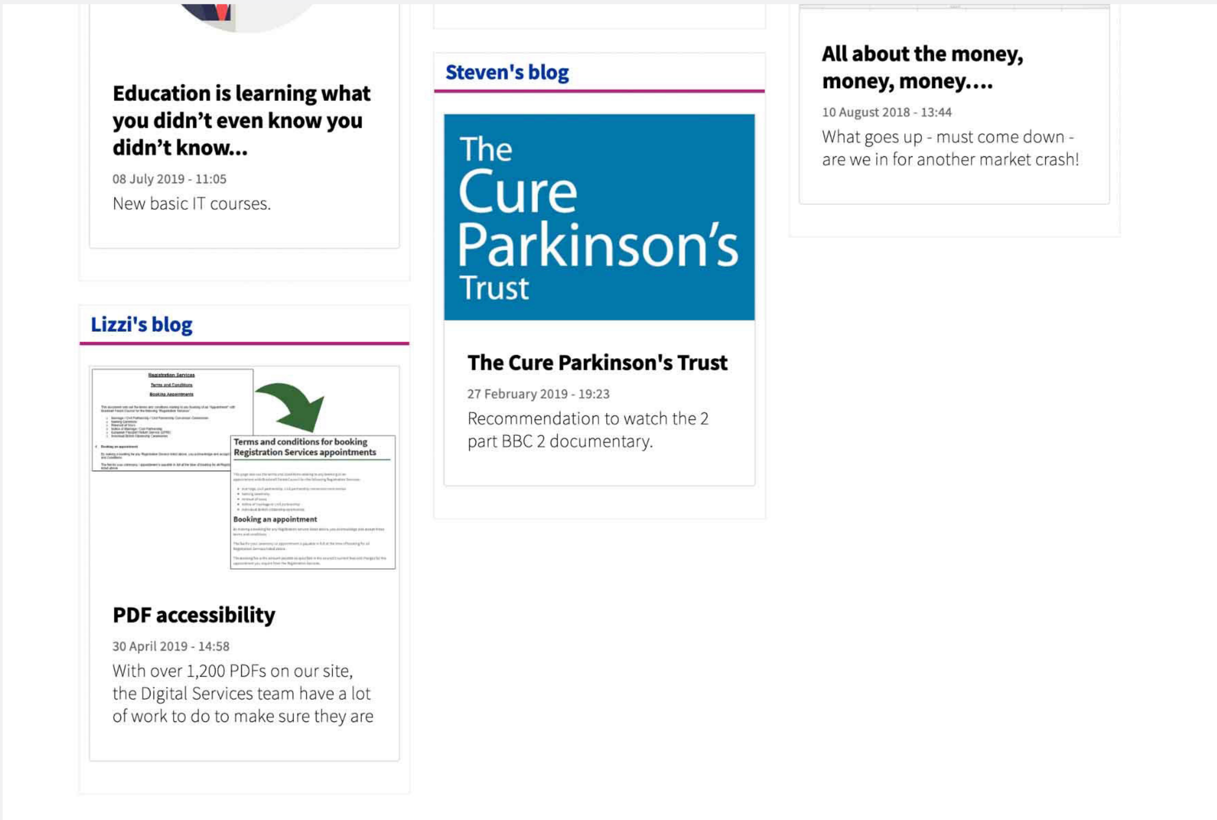
- Make text searchable
- Ensure fonts allow characters to be extracted into text
- Create form fields that are labeled as interactive and include error messages with proper timing

Additional work needs to be done to ensure a PDF is inclusive; you can't just export it and assume it's good to go. Employees should be able to access bookmarks using the keyboard, and PDFs' security settings must not interfere with screen readers. Structural tags on headlines, paragraphs, tables, and other elements must be set to define reading order, and ALT text must be included on all images. Color should not be used to convey meaning; there must also be proper contrast between foreground and background.

In another favorable example, Bracknell Forest Council included a thorough blog post on its intranet, outlining how employees and designers who create, and post PDFs could ensure they were accessible.



Bracknell Forest Council used an HTML gateway page instead of relying on a PDF alone to communicate how to order food and catering services, which is the proper way to handle PDFs on an intranet.



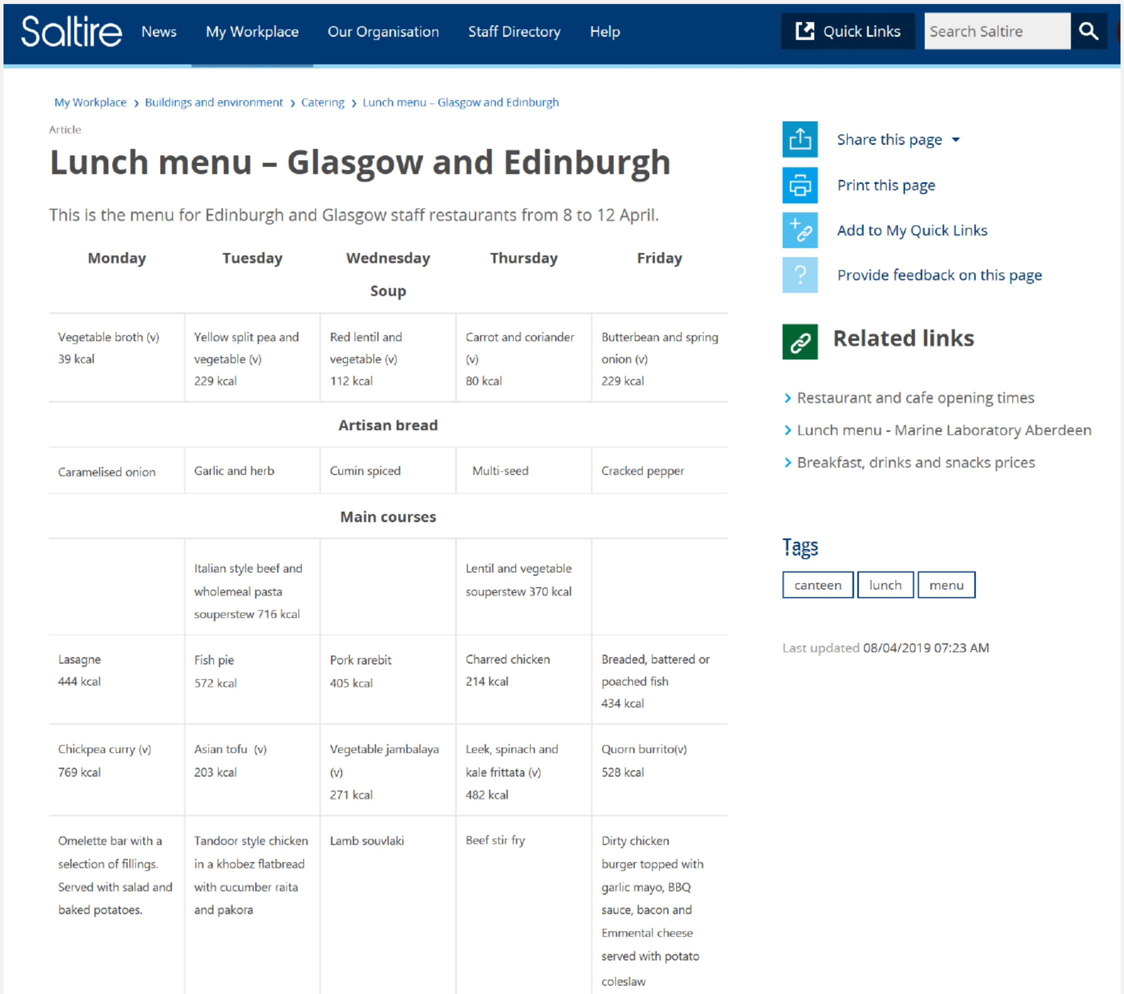
To take it even further to ensure PDFs were properly designed and formatted, Bracknell Forest Council included a detailed blog post on its intranet to help designers ensure haphazard PDFs weren't posted on the intranet.

Posting content only as PDFs is also problematic. PDFs break employees' workflow and contribute to the issue of too many new browser tabs and windows being open. **PDFs are meant to be used for distributing documents that users will print.** They're optimized for paper sizes, not browser windows or modern device viewports, and they're not navigable like a web page. PDFs also use lots of heavy, dense text and elaborate graphics, increasing their file size and, subsequently, the time they take to download.

For example, though the Mayo Clinic's employees may want to eventually download and print a cafeteria menu to post in their office for the week, this PDF (shown below) was over-designed, highly colorful, and included needlessly fancy graphics. The amount of colored printer ink needed to print this out is unnecessary. Navigating to a PDF just to see what the cafeteria was serving slowed down busy employees as they waited for this to download. Don't design PDFs for content that should otherwise be posted on an HTML page.

In the case of a PDF cafeteria menu on the Mayo Clinic's intranet, the designers' time would have been better spent laying out and formatting this content for an HTML web page. Don't design PDFs for content that should otherwise be posted on an HTML page.

A better approach would be to use a design similar to the Scottish Government's intranet, where the lunch menu is provided as a simple table on a printable HTML page. This supports employees navigating the web page and those who want a printer-friendly version.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My Workplace › Buildings and environment › Catering › Lunch menu – Glasgow and Edinburgh

Article

Lunch menu – Glasgow and Edinburgh

This is the menu for Edinburgh and Glasgow staff restaurants from 8 to 12 April.

Monday	Tuesday	Wednesday	Thursday	Friday
		Soup		
Vegetable broth (v) 39 kcal	Yellow split pea and vegetable (v) 229 kcal	Red lentil and vegetable (v) 112 kcal	Carrot and coriander (v) 80 kcal	Butterbean and spring onion (v) 229 kcal
		Artisan bread		
Caramelised onion	Garlic and herb	Cumin spiced	Multi-seed	Cracked pepper
		Main courses		
	Italian style beef and wholemeal pasta souperstew 716 kcal		Lentil and vegetable souperstew 370 kcal	
Lasagne 444 kcal	Fish pie 572 kcal	Pork rarebit 405 kcal	Charred chicken 214 kcal	Breaded, battered or poached fish 434 kcal
Chickpea curry (v) 769 kcal	Asian tofu (v) 203 kcal	Vegetable jambalaya (v) 271 kcal	Leek, spinach and kale frittata (v) 482 kcal	Quorn burrito(v) 528 kcal
Omelette bar with a selection of fillings. Served with salad and baked potatoes.	Tandoor style chicken in a khobez flatbread with cucumber raita and pakora	Lamb souvlaki	Beef stir fry	Dirty chicken burger topped with garlic mayo, BBQ sauce, bacon and Emmental cheese served with potato coleslaw

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› Lunch menu - Marine Laboratory Aberdeen

› Breakfast, drinks and snacks prices

Tags

canteen lunch menu

Last updated 08/04/2019 07:23 AM

A better alternative to using a PDF for a cafeteria menu was on the Scottish government's intranet, where this page displayed the lunch menu in a clean HTML table and allowed employees to print the page.

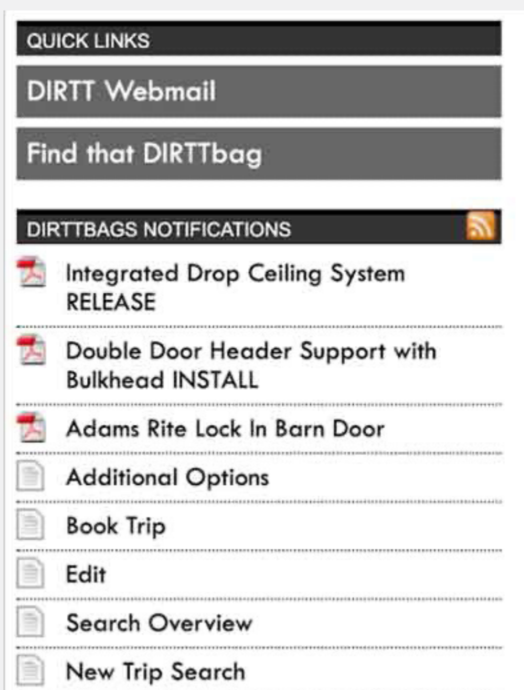
Clickable tables of contents are often introduced in PDFs as pseudo navigation, but employees still slow down and have trouble finding what they need. The use of *Command* or *Control* + F to find something within a PDF is not familiar to all employees. Some will take advantage of these shortcuts, but others will not. If technical limitations are holding you back from creating HTML gateway pages for your PDFs, collaborate with experts on web-publishing principles to create a template for an HTML gateway page. With advancements in web content management, there's no reason why we should still see so many PDFs; design a gateway page template to reduce the number of PDFs on your intranet.

37. Visually indicate the file type for links to native files, PDFs, documents, spreadsheets, or presentations.

There are legitimate cases when documents and policies must exist in PDF or other native formats on an intranet (e.g., for legal reasons), but this doesn't mean these native file formats are the only format in which the content should exist. A document, presentation, or spreadsheet should never be used to display digital content that users will read online.

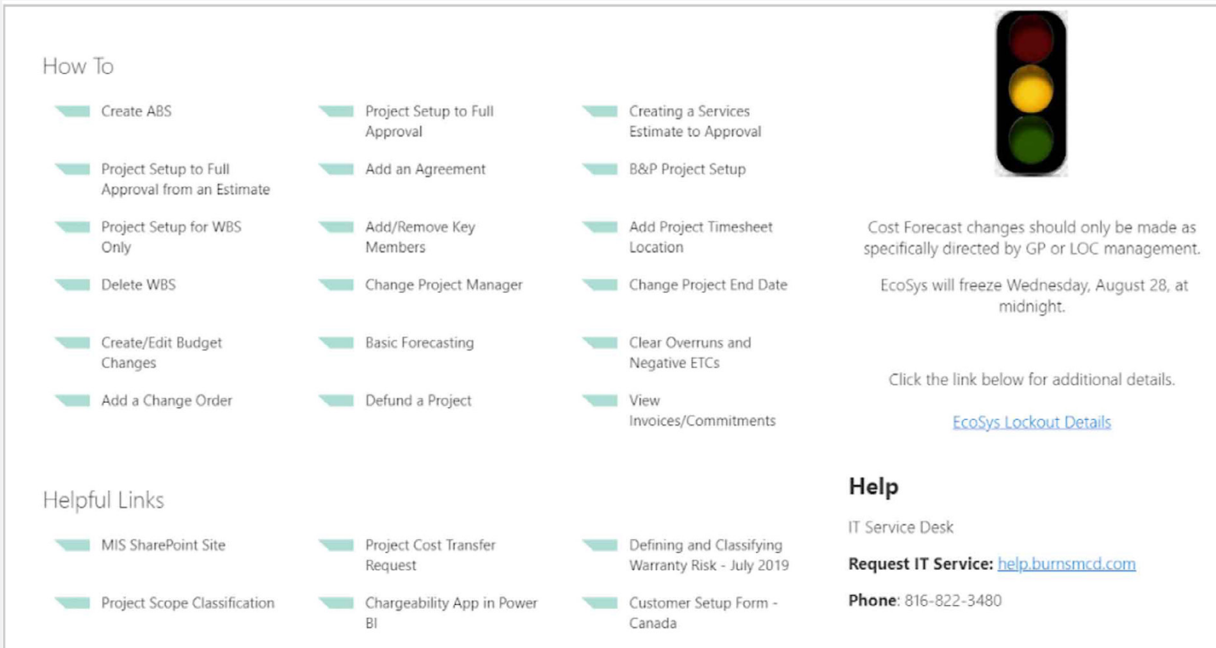
Gather evidence to understand the document types your employees need and expect in certain situations. You will need to conduct research such as field studies, usability testing, interviews, and contextual inquiries to find out. It will all depend on your employees' context and reading preferences relative to the content and task. If you find employees don't want to print out a document, use a web page. When they do, use a web page to summarize the key information and provide a link to download the document, along with a visual indicator or icon to represent the document type.

For example, DIRTT employees often needed instructions on designing and building different office furniture and fixtures. Because they were out in the field and accessing the intranet to download, print, and use these documents, it made sense that they were available in this format. Each document had a unique icon that indicated its file type, which signaled to users that the link would open a file, not an HTML page, which was favorable.



Knowing employees would need to access, share, and print these documents, DIRTT made them available in their native file formats and included clear icons to visually indicate that they were not linking to web pages.

On Burns & McDonnell's intranet, there was no way to predict link destination, and format, no icons to set expectations about the content type (PDF, Word doc, video, or HTML in a new tab). For example, in the *How To* section of the *EcoSys* page, there were no visuals to indicate whether each link would open as a PDF, Word document, or web page. A better approach would be to include an icon or suffix (for example, "PDF") in each link in the list. If the link does anything other than open a new web page in the same tab, communicate that to users.



Providing employees with a visual indication of what will happen when they click on each link in these lists would improve this page on Burns & McDonnell's intranet.

When designing PDFs, lay them out to fit different paper sizes.

Timeless Design Tips

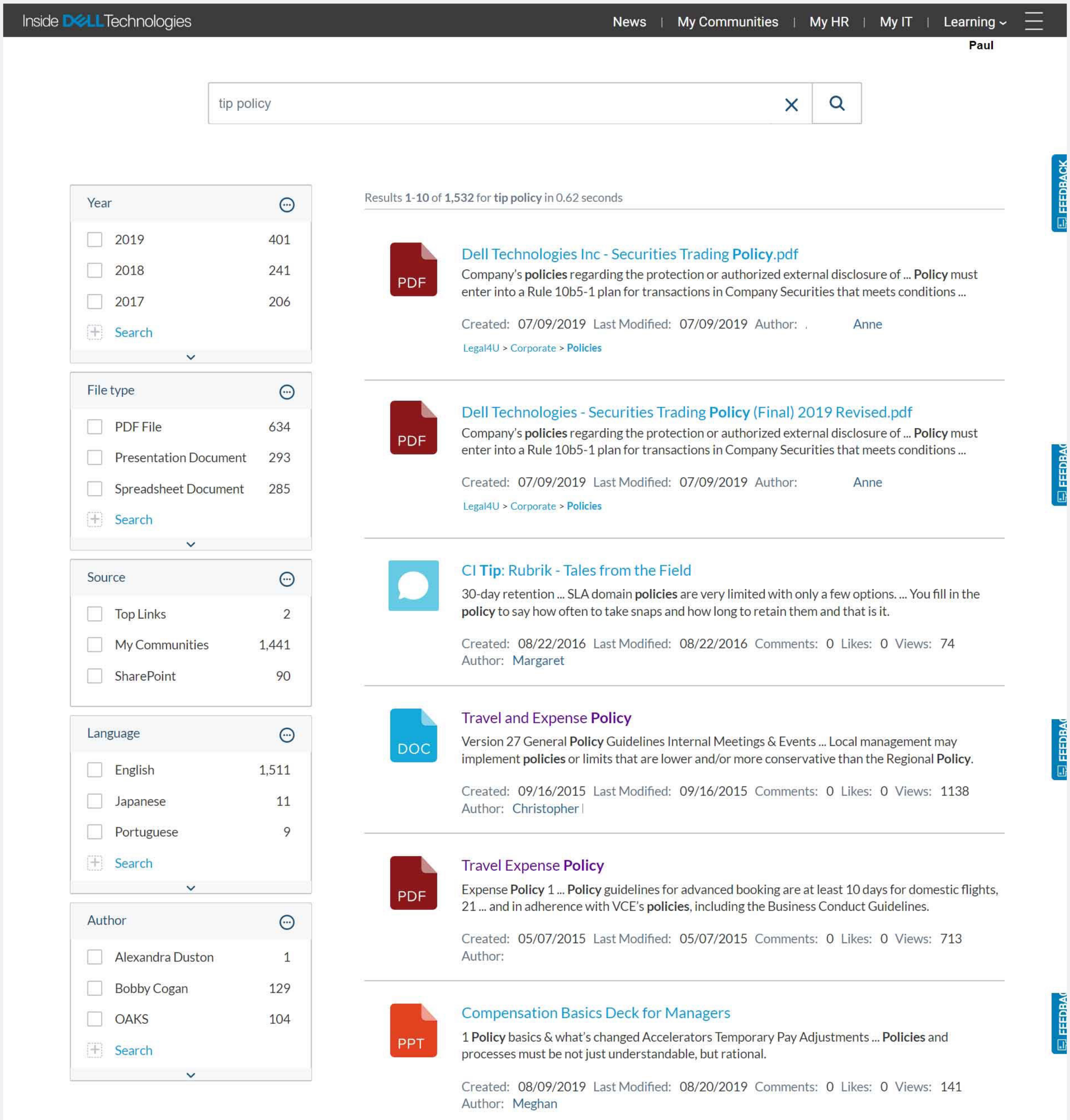
Some countries use the 8.5x11-inch paper size, while others use A4. Make sure your document will fit both. Avoid using multiple columns of text and small font sizes. Multicolumn text is harder to read and scan when printed out, and small font sizes cause readers to strain their eyes, regardless of the medium.

Save documents you design in an earlier PDF version and include the date to help users avoid issues when opening the document. Reduce the size by making sure only the most necessary information is included, and that image sizes are reduced to balance size with quality of display.

Remember the use case: someone will print out this document because, given their context and task, using paper is easier than a device.

On Dell's intranet, information presented in native file formats was usually accompanied by a corresponding icon, especially on the search results pages. While this did help warn the users — both on search results pages and inline hyperlinks, employees still complained that they had to open a PDF or other document type. One said, "Oh great, now I have to download a file to open it."

This substantiates the importance of favoring content presentation on nicely designed HTML pages instead of directly posting PDFs, Word documents, spreadsheets, or presentations to the intranet. Only use native file formats if employees must print, share, or distribute approved information with people who can't otherwise access links on the intranet. Even then, provide visuals to set expectations about what will happen next after clicking.



Dell did a nice job of including visual indicators to set expectations for what type of file employees would encounter upon clicking, which is good, as usability suffers when users are abruptly dumped into a PDF or other native file format. Including icons can help, but it doesn't make the experience of interacting with native files in a browser window any better.

FORM DESIGN

38. Design web forms instead of paper-based or interactive PDF forms.

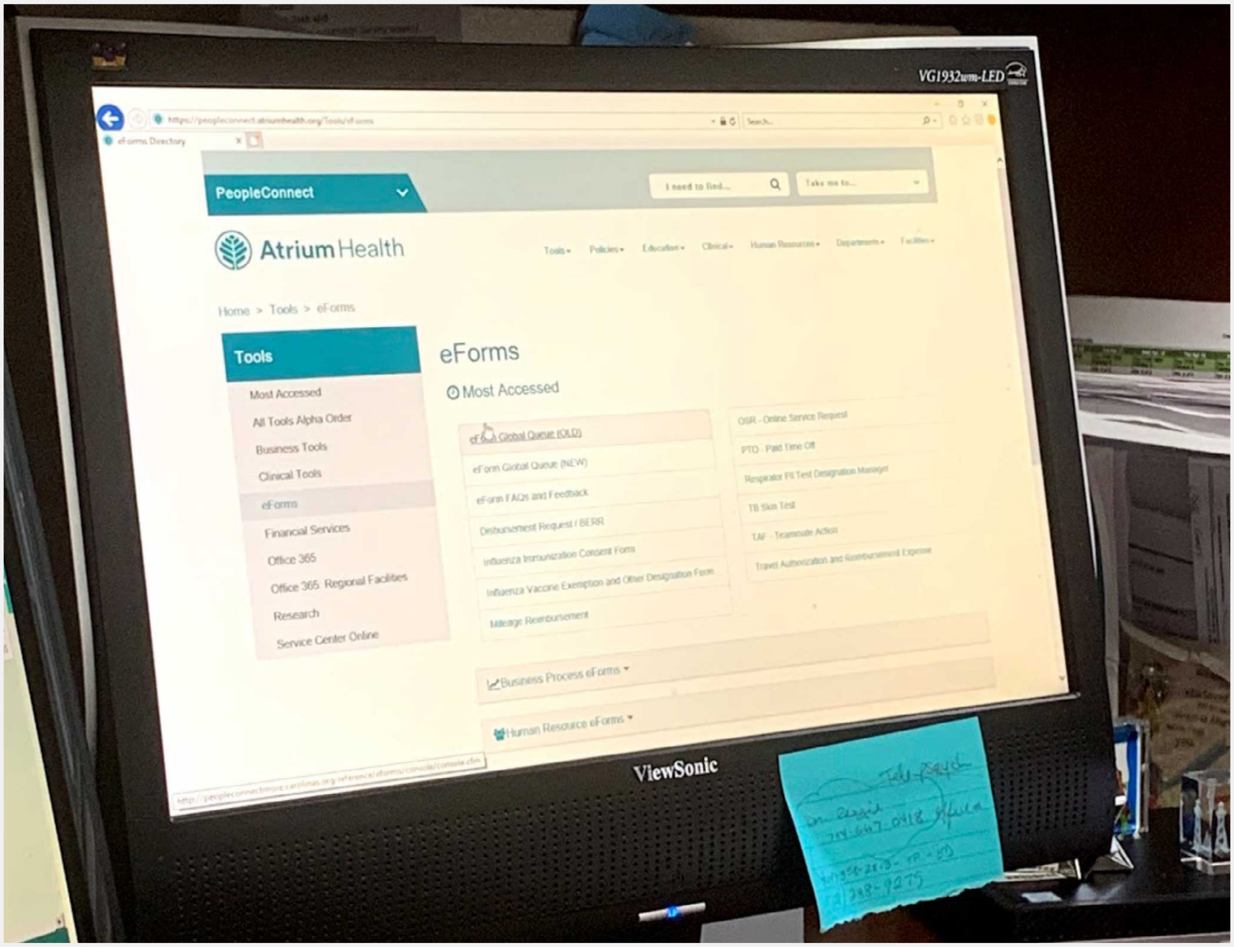
Downloading and printing paper forms or filling in and emailing interactive PDF forms on an intranet slows employees down. It's much better for employees to enter data online. As intranet designers, we advocate for designing a true user interface for forms. Existing processes are usually suboptimal and designed under the old technology's constraints. New technology alleviates these constraints and offers designers different ways of solving problems while introducing new constraints we must address for web forms to work.

When designing web forms, do not repeat failures or create bottlenecks by screen-converting hundreds of complex forms that are probably no good to begin with. Follow established best practices for form design.

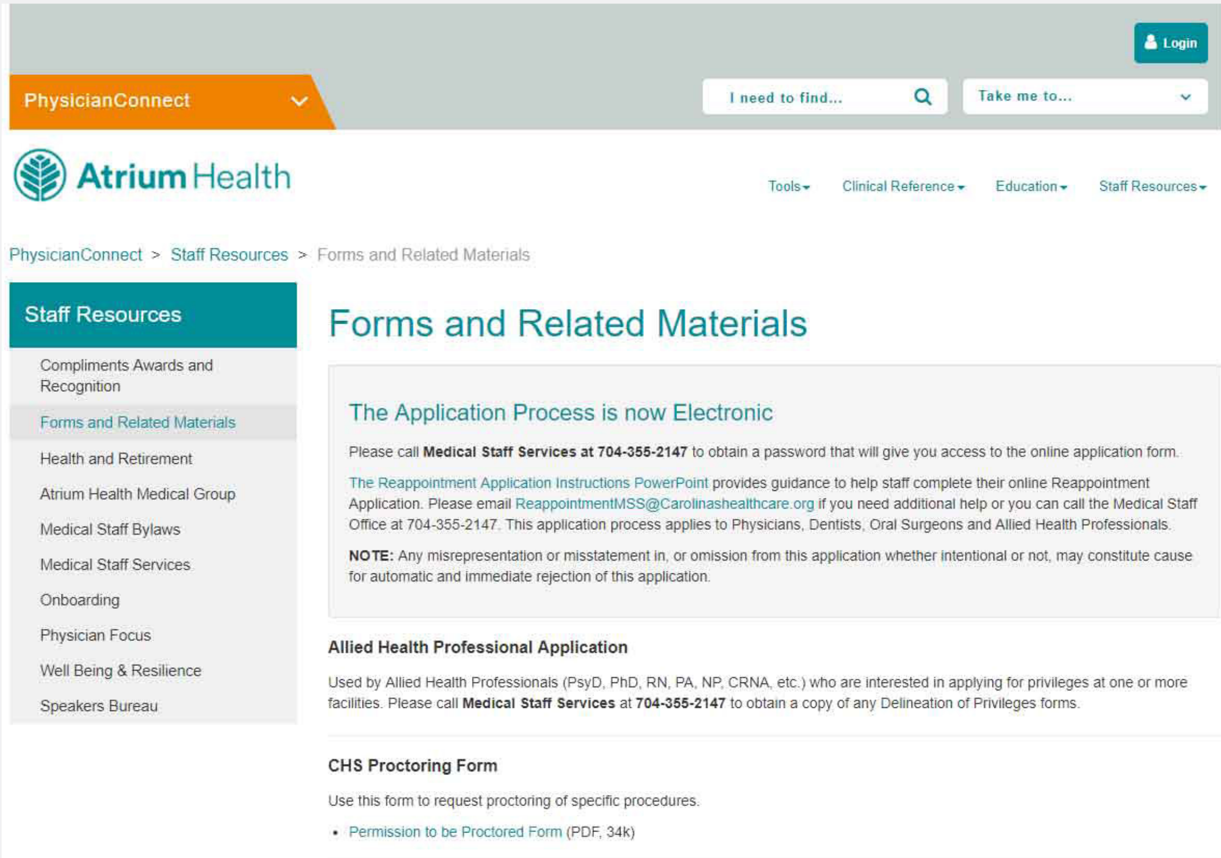
For example, the City of Calgary was working on converting 1,200 PDF forms to web forms. It was no easy task, but IT was moving them all to Adobe electronic tools. The vision was to integrate the forms with PeopleSoft so that information could be pre-populated. The intranet team lead said:

> "All of the PDF forms are horrible. Old forms and versioning control is difficult. To take 1,200 forms and tie them into a database, the cost is $3,000 to $5,000. Much of the work is inventory and determining before you design the form if we really need it at all. We're going to take the top forms and start designing those to be web-based."

Atrium Health used web-based forms on its intranet and did a great job merchandising links to forms employees accessed often. A dedicated eForms page allowed employees to access the forms they needed quickly and easily. Anytime a contextually relevant form moved from the legacy workflow of being paper or PDF-based to the new web-based workflow, the design team intentionally and thoughtfully placed messaging at the top of the page to inform employees of the new web-based form, which was favorable.

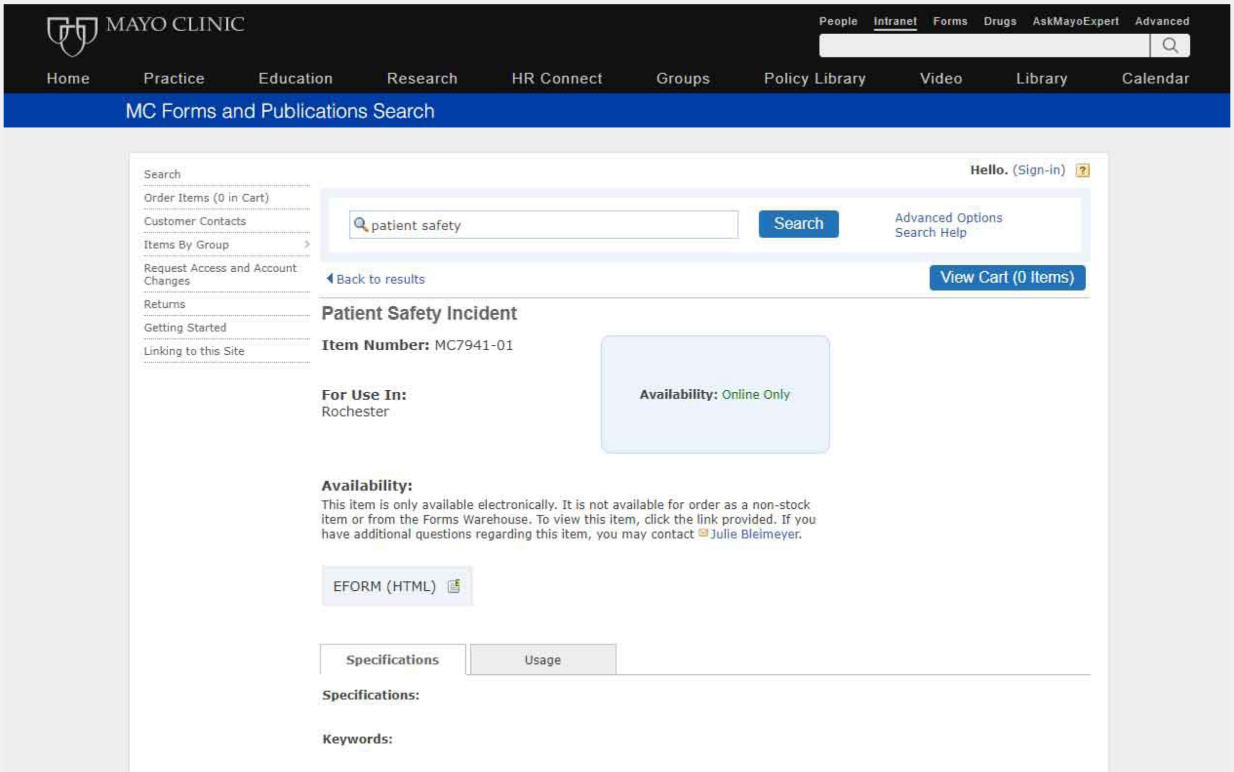


Atrium Health's eForms *page enabled employees to easily access the web-based forms they used most. This central location for all forms was helpful, and forms were displayed where they were contextually relevant.*



At Atrium Health, whenever processes moved from legacy paper or PDF-based forms to web-based forms, the intranet design team provided clear messaging at the top of relevant pages with instructions for accessing the electronic forms.

Because the Mayo Clinic is such a large healthcare organization, it has many paper forms, PDF forms, and web-based forms. The team designed a landing page to house and describe each form and outline when employees should use them. The Mayo Clinic's design team included the forms' availability as an added detail. With so many different types of forms, this helped set employee expectations for how they would ultimately interact with the form. This was a favorable approach. For organizations that may still have a mix of formats, it's important to be upfront with employees about when they must use a paper or PDF-based form.



The Mayo Clinic included a landing page for each type of form on its intranet where they described the form's purpose, where to use it, and its availability.

39. Use a consistent visual design across web forms.

Advocating for consistency and standards across forms on the intranet may seem like we're pushing for all forms to look and act the same, but that's not the case. Rather, when forms and applications adhere to standards, employees know what to expect, learnability increases, and confusion is reduced. Errors decrease, while efficiency, productivity, and satisfaction with the intranet and the organization improve.

Intranet forms should adhere to both **internal** and **external consistency** so that they are easy to learn and use. They should use the same patterns everywhere inside the system and follow web-, platform-, and domain-specific conventions. This means the look and feel of form components, including colors, fields, and other inputs, buttons, links, and control types are similar. The way forms are laid out should be parallel, as should the way information is asked for across the forms. Labels and messages should also be consistent.

Internal consistency

Definitions, Principles, and Methods

Internal consistency relates to consistency within a product or a family of products, either within a single application or across a family or suite of applications.

External consistency

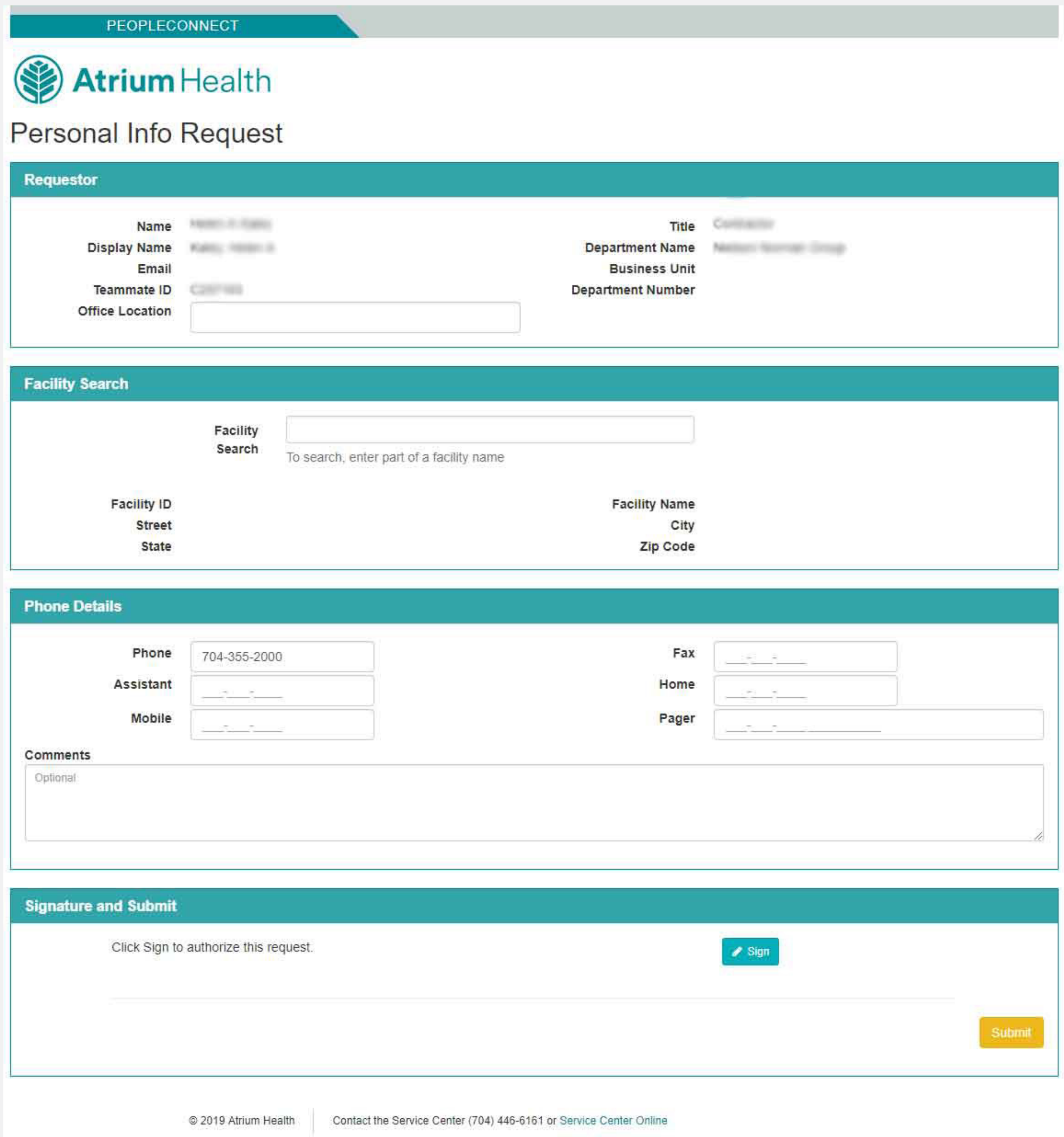
Definitions, Principles, and Methods

External consistency refers to established conventions in an industry or on the web beyond one application or family of applications.

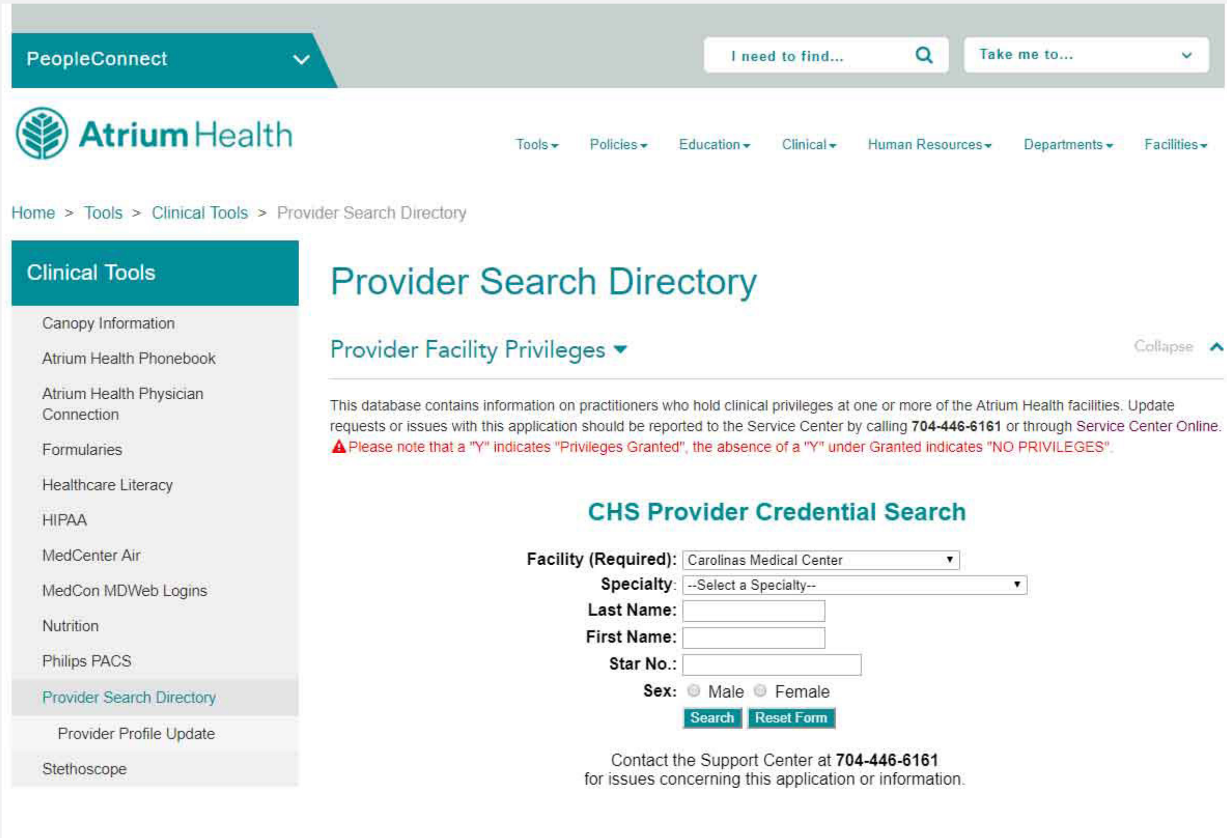
Including form components in your intranet's design system can help maintain consistency across forms. Not only will employees find the forms familiar and easy to learn, but the teams building the forms will also benefit from reduced redundancy in their work and a single source of truth for how and when to use form components.

Employees spend most of their time on sites other than the intranet, which means they'll bring their expectations from other sites' forms when they visit the intranet. Most form interactions should be consistent with what people expect. When designing forms, focus on helping employees complete them as efficiently as possible rather than creating a nonconventional form interface that people need to figure out.

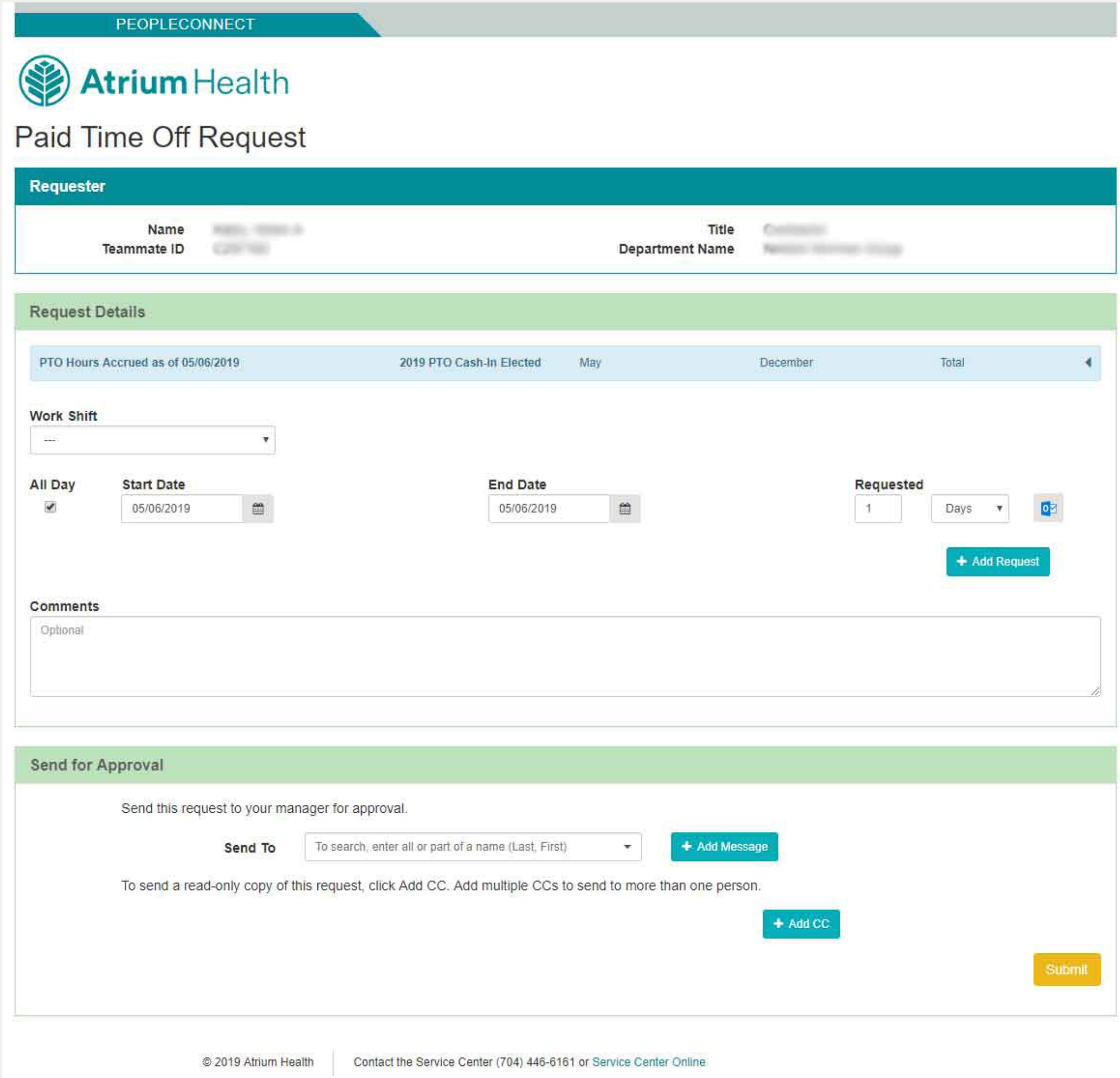
For example, the form design around Atrium Health's intranet was inconsistent. In some cases, the submit button was on the top right, while in others, it was on the bottom. Fields were aligned differently; some forms autofilled some content, while others didn't. The inconsistent behavior forces employees to pay more attention and spend more time on forms than if the forms were designed more consistently.



The design of forms around Atrium Health's intranet was inconsistent. This Personal Info Request *form used multiple form blocks and several different columns. The yellow submit button appeared in the lower right corner.*

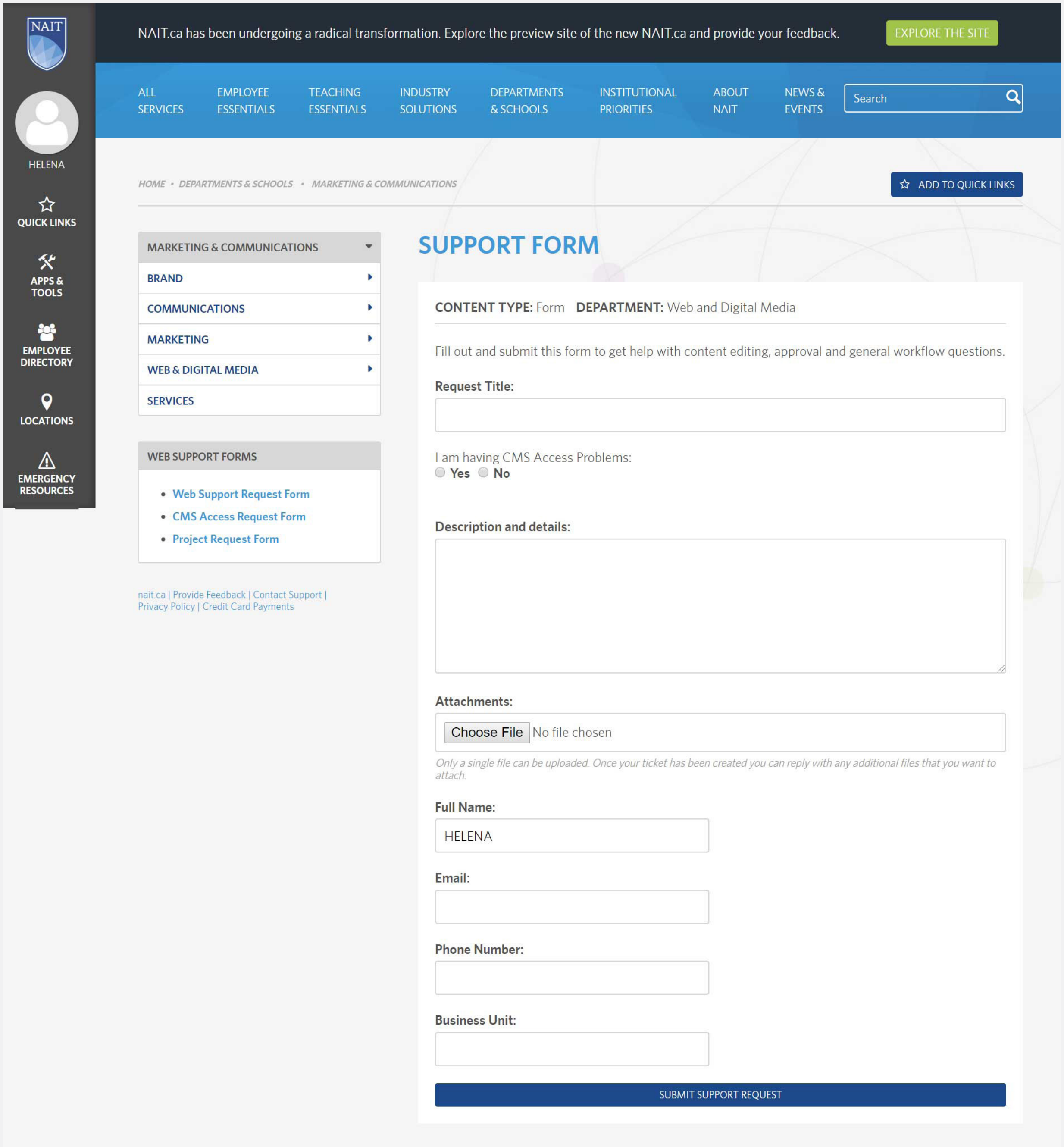


Atrium's Provider Search Directory *form labels were positioned similarly to the left of the fields as on the first form; however, those fields had rounded edges. The layout of this form, sharp border edges on fields, and the primary buttons to submit the form were all inconsistent.*



Atrium Health's Paid Time Off Request *form had some similarities with the form shown above, but the colors used, label placement near the fields, and container header background colors were inconsistent.*

Ensure consistency in the design and placement of form fields and buttons, especially for multipage forms or wizards. Will you place the call-to-action on the left and the *Cancel* button on the right, or vice versa? How will you designate fields as required? Regardless of the answers to those questions, make sure that each form on the site is designed in the same way. For example, the Northern Alberta Institute of Technology used a consistent form design across its intranet. Each form included all of the same components and design elements.



We observed one of the best examples of consistent form design across an intranet on the Northern Alberta Institute of Technology intranet.

Establish standards and conduct design reviews at regular cadences.

Process and Strategic Considerations

Form consistency doesn't happen by itself but requires an active process. Even if you have an official design standard and a mandate to follow it, people will forget about rarely applied elements. They will interpret more ambiguous parts of the standard in different ways.

There is also the risk that some design teams will rebel and decide to do things differently because they feel their corner of the intranet is surely different than everything else.

Without design standards, it's common to have different designers invent different solutions to the same problem as they work on different pages. Conduct regular design reviews and flag deviations from the design standards or from how things are done elsewhere.

Finally, acknowledge that some inconsistency will happen over time, despite your best attempts to root it out during the initial design stages. Occasionally (say, once a year), conduct a special consistency review across all your intranet designs and identify and fix the worst offenders.

40. Place clear labels above or next to intranet form fields.

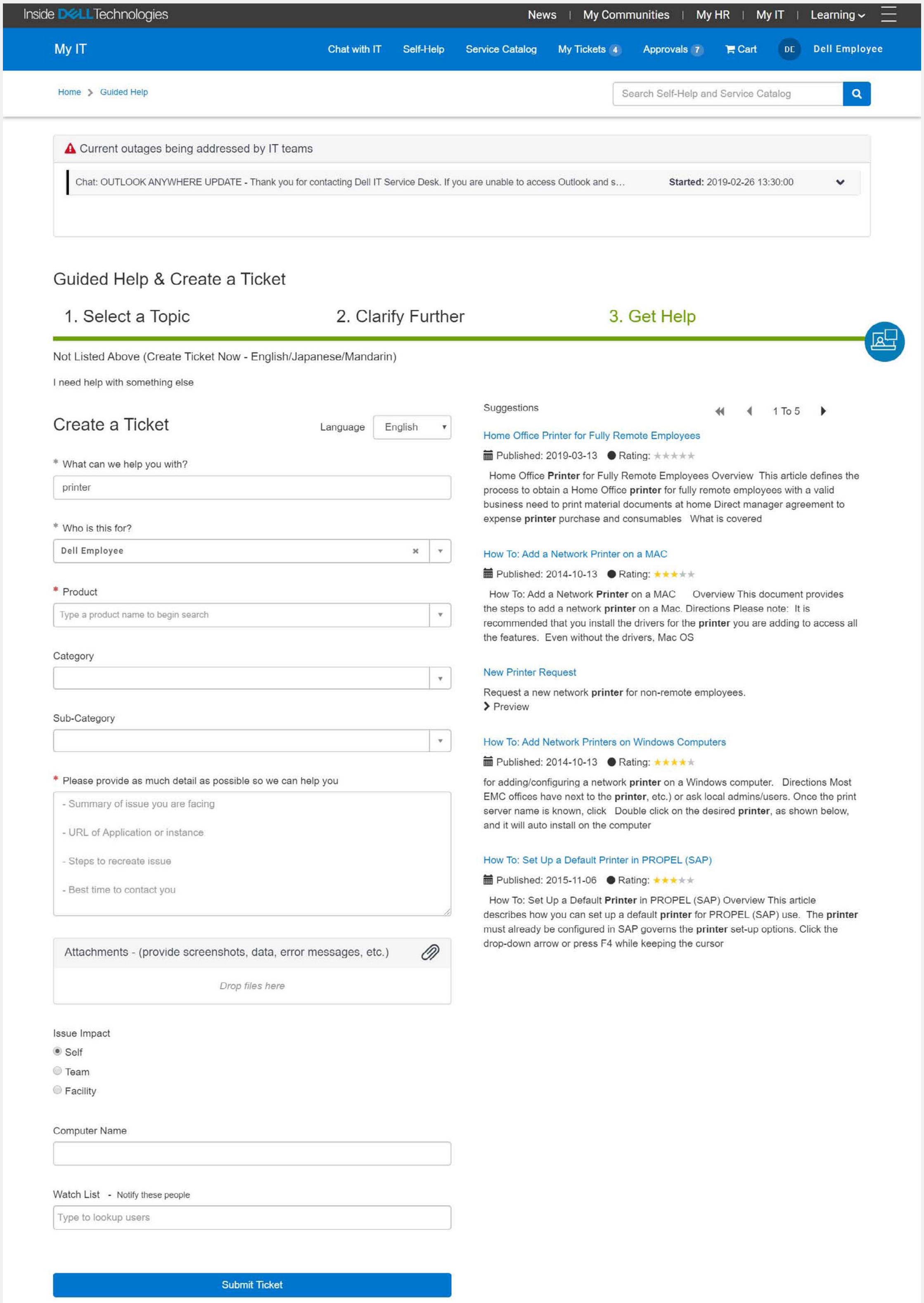
Labels should be close to the fields they describe, placed either immediately above the field for mobile and shorter desktop forms or next to the field for extremely long desktop forms. We usually recommend putting field labels above the corresponding text fields. Although this increases the form's overall length, it makes scanning easier because users can see the text field in the same fixation as the label. Top placement also allows for longer field labels, as horizontal space isn't an issue.

If form length is a concern, you can place field labels to the left of the fields. However, make sure that labels are of similar length and are placed as close to the text fields as possible. If the labels are too far to the left, it can be difficult to associate the correct label with its corresponding field.

Avoid ambiguous spacing, where labels are equidistant from multiple fields, and be sure to include the label attribute for screen readers. If your form asks about two different topics, section it into two groups of fields and tag the groups for screen readers.

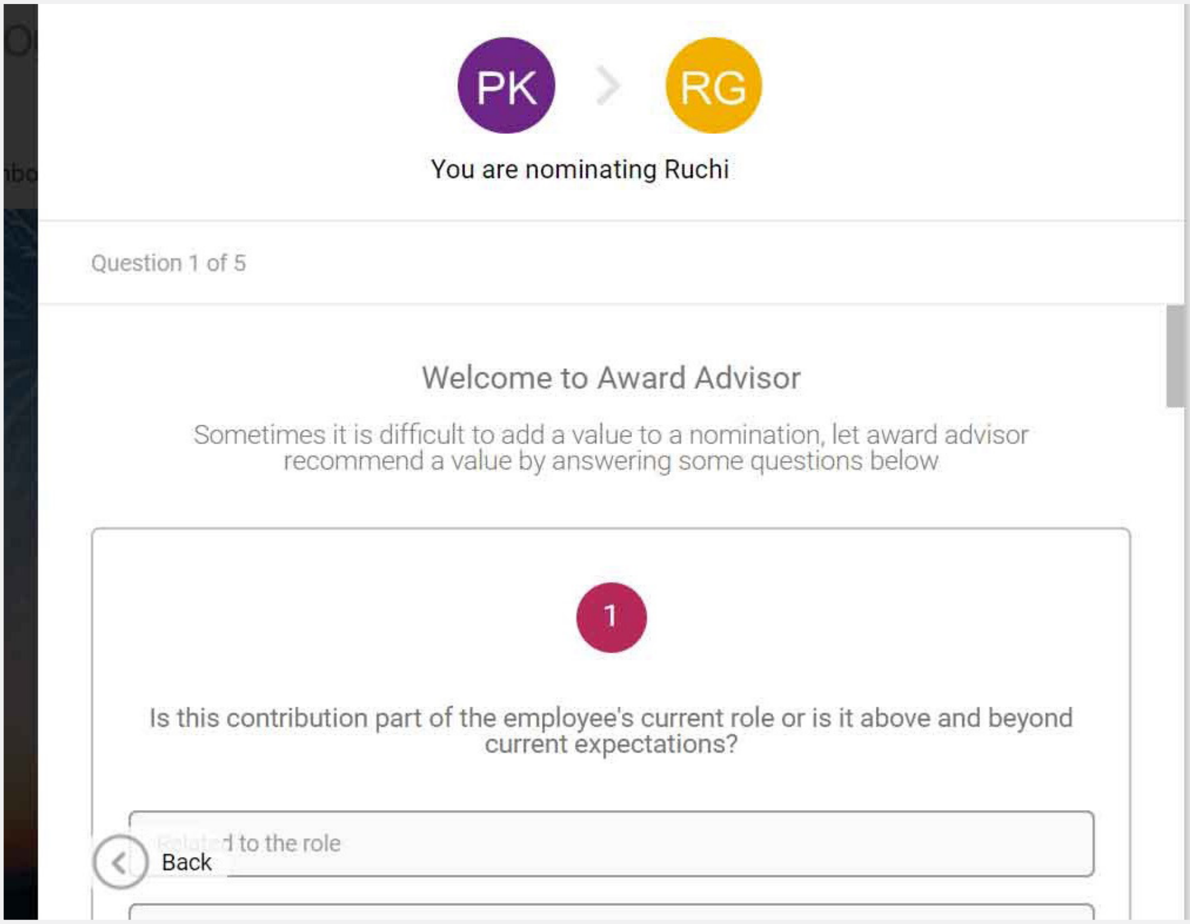
Do not put form labels for prompts or instructions in form fields. For example, at Dell, some form fields contained instructions as prompt or placeholder text in the fields themselves. The form to create an IT ticket had helpful labels set on top of the field, but when ghost text (which reminds users what to type in a particular form field) was contained inside the form field, then it disappeared when the user started to type. When this happened, people often forgot what the form field was asking them to enter in the first place. One employee said, “All these questions are in here, but as soon as you type, it goes away.”

Use form field labels (rather than placeholder text) that sit above the form fields and concisely indicate what the user should type in the field.

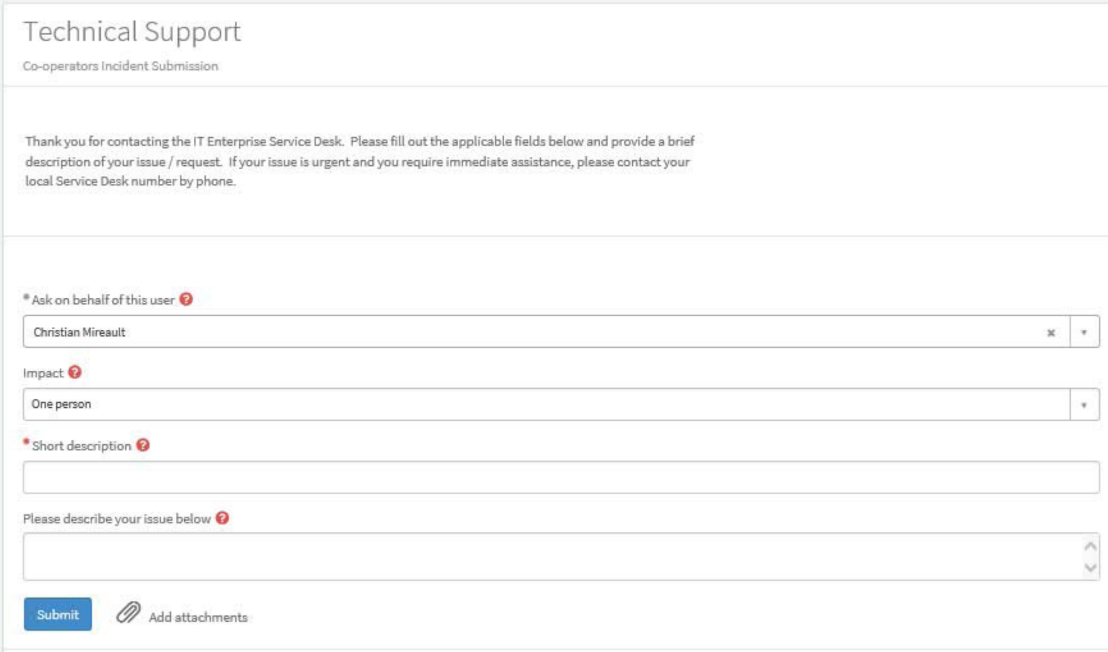


Though Dell's IT ticket form included labels on form fields that sat above, the placeholder text is what helped users understand what to enter.

Dell also used placeholder text in form fields on its *Inspire Recognition* tool, but it disappeared after users selected the form field and was inaccessible. The text contrast also appeared too low to be considered accessible, as it's light gray on a white background.



Dell did not include labels on the form fields in its employee recognition tool. The light gray placeholder text disappeared as soon as users clicked into the field and was not accessible.



The Co-operator's Technical Support *platform included clear labels above form fields. The only improvement to this form would be to use a different color for the question mark tooltips, as red usually indicates field-level errors.*

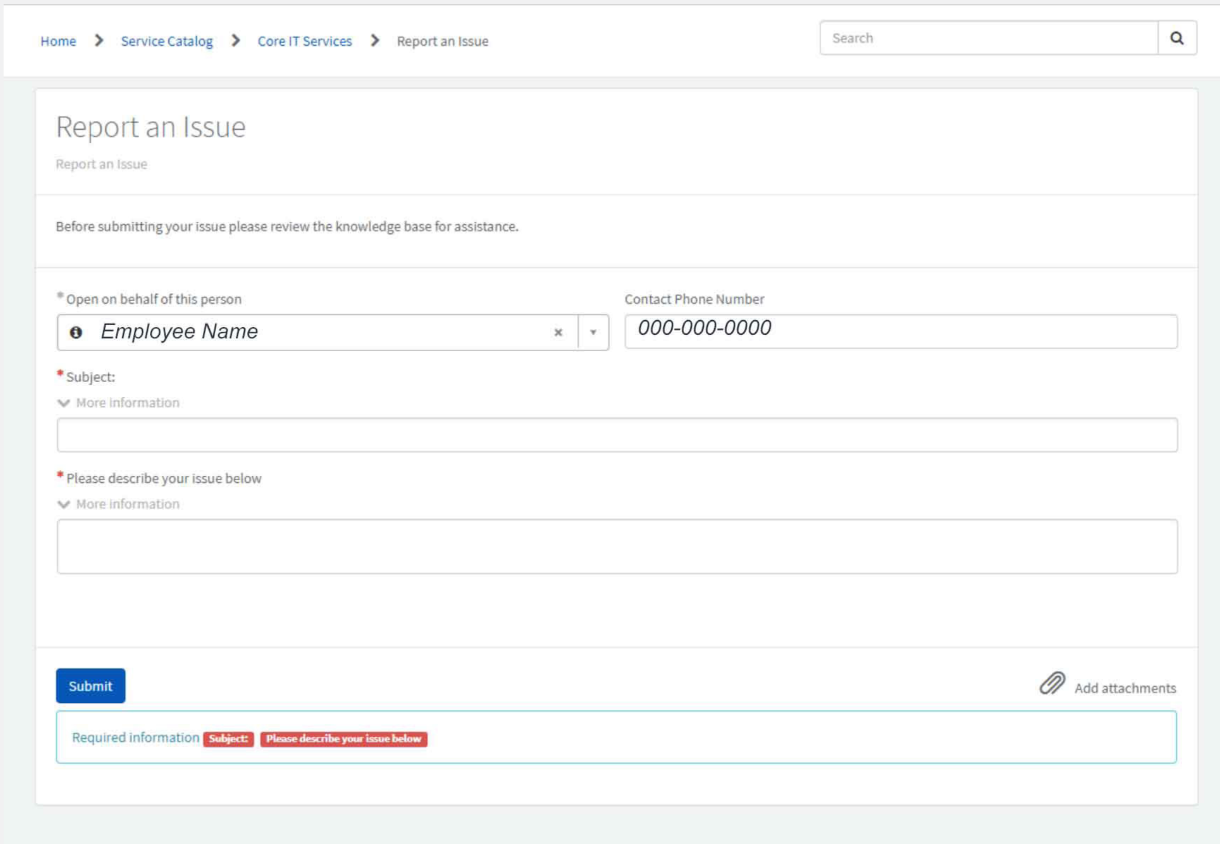
Long forms, with many fields, can feel overwhelming. Grouping related fields together helps users understand the information they must fill in. For example, name and date of birth could be *Personal Information*, while address and phone number could form the group *Contact Information*. Using white space and clear labels to effectively group related fields and indicate what information goes in each field could significantly increase form usability.

41. Left-align form fields and avoid multi-column forms.

Right-aligned fields and labels make it more difficult for employees to scan an intranet form for the same reasons right-aligned menu items impede scannability. Most forms work better if you stick to a single column of fields with corresponding labels, all of which should be left-aligned and properly spaced.

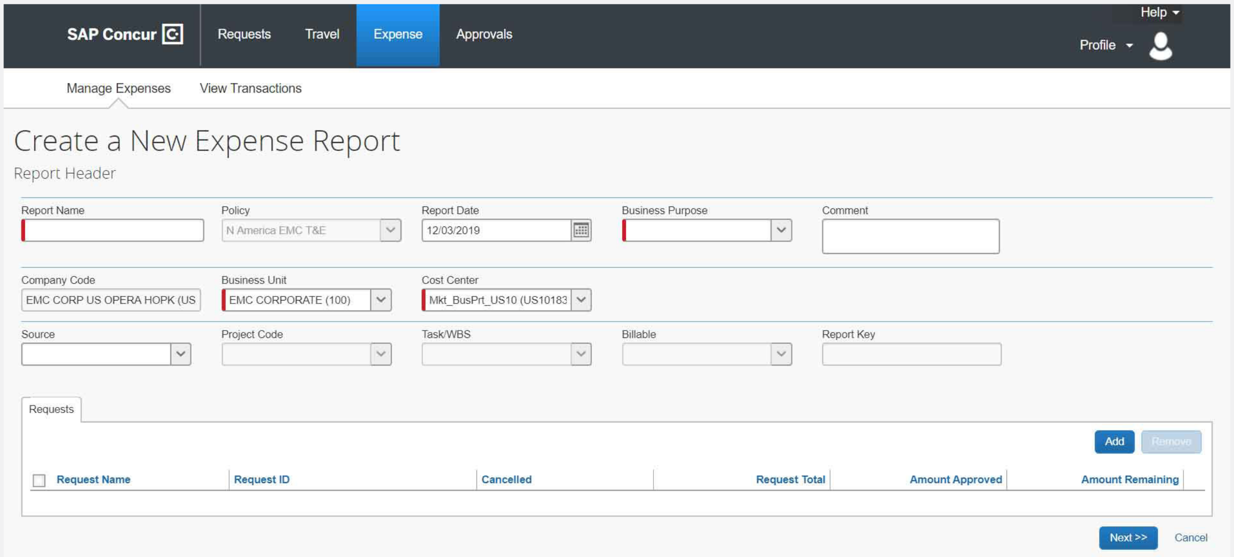
Avoid the temptation to make the form shorter by squeezing multiple fields into a single row, which results in a multi-column form. Of course, there are exceptions to this guideline, such as for dates. A day, month, and year are three parts of the same information, so dividing them into three different rows would be strange. Each form field is essentially a separate question, and you should ask those questions one at a time with clear signals to guide users through the form. A single-column design reduces the risk that people will overlook fields that are off to the side.

Multi-column design requires employees to visually reorient themselves with each new row. Keep users in the flow by sticking to a single column with a separate row for each field. Exceptions to this rule are short and logically related fields such as City, State, and Zip Code, which can be presented on the same row.



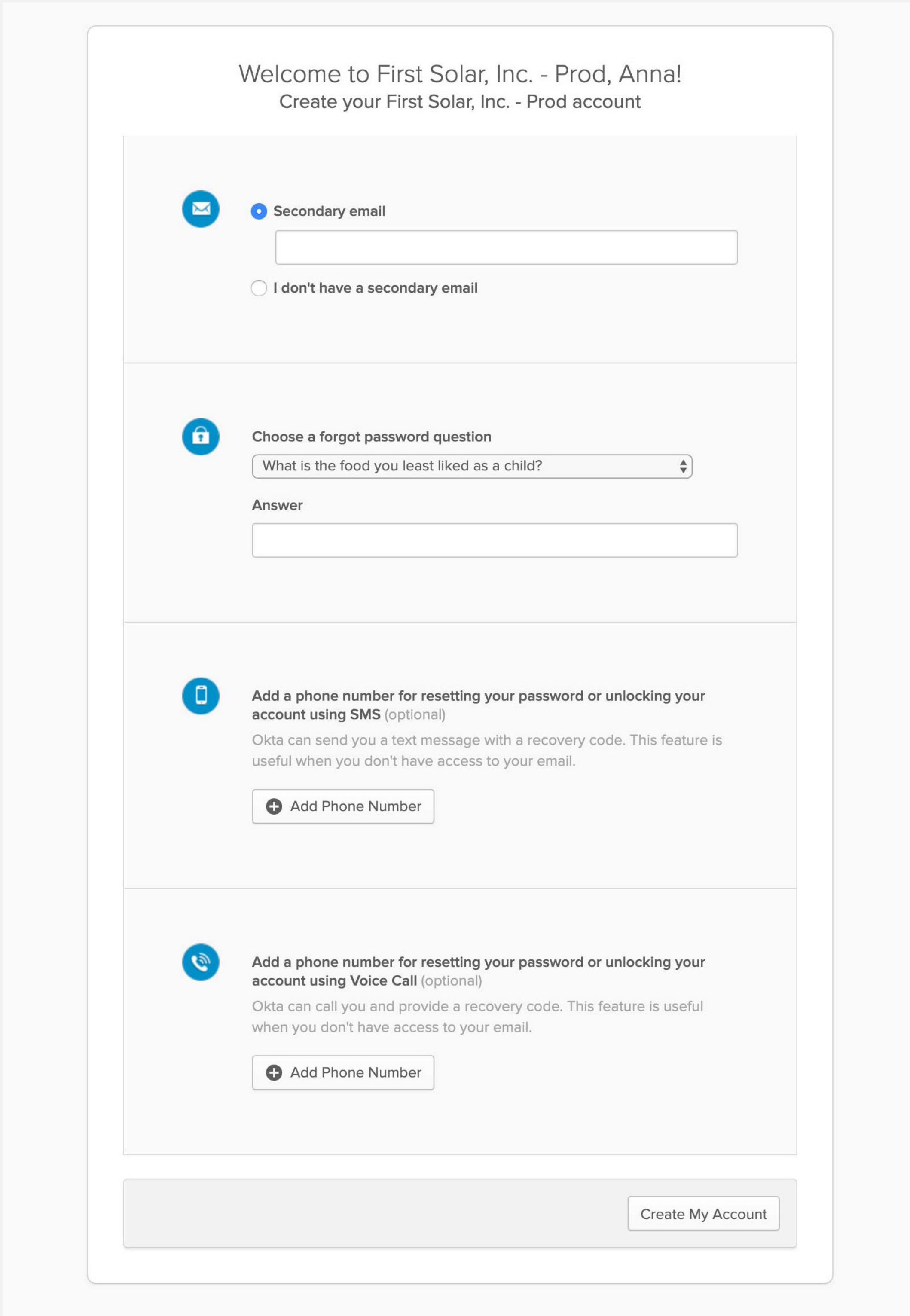
On Burns & McDonnell's intranet, it's excusable that the employee's name and contact phone number appear in the same row since this personal information is generally related. It's also good that the rest of this form is presented in a single column with left-aligned fields and labels. However, an improvement would be to move the required information to the top of the form and use a darker font for the form's text.

In addition to left alignment and presenting form information in a single column, use logical sequencing for fields. (e.g., Credit card number, Expiration date, Security code) and for value choices (e.g., Standard shipping, 2-day shipping, 1-day shipping). Employees had to navigate a complex, multi-column form on Dell's travel and expense tool, Concur. The form fields' logic and order were unclear (for example, *Source)*, as were the red vertical lines affixed to the left side of the form field to denote them as required. A better approach here would be to include only the necessary form fields and place them in a single-column form.



Dell's travel and expense tool, Concur, *had too many fields per row, and a red line was used to denote required fields instead of a standard asterisk. Since this is only marked by color, it's not accessible.*

First Solar employees create their intranet accounts using a nice, single-column form where each item in the form appeared in its own row with clear labels above the fields. The only improvements we'd suggest to this form would be to include a specific prompt for the first form item, use a darker font for the explanatory text underneath the bottom two form prompts, left-align the button with the form fields, and make the button look active instead of gray, which typically indicates a disabled state.

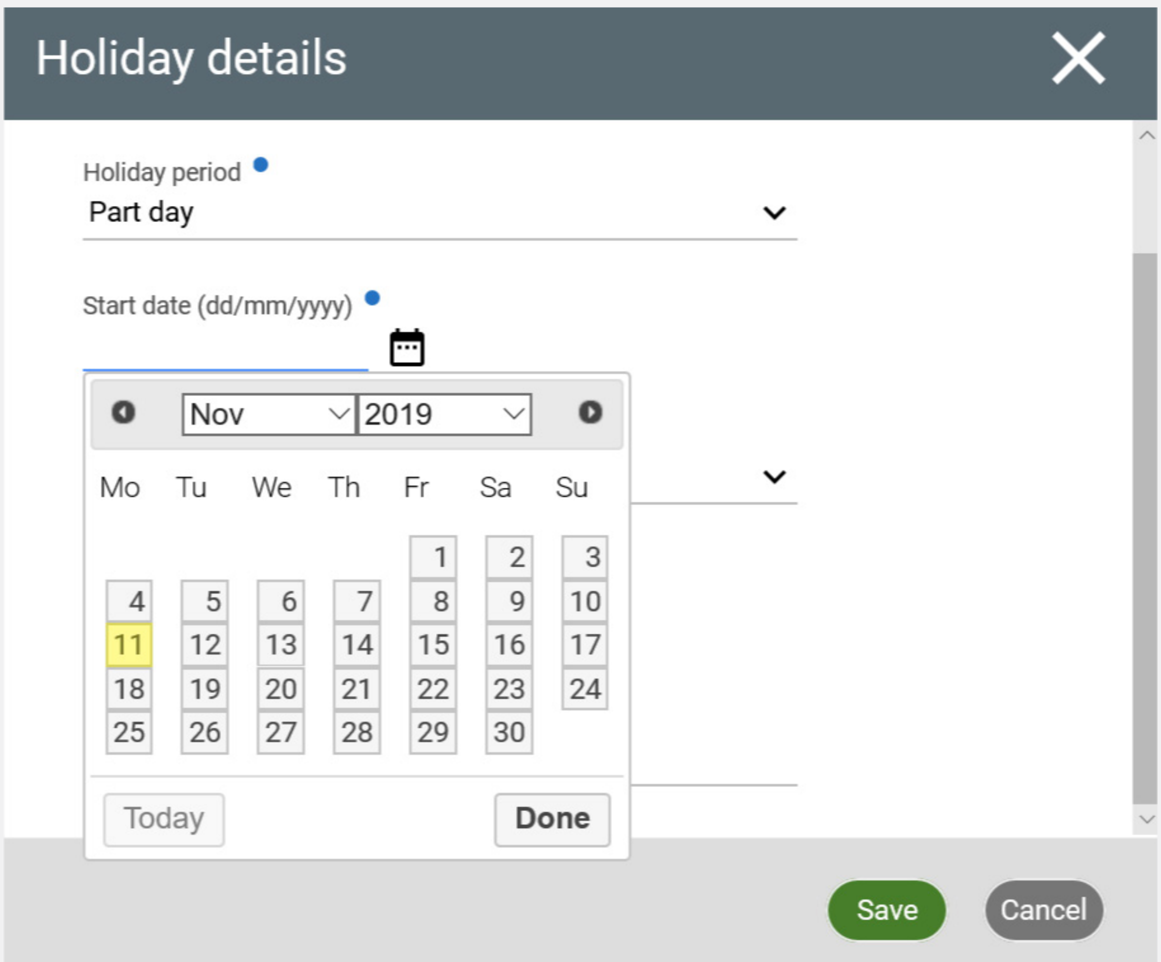


The form to set up an intranet account on First Solar's intranet is nice because it is a single, easy-to-scan column; however, the button doesn't look clickable and is not properly left aligned.

42. Design form controls that support how employees naturally input information.

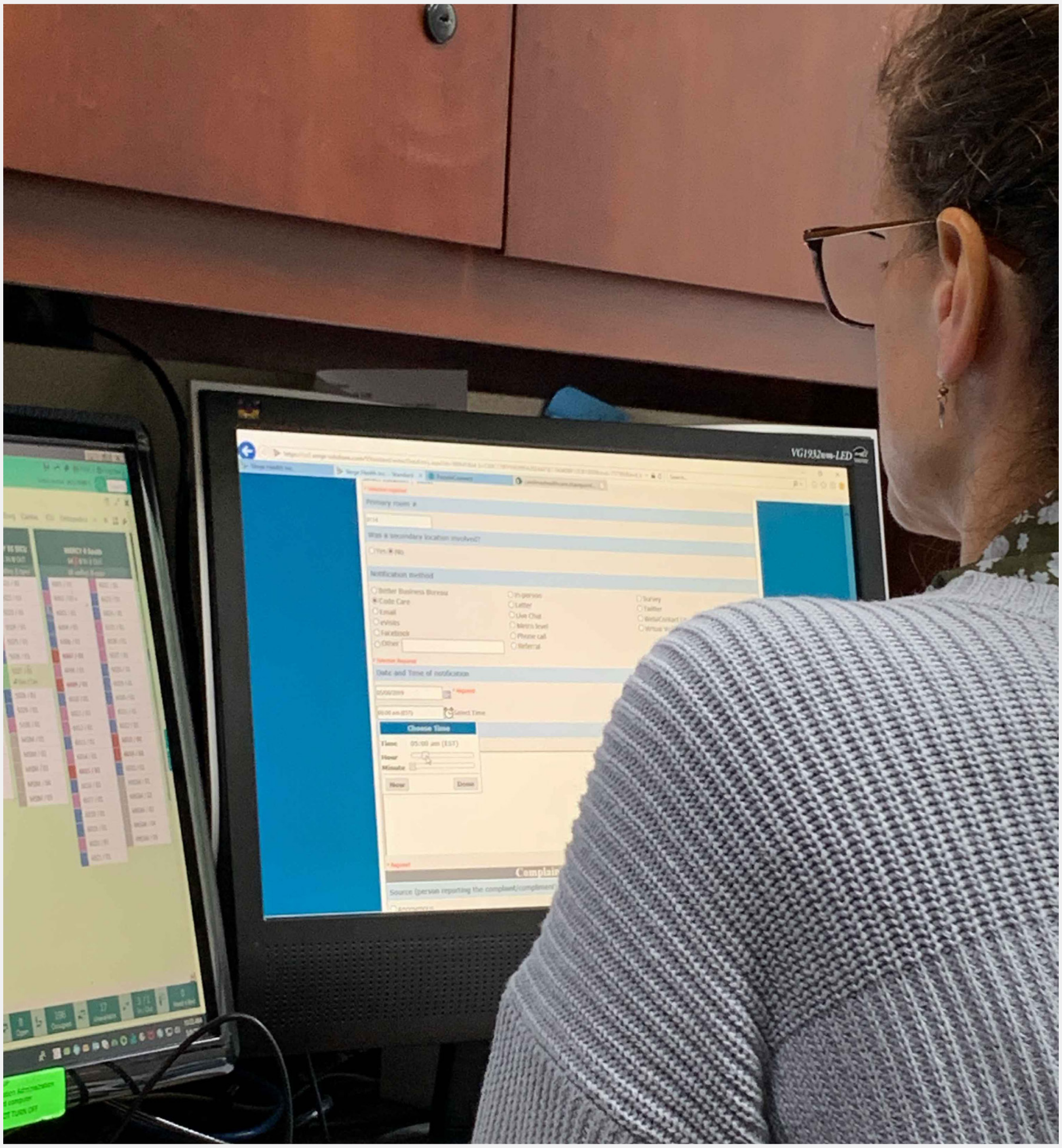
When asking employees to input information such as dates, phone numbers, or locations, use industry-standard controls rather than trying to reinvent the wheel. For example, most intranets use a calendar date picker when asking employees to input dates. If employees come to the intranet and are presented with an open form field, they will have to spend extra time considering which format to use when entering the date.

It's okay to allow employees to type in dates, but autoformat how the numbers should appear. Don't force employees to type parentheses or dashes for dates, phone numbers, and area codes. Also, avoid using a dropdown when there are only two or three options that could be displayed better as radio buttons, which require only a single click or tap. Use the form controls that will support employees' common tendencies and expectations for entering information.



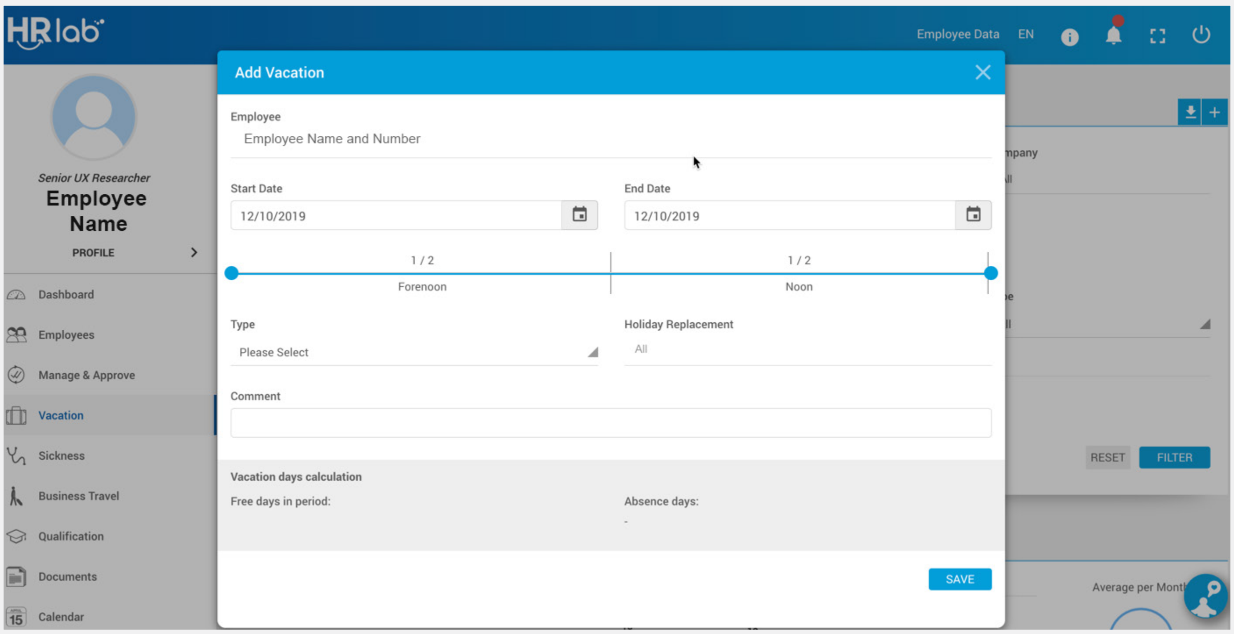
This calendar picker on one of the intranets we studied used a clean design, applying expected form interaction controls for entering a date, but employees could also type in the date following the format communicated at the top.

Whenever possible, help users enter data by designing form fields and controls that eliminate the need to guess how the entry should be formatted. Explain any input or formatting requirements, and if a field requires a specific format or type of input, state the exact instructions. Don't make users guess your obscure password requirements or mine through massive columns and lists of checkboxes or radio buttons when a listbox or dropdown would be better.



A house supervisor at Atrium Health was filling out a long, multi-column form. She took a while with the form as it used less than optimal controls to help her get through the task. For example, instead of using sliders to set the time, it would have been much faster to let users simply type in the exact numbers. The overwhelming three columns of radio buttons could be a dropdown instead.

Stick to familiar and standard input controls such as text fields, calendar pickers, checkboxes, dropdowns, listboxes, and radio buttons for forms. Using fancy sliders or other novel controls isn't necessary and will likely only waste employees' time as they try to get the precise answer or information they need to enter into the form. Using these nonstandard controls also introduces the risk of employees entering the wrong information.



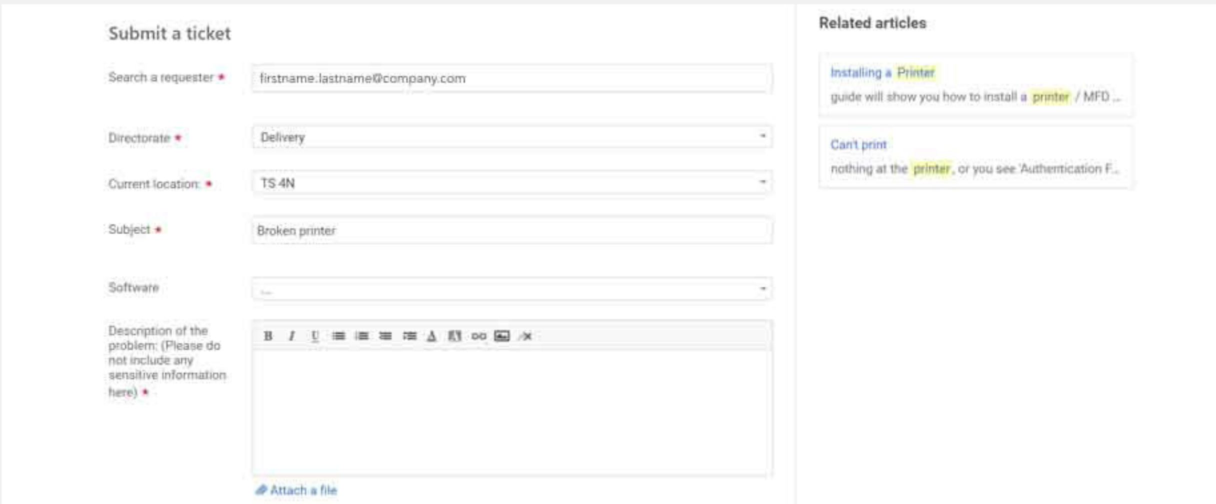
Eyeo's vacation request tool through HR Labs used a slider for employees to specify how much time they'd be taking off. It was a confusing, non-intuitive control that forced employees to waste time and work harder than necessary just to request time off.

43. Label required fields with an asterisk or the word "required."

It's best to have either an asterisk or the word "required" next to every required field in intranet forms instead of just having a message at the top or bottom that says, *"All fields are required" or "All fields are required unless otherwise indicated,"* or worse, no message at all. Employees usually don't read small or even large font instructions at the top of a form. When they see a form, they often jump straight into filling it out. Even when employees read such instructions, they'll likely forget them if interrupted while filling out the form.

Some designers may think marking only the optional fields in a form is more efficient since there are often fewer of these. Unfortunately, with this approach, an employee must scan the entire form to determine which fields are required. Users won't do this. Instead, people will use common sense to assume which fields are mandatory. Employee expectations can differ from designers', resulting in a form submission error that will take significant time and interaction costs to recover from.

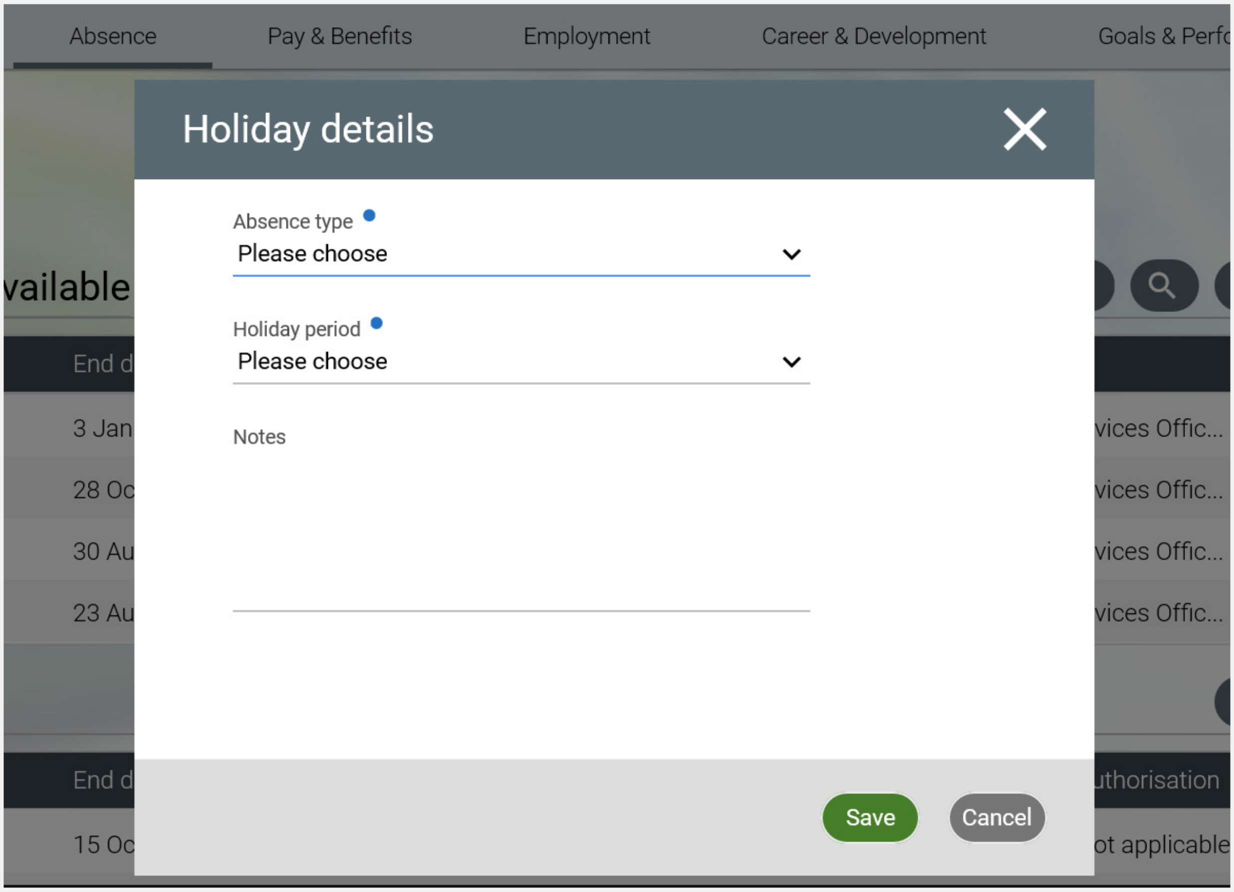
Asterisks have become the standard for indicating mandatory fields, and this approach has the advantage that it does not take up much space, so use it. Ensure the mark precedes the label to help employees' eyes easily locate which fields are required upon scanning. This way, they only need to fixate on the leftmost character to know what is required.



Though not likely to make a massive difference, placing the asterisks indicating a required field to the left of the first character in the form field label is favorable. This way, employees can simply scan down the left side of the form, which they'll already naturally do, to understand which fields are required.

You can also specify the optional fields as it will lighten the employees' cognitive load. Without the word *optional*, employees must look around and infer whether the field is optional based on the other fields marked as required. The task becomes easier if the word is next to the form label.

Additionally, try to eliminate as many optional fields as possible. If some fields are truly necessary but only apply to a subset of users, don't make users find out through trial and error. Limit the form to only one or two optional fields and clearly label them as optional.



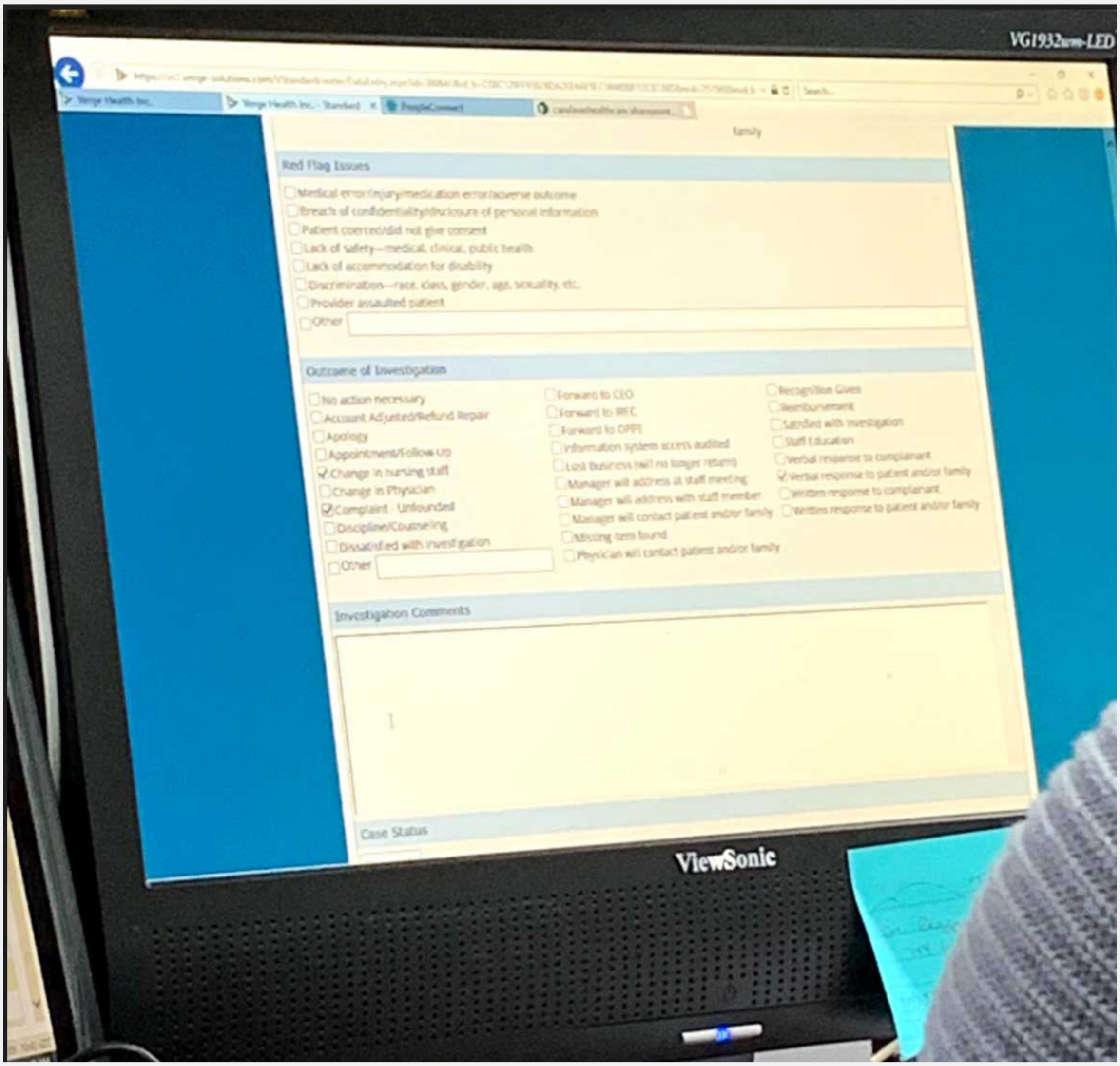
Though not a standard means of marking required fields, the small blue dot next to the form fields on a leave request form still insinuated that those fields were required. A better approach here would be to use an asterisk instead and to label the Notes *field as optional.*

44. Choose field sizes that correspond with the amount of information employees will enter.

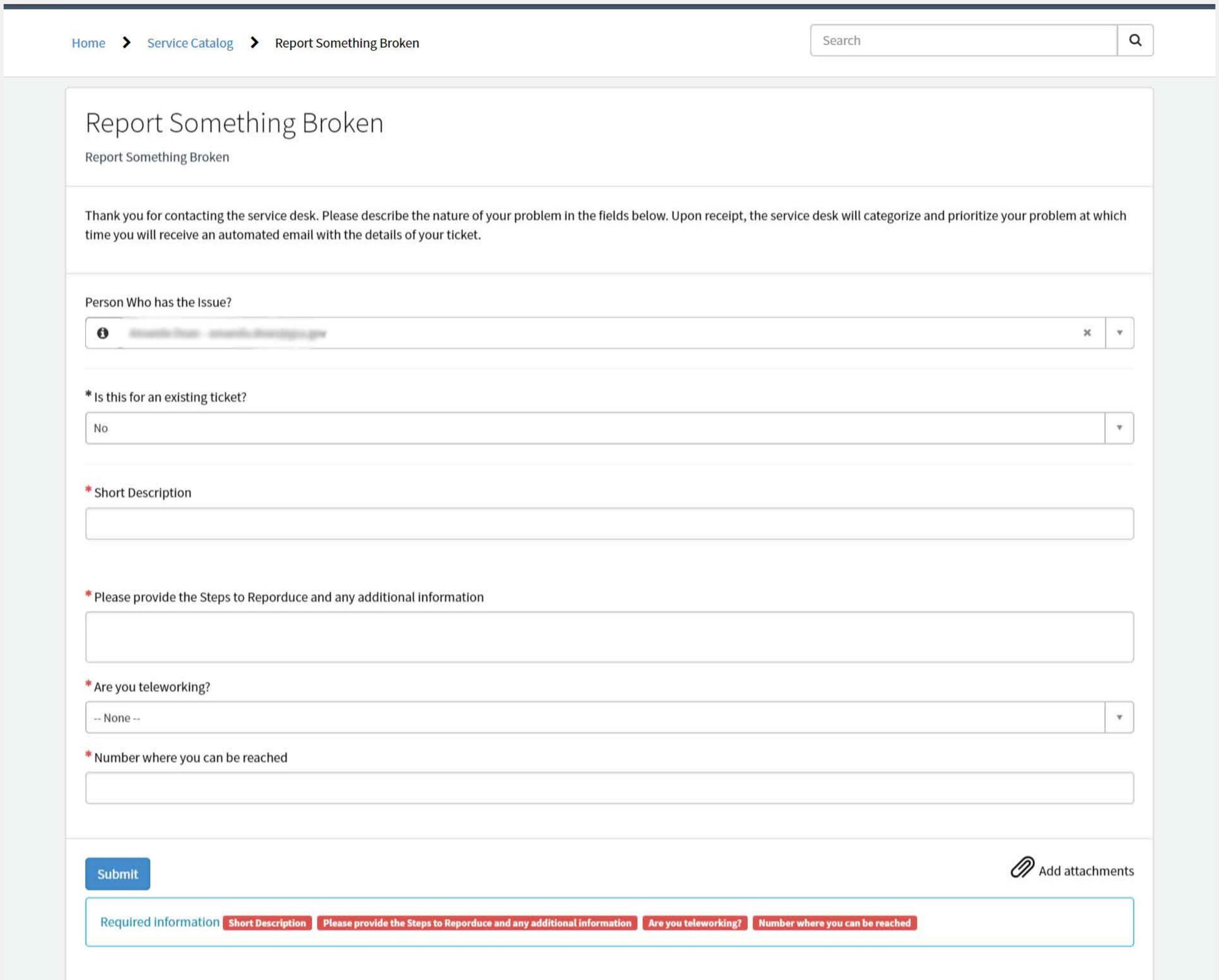
All form fields do not need to be the same size or format to yield a visually appealing and balanced form. Match fields to the type and size of information employees will input. Text fields should be about the same size as the expected input since it's highly problematic when users can't see their full entry.

For example, for 2,130 recent participants in the UX Conference, the user's city of residence ranged between three characters (Leo, Indiana) to 22 characters (San Pedro Garza Garcia, Mexico). 99.9% of city names were 19 characters or shorter, making 19 characters a reasonable width for a city field.

While observing a house supervisor at Atrium Health as they worked through a complex form used to file an incident report, the investigation comments field looked abnormally large. However, for this context and situation, it wasn't. The nurse manager explained that many details and comments are required to file these reports, so having that much space was helpful. However, the *Other* checkbox, which appeared higher up on the form and had a wide open form field next to it, likely could have been narrower to match the level of detail and information contained in the checkbox options listed above.



To make this complex form easier to scan, the Other *form field in the section related to Red Flag issues would be more favorable if it matched the width of the one in the Outcome of Investigation section above. As it appears, it's too wide, given the amount of information in the options above it. Containing the many checkboxes in the Outcome of Investigation section in a scrollable, multiselect listbox would also help simplify this form.*



In another example, these form fields are too wide, considering the amount of information that will eventually populate them. For example, the second question seeks a yes or no answer, yet it has a field that spans the entire page width. Additionally, the last field asks for a phone number and also spans the full width of the page. Better to reduce the width of these form fields to a more realistic size, given the data they'll hold.

45. Keep forms simple; include only necessary content, fields, and controls.

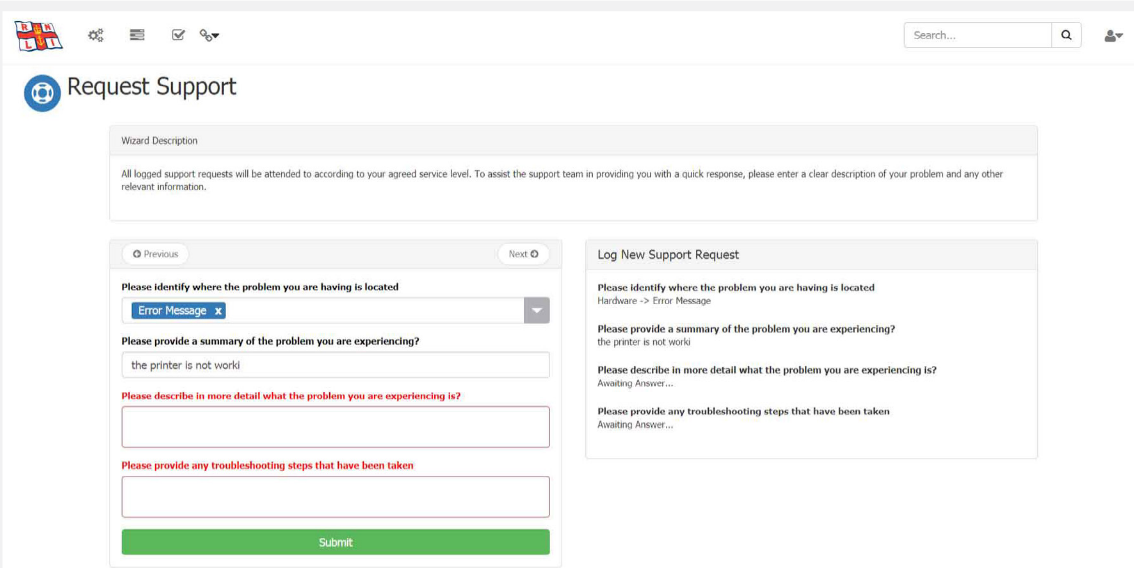
Eliminating unnecessary fields and form elements requires more time and possibly debate, but the resulting reduction in employee effort and increase in form completion rates will make it worthwhile. Remove content and fields that collect information that can otherwise be:

- Derived in some other way
- Collected more conveniently at a later date
- Simply omitted

We recently applied this technique to one of our own forms and reduced it from six fields to only two. Every time you cut a field or question from a form, you increase its conversion rate and save employees time, making the business case for this guideline obvious.

At the Royal National Lifeboat Institution, there were UI elements on form pages that did not support the employees' tasks, which increased cognitive load. In addition to a panel on the side right of the form where users created an IT request, there were also inactive buttons.

The *Previous* and *Next* buttons at the top of the form were not clickable. A better approach would be to remove or hide elements like these to avoid unnecessarily increasing cognitive load as employees scan forms.



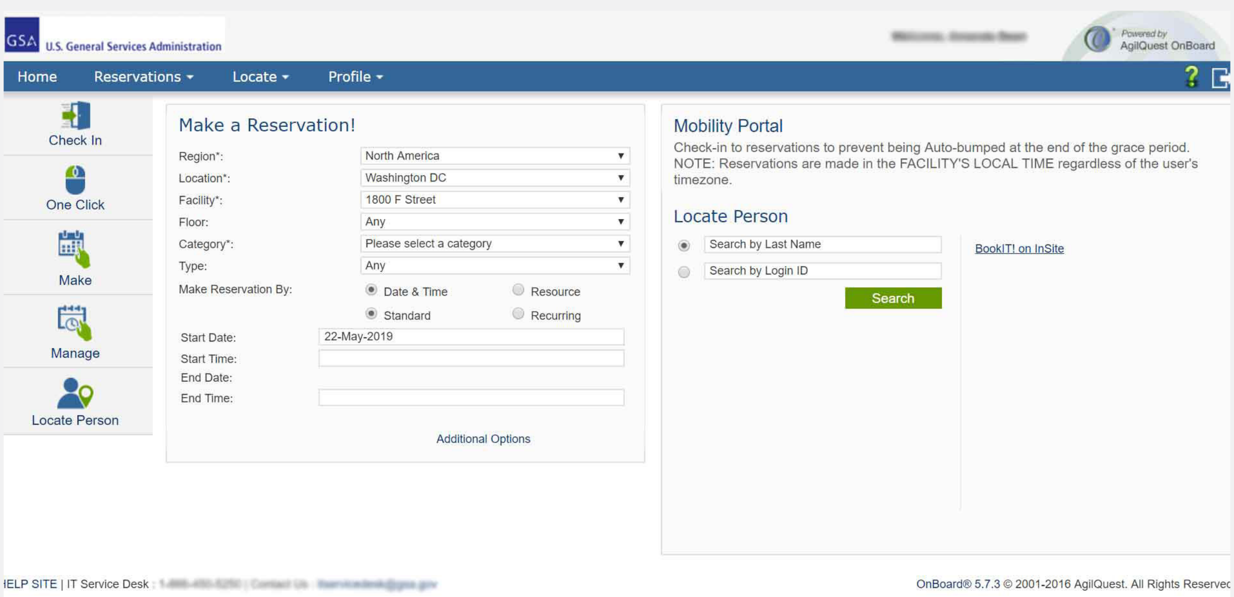
Though it contains only necessary fields, a better approach for this form on the Royal National Lifeboat Institution's intranet would be to remove the Previous *and* Next *buttons, as they're inactive, as well as the right rail of supplementary content. These elements distract the user and add clutter. Additionally, making all the form field labels black instead of red would also help simplify the form.*

Avoid excessive bolding and italicizing in forms.

Timeless Design Tips

Stick to only one or two text and font treatments in a form. Too many competing visual elements will distract employees and make the form appear overly complex. When everything is bold, bright, or italicized, it becomes hard to know what is actually important.

When employees at the GSA were booking conference rooms through the agency's booking tool, unnecessary fields, and mandatory dropdowns slowed them down. Users also complained about unnecessary fields and questions in the *BookIT* and *HRLinks* systems. They did not want to shift through various building wings to find open rooms in the tool. They said it would be much easier if they could see all open rooms available on an entire floor. A better approach here would be to simplify the forms by eliminating redundant fields, those that are unnecessarily required, and confusing options within the fields.



The General Services Administration's conference room booking tool included excessive fields and another confusing form to the right of the main form. When attempting to book rooms, employees wondered what the difference was between the Type *and* Category *fields. A better approach would be to simplify the form down to only the most important fields required to book a room.*

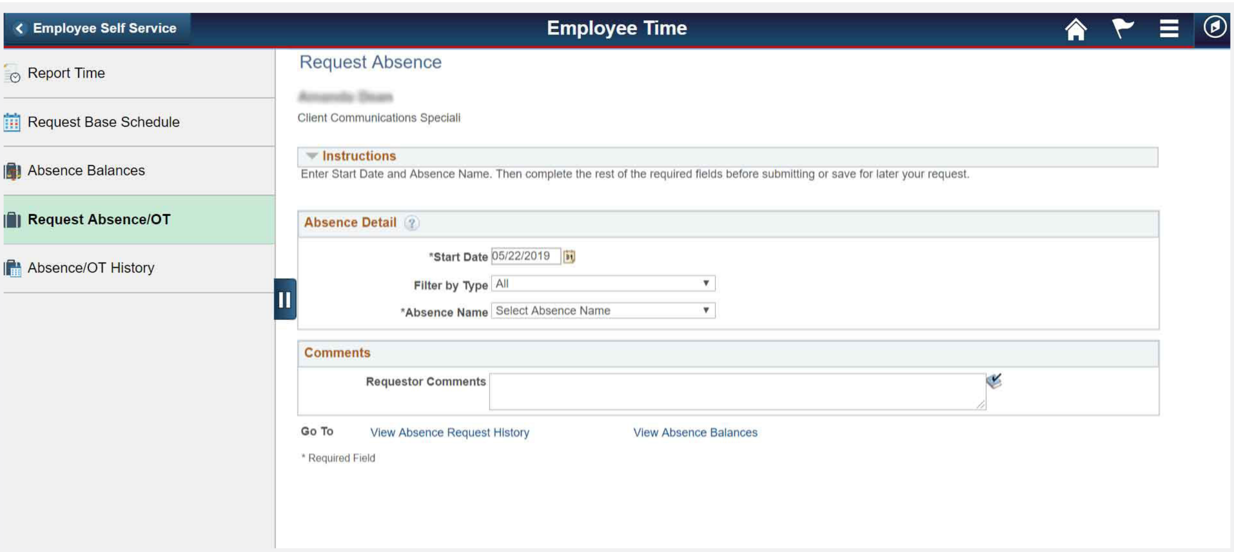
46. Use coherent language for form field labels and the values that appear alongside them or in controls.

Labels should clearly identify all form controls. That goes for text fields, checkboxes, radio buttons, and dropdowns. Labels should describe the purpose of the control and the names of the values that coincide with or are contained in any controls. Employees shouldn't have to stop and wonder which value or option to pick or what to write in an open text field. If employees have to do this, they'll waste time or possibly enter something incorrectly into the form.

For field values, also consider usage frequency, and whenever possible, list the most common values first. Help keyboard users by testing the tab-key navigation to ensure it follows the correct field sequence. Use the language you hear employees speaking, either in passing, in interviews, or during usability testing. You can also mine intranet search logs for the keywords and phrases employees search for related to the tasks your forms support. That language will be clearer to employees and align with their mental models for the topic.

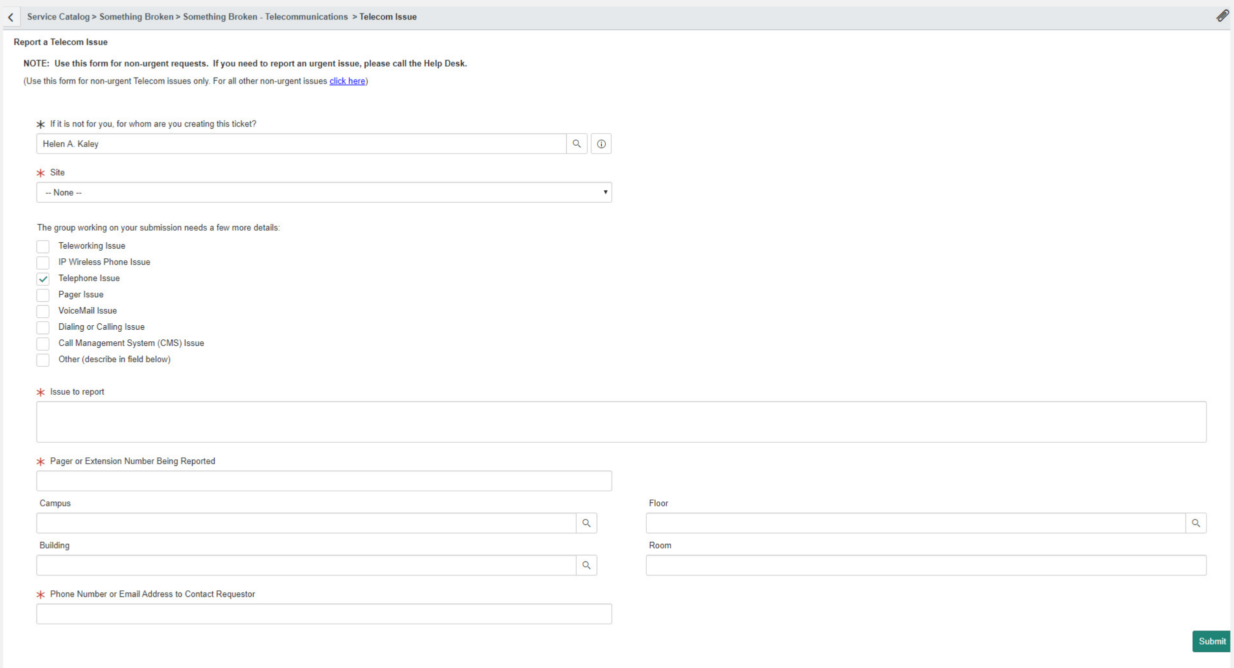
At the GSA, employees struggled to understand what form field labels and dropdown values meant, which increased task completion times. While attempting to request a half-day vacation, several users had difficulties, and one employee gave up. They were particularly confused by the field labels. One user said, "It's confusing what these terms mean. It would be nice to have a bubble that says, 'this means ____ and that means ____".

A helpful approach to address obscure labels or control values is to place contextual help text near the field or provide tooltips to help users understand which option to select for a given task or need more clearly.



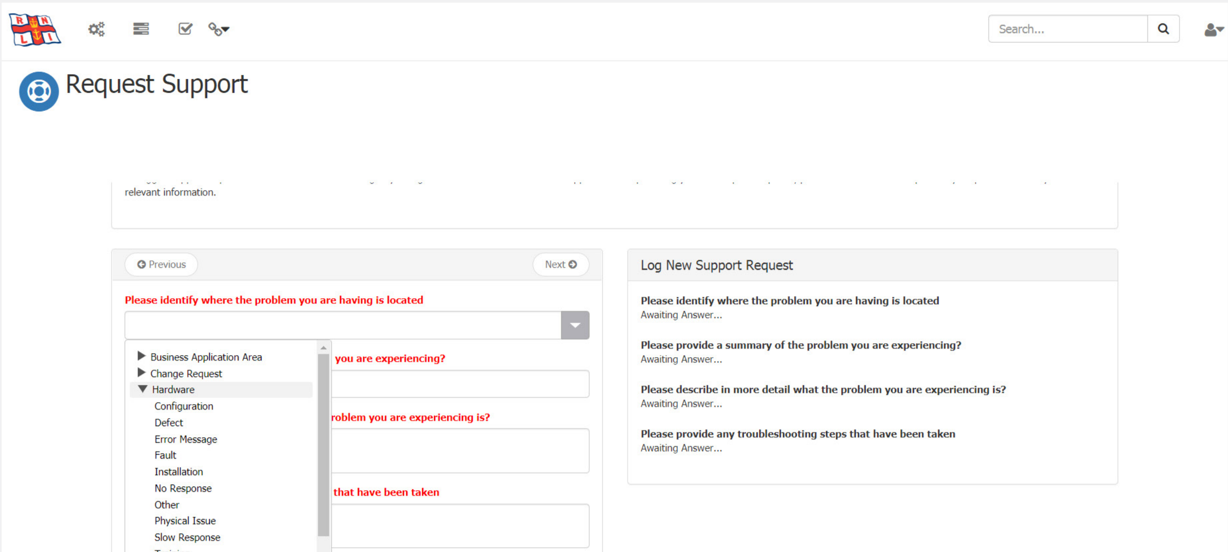
While trying to request a half-day of vacation, employees at the General Services Administration were confused by what the labels and values under the Filter by Type *and* Absence Name *dropdowns meant.*

At the Mayo Clinic, when an employee tried to submit an IT ticket to report an issue with their phone dropping calls, he missed the correct reporting option to *Report a telecom issue*. Instead, he selected *Other issues* from a dropdown. This language was not an issue for longtime employees during the testing. However, considering the Mayo Clinic's expansion and size, using plainer language for dropdown options, such as *Report a phone issue* would help more employees understand which option to choose.

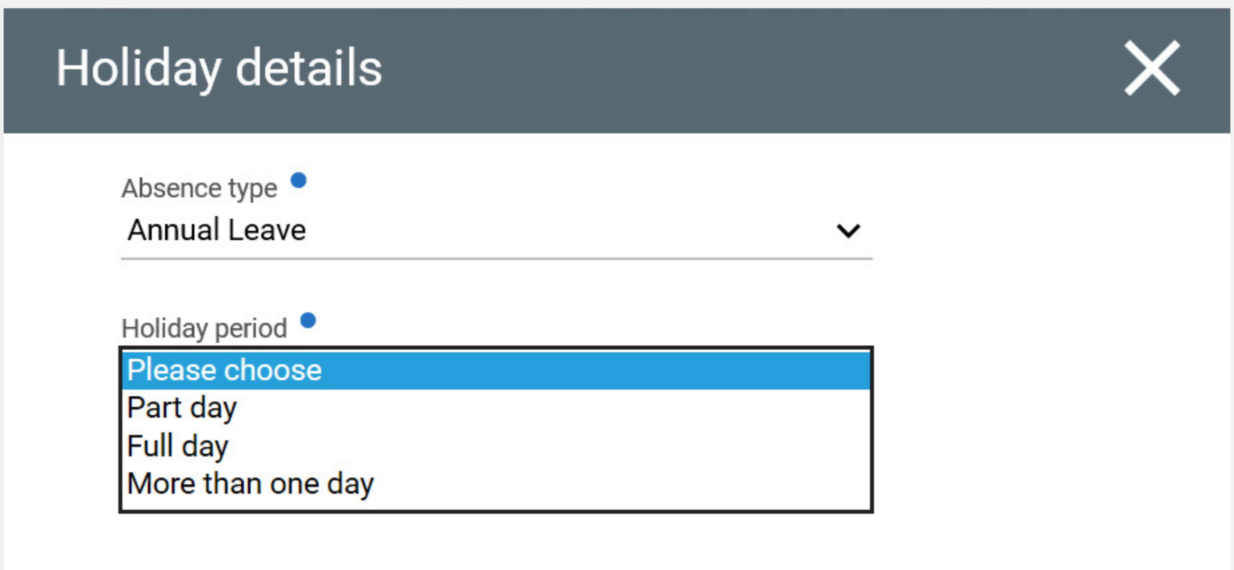


Seasoned employees at the Mayo Clinic knew to select Report a telecom issue *when submitting an IT ticket to get their broken phone fixed. They knew by choosing this option, they'd be directed to this page where they could elaborate on the issue to get it resolved quickly. Unfortunately, this phrasing in the initial dropdown wasn't clear to all employees, especially new hires, so many test participants didn't reach the proper form to get their phones fixed.*

The Royal National Lifeboat Institution used a custom control on its IT support tool, a dropdown with accordions inside. While the field label was straightforward and asked employees where the issue was occurring, some options were redundant or would be unclear to employees who didn't have a highly technical background. It would be better to clarify and simplify the language in these options and reorder them so that the problems employees report most frequently are listed first.



The values in the Royal National Lifeboat Institution's IT support tool were unclear to employees who didn't have a strong technical background.



The dropdown labels in this form for requesting time off at RNLI were much clearer, as were the options inside. When requesting leave, employees immediately knew whether to select a half day, full day, or more than one day.

47. Automatically populate known data in forms but allow employees to edit it.

Remember that when employees access the intranet, they're focused on tasks. Often, those tasks involve filling out forms to share information or initiate a workflow. Employees don't want to waste time doing this; they want to move through the forms quickly and easily. Because an intranet has a user account for each employee with information such as their name, phone number, title, office location, email address, and more, it's a good practice to leverage some of this data to prepopulate form fields. This will enable employees to skip over the mundane fields that the intranet already knows about them through their logged-in state or connection to the company's network. Then, they'll only have to fill out the parts of the form specifically related to their task. Whenever possible, automatically fill in what's already known about employees to give them a jumpstart.

While observing an administrative assistant at Atrium Health, she used the *eForms* page on the company's intranet to find a travel request form to request a rental car for the vice president she supported. Unfortunately, even though this form was listed on the eForms page, it opened as a Word document that she had to fill out and email to a travel agent.

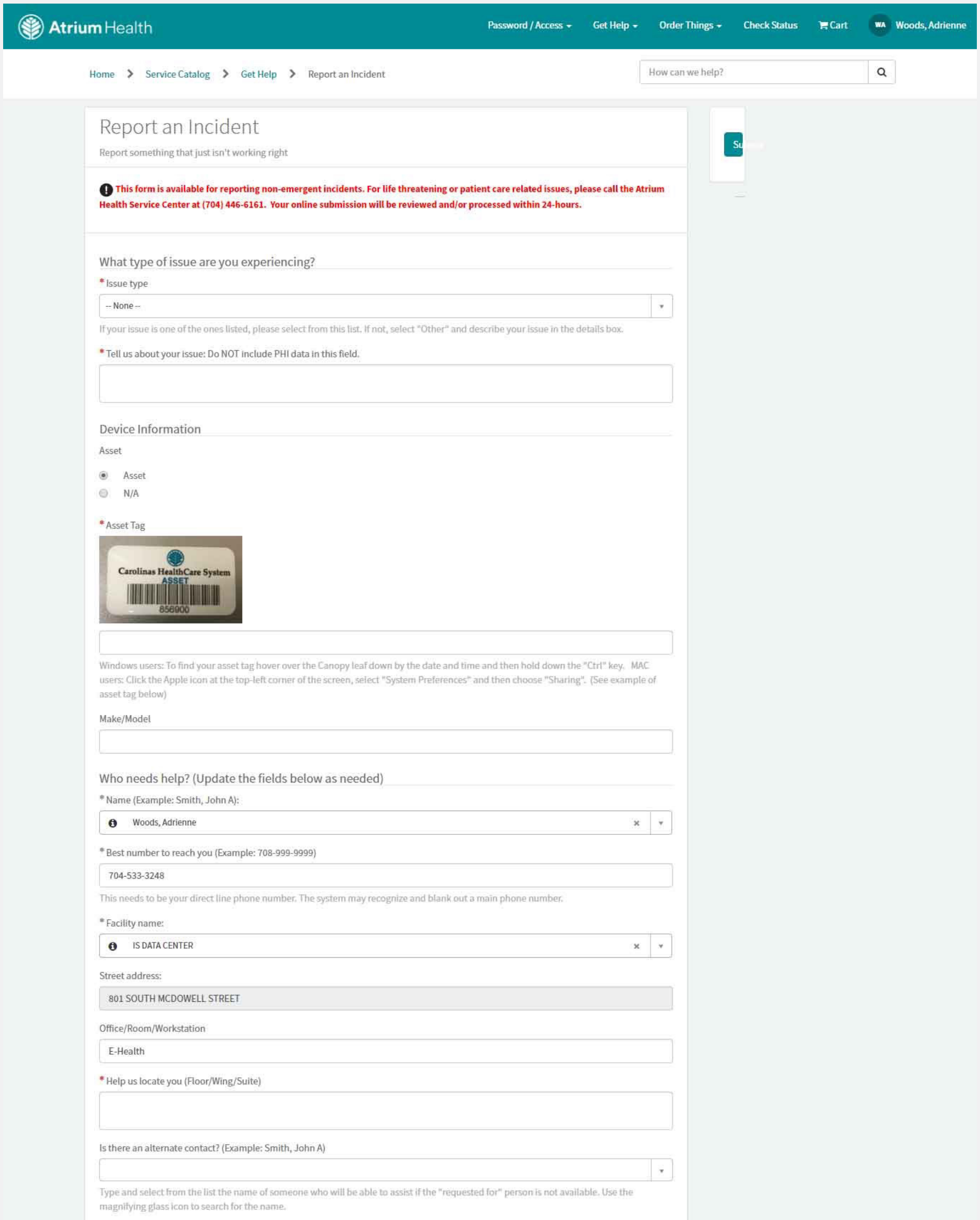
She said she wished the forms would populate employee information based on their name. She was frustrated that she had to find information or look it up in a separate system to add it to the form. Her workaround was to save contact information in Outlook to use when needed to complete the forms.

Because Atrium used Active Directory, this data was likely already known, including information about the executive she supported. Also, other forms in the digital workplace leveraged data to prefill form fields. A better approach would be to digitize the form instead of using a Word document so it's consistent with other forms on the intranet. It would also be helpful to autofill information such as home office location and address, so she doesn't have to fill in the field or waste time looking up an address in Outlook contacts.

Automatically save employee progress in long forms.

Timeless Design Tips

Automatically save employees' progress in long forms or multistep workflows. And don't force them to have to do the saving to make sure they keep their place. Use autosave to give employees one less thing to think about and provide additional time savings.



This Atrium Health form is a good example of prepopulating known employee data in a form; however, the red message describing the form's purpose looks like an error when it's not. Also, the button to submit the form in the upper right corner is partly hidden. Fixing those two issues and making other forms on Atrium's intranet follow the same consistent pattern of prepopulating known data in fields would be favorable. Users could complete the forms faster and be pleasantly surprised when forms prefilled their information.

It's good to prefill data you already know about employees but use caution when prepopulating data based on the most common responses. When fields and controls are filled in, employees tend to skip right over them, assuming they don't need to do or answer anything. Usability test your forms with employees to know when it's acceptable to prepopulate other values outside of personal information such as name, phone, email, office location, etc. In some cases, it may help to accelerate the pace at which employees move through forms, but in others, it may cause them to inadvertently submit the wrong value for the field.

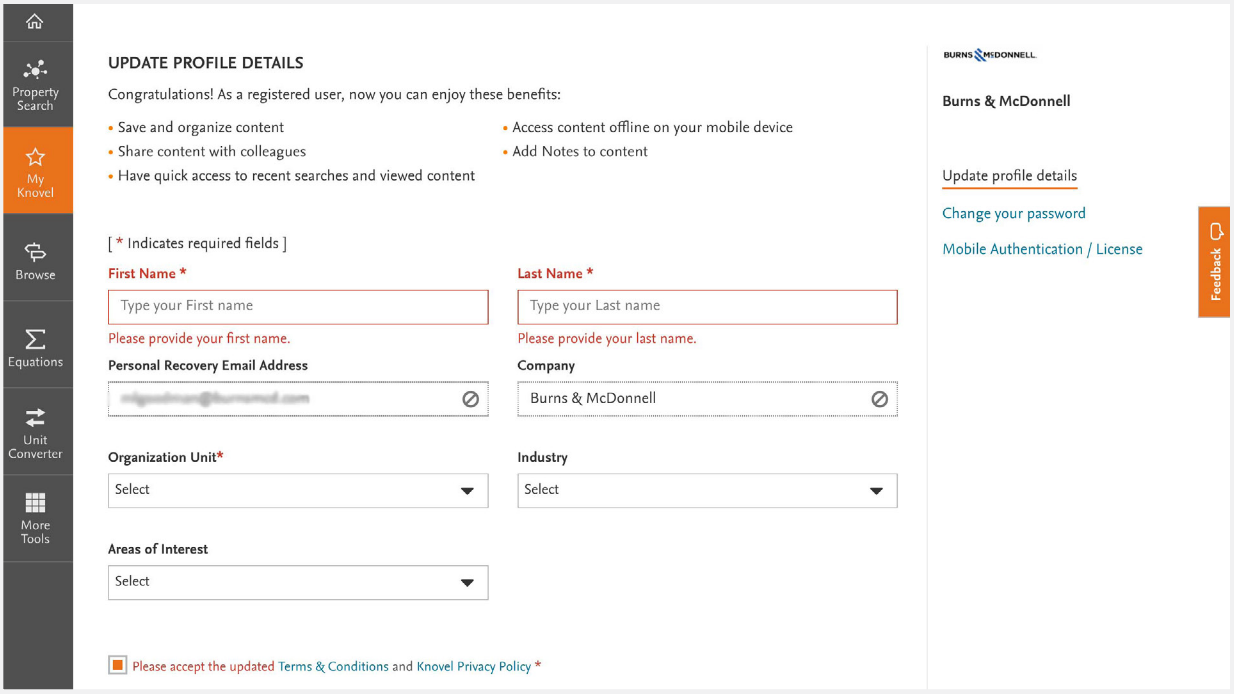
48. Present visible and helpful error messages at the field level as well as at the top of forms.

Provide specific and highly visible error messages on intranet forms. Errors should be signaled through a variety of cues, not solely through color: outline the field and use red text and a heavier font to ensure employees don't overlook this critical information. Make sure errors on intranet forms are:

- Easy to notice and understand
- Easy to locate
- Not reliant upon employees memorizing instructions to fix the error

On Burns & McDonnell's intranet, the form used to register as a content management system user had error messages that appeared inline as soon as the user skipped over a required field. When employees filled out a field correctly, they could move forward. Not only did the error messages highlight the form field with the error and label in red, but clear helper text also appeared below the form, which told the employee exactly what to do to course-correct, all of which was easily noticeable.

Fixing the error immediately after the field is completed requires the least interaction cost for employees as they don't need to locate the field with the error or navigate to it later, nor do they have to switch context from a new field to return to an old field they thought they had completed successfully. Of course, there will be situations where inline validation won't be possible, and data entered by the employee will need to be sent to a server for verification. However, whenever possible, follow this practice of providing immediate error feedback.



A form in Burns & McDonnell's digital workplace followed form error guidelines perfectly. The messages were explicit, human-readable, polite, precise, and they gave constructive advice on how to resolve errors.

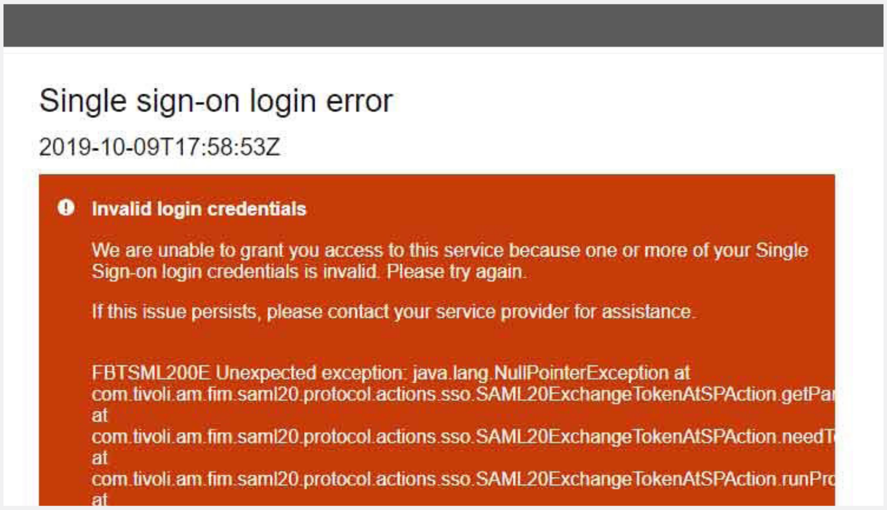
Employees were not drawn to the error messages provided in forms on the GSA's intranet. They often did not see or use them to course-correct. For example, after getting stuck in a form after a couple of attempts to request a half-day of vacation, an employee scanned a red error message to see what they needed to do to proceed, then said, "Do people know how to do this, am I the only one that doesn't know how to do this?" The employee then read the error message and successfully course-corrected, however, they also said:

> "I find it to be cumbersome, and it's new. I don't think we've had it for a year. It's frustrating because why do I have to put in partial days? Why can't I just put in that I want a half day? The training we had for HR Links was not robust enough. It was rushed, and they should have had other iterations of the training system after it went live. It was a module, not hands-on or scenario-based training which is more helpful."

Employees shouldn't need to undergo training to understand how to fix errors on a form.

At First Solar, while a content manager was trying to post a new event to the intranet, she received an obscure error message saying the system couldn't populate the groups of permissions needed to read and write the event. She immediately said the terminology was strange, and she wasn't able to move on with posting the event. Also, the field where she received the error was required, so, unfortunately, she lost all progress. When asked what she'd do next after trying to use the intranet to complete the task, she said she would find someone more familiar with it and ask them questions or look over their shoulder.

She tried one last time to create the event but failed and received the same obscure error message shown below.



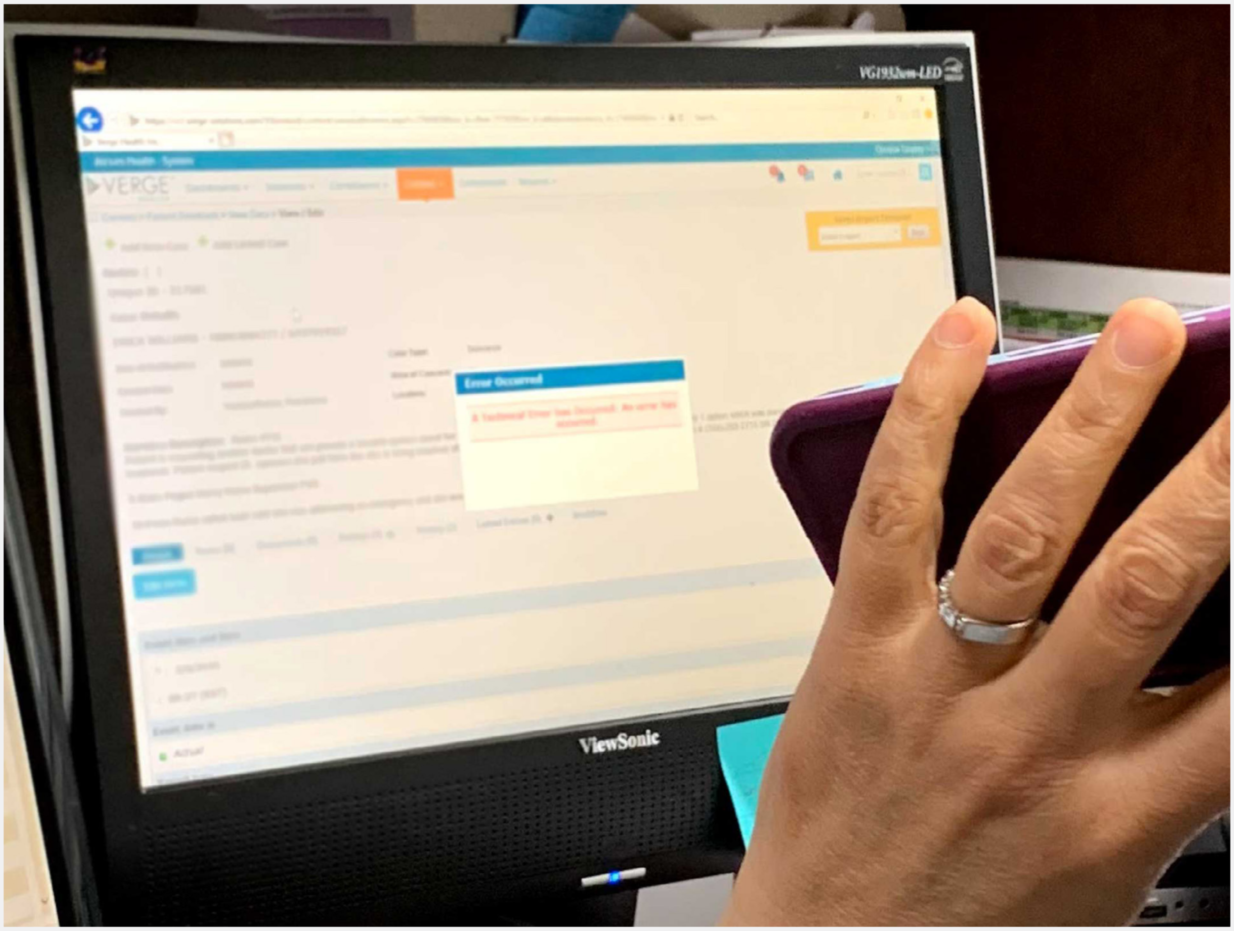
Obscure error messages that don't help employees overcome errors and those that include technical language force people to waste time, sometimes to the point where other colleagues' time is also wasted helping them resolve the form issues.

While trying to complete a long, complex form, a nurse at Atrium Health encountered an error message she couldn't overcome on her own, so she called another employee. The need for employees to pester peers costs organizations in the form of lost productivity, not only for the stuck employee but for the others that must help them course-correct. This shouldn't happen, as properly designed error messages can help employees self-solve instead.

To draw extra attention to a potential error, you can use a modal or confirmation dialog to explain the details and help the employee fix the issue. However, use such dialogs sparingly as they have two significant disadvantages:

- They are disruptive.
- The error message is presented in a window that needs to be dismissed before the employee can fix the error, so any complex instructions will have to be stored in users' working memory, thus increasing their cognitive load.

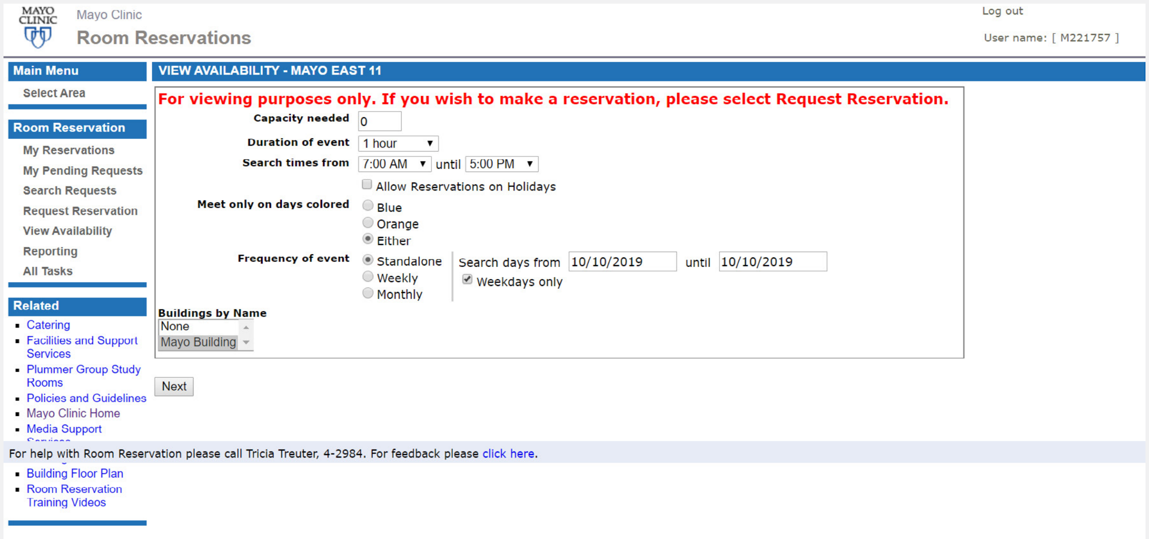
These modals and dialogs are okay to use if the error message is simple or the form could still be submitted as it is.



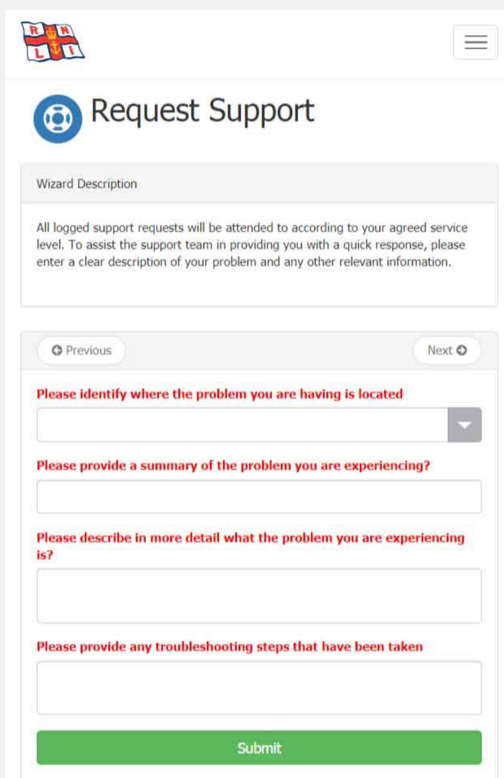
Use modals and dialogs sparingly for errors. This unclear error at Atrium Health caused a nurse to call IT to resolve the issue so she could (hopefully) save the progress she had already put into completing this long form.

Red is the color associated most with errors, along with orange or yellow for warnings and green or blue for success. Ensure the validation text's color stands out from the rest of the form so the employee will notice it quickly. Add a semitransparent background of the same color to the error field to make it stand out on a long page with many form fields.

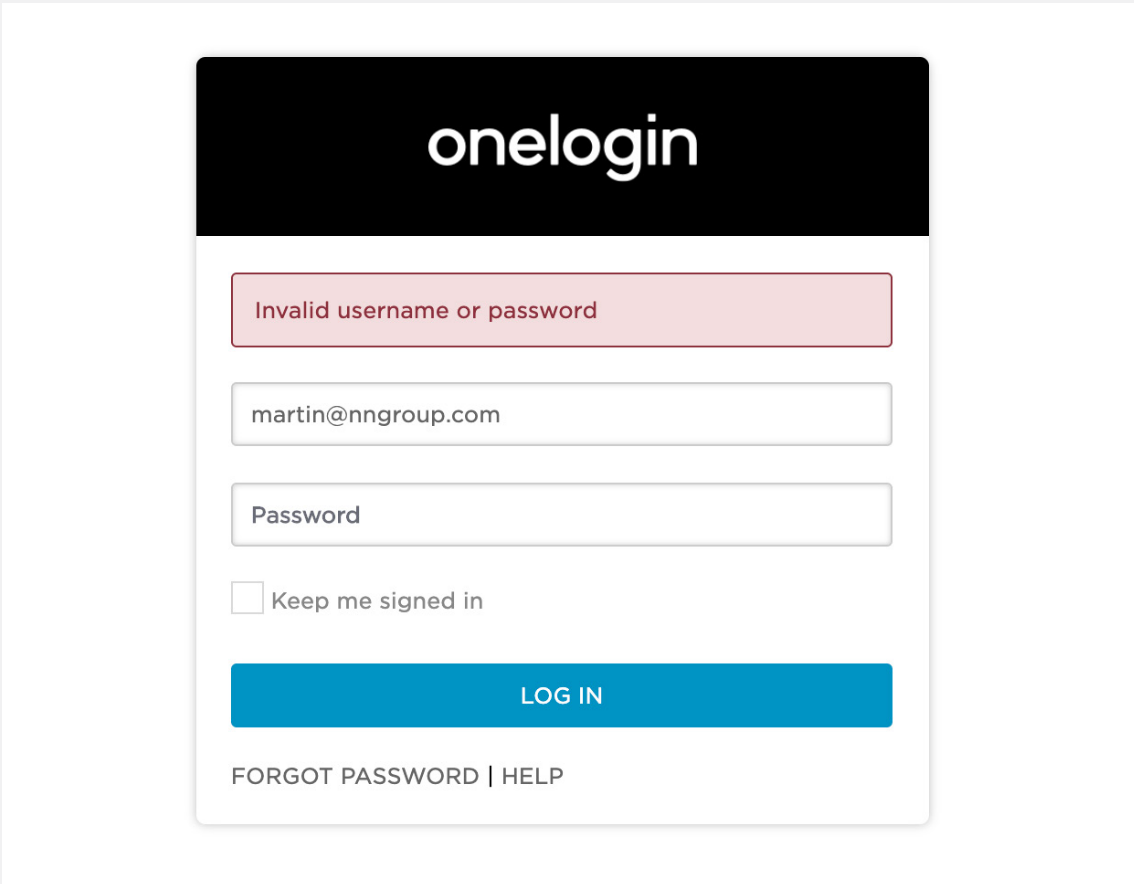
Additionally, don't use validation summaries as the only indication of an error. A validation summary is a message shown at the top of the form page to let employees know that there are errors that need to be fixed, whether those errors are in the viewport or below the fold. A validation summary can give the employee a global understanding of all the errors in a form but shouldn't be used as the only form of error indication, as it forces them to search for the field with the error. Moreover, the validation summary message may no longer be present in the viewport when the employee reaches the error field, thus forcing them to memorize the error message in order to fix the issue.



On the Mayo Clinic's conference room booking tool, a message appeared in red at the top of the page, mimicking a validation summary, but it was not. It was merely form instructions. A better approach would be to use black text to communicate information about the form.



Do not use red text for form field labels as the Royal National Lifeboat Institution did on its support form. Red text will signal errors to employees.



On shorter forms, like a login form, it's perfectly acceptable to use a short validation summary to communicate errors. Place a visible red design treatment at the top of the form to help employees quickly resolve the error.

Error messages indicate system status: they let employees know they have encountered a roadblock and provide solutions to help fix it. But for the error messages to be effective, people need to see them, understand them, and be able to act upon them easily. An error flow is the sequence of steps the employee must complete to correct the error. A thoughtful error flow allows employees to easily fix their mistakes and proceed with their tasks. We recommend you review analytics data to discover repeated errors and then review or test the design to try to improve it. A rewritten error message is often the first thing to try.

As a stopgap solution, you can also show a link to more detailed help information or documentation after an employee has made the same error too many times. Design error flows to help employees fix mistakes and advise them on how to avoid making more. Ensure that employees can easily detect errors, understand how to fix them, and see the error message while correcting the corresponding error. Remove the guesswork and let employees get on with their tasks and workday.

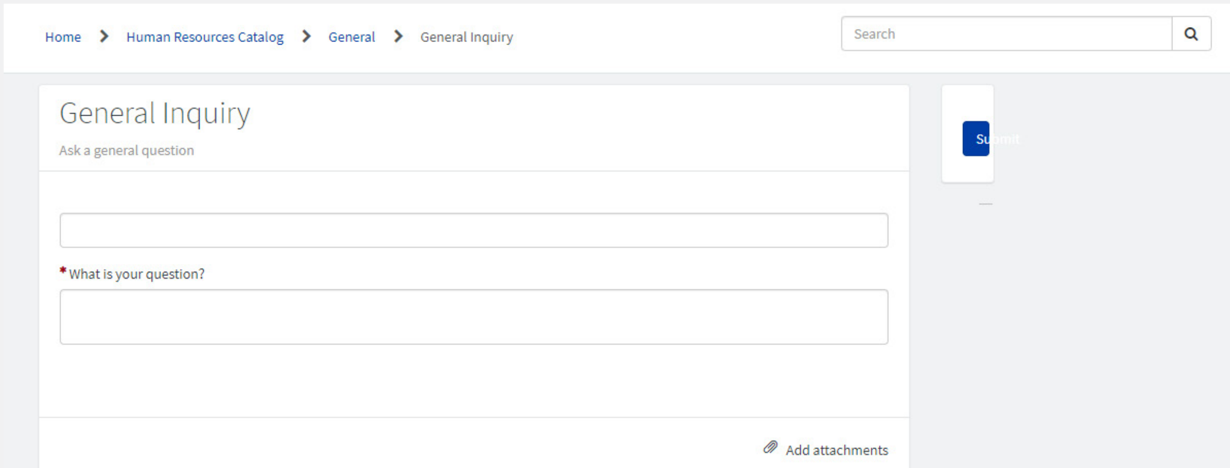
49. Left-align form buttons and visually differentiate primary calls-to-action from secondary.

We've established in previous guidelines that single-column web forms yield the cleanest designs. This means a form design where each control or field lives on its own row instead of using a multi-column form where employees must scan it from left to right and from top to bottom. The only time it's acceptable to place fields on the same line is when information is very closely related, such as date of birth with a month, day, and year, or the city, state, and zip code corresponding to an address.

A significant trend we noticed in our most recent round of research was that *Submit* buttons on intranet web forms were often improperly aligned, appearing to the far right at the bottom of the page or, in some cases, at the top of the form instead of left-aligned with the left side of the input fields and controls. It was also often difficult to visually discern the primary call-to-action from the secondary call-to-action in forms, as the primary button style was applied to both, instead of using different visual styles to denote levels of importance.

When simple forms are lined up in a single column, and buttons are left-aligned, it makes forms much easier for employees to skim and scan and supports peoples' natural F-shaped reading pattern. Users generally move through forms in a straight, vertical, visual line as it's the most efficient means of navigating the form. Forcing the user's eye to move down and over to the right takes more mental effort to find the buttons and submit the form. Left-aligning buttons is also more convenient for employees who rely on the *Tab* key for navigation because they don't have to look over on the other side of the screen to see where the focus jumped.

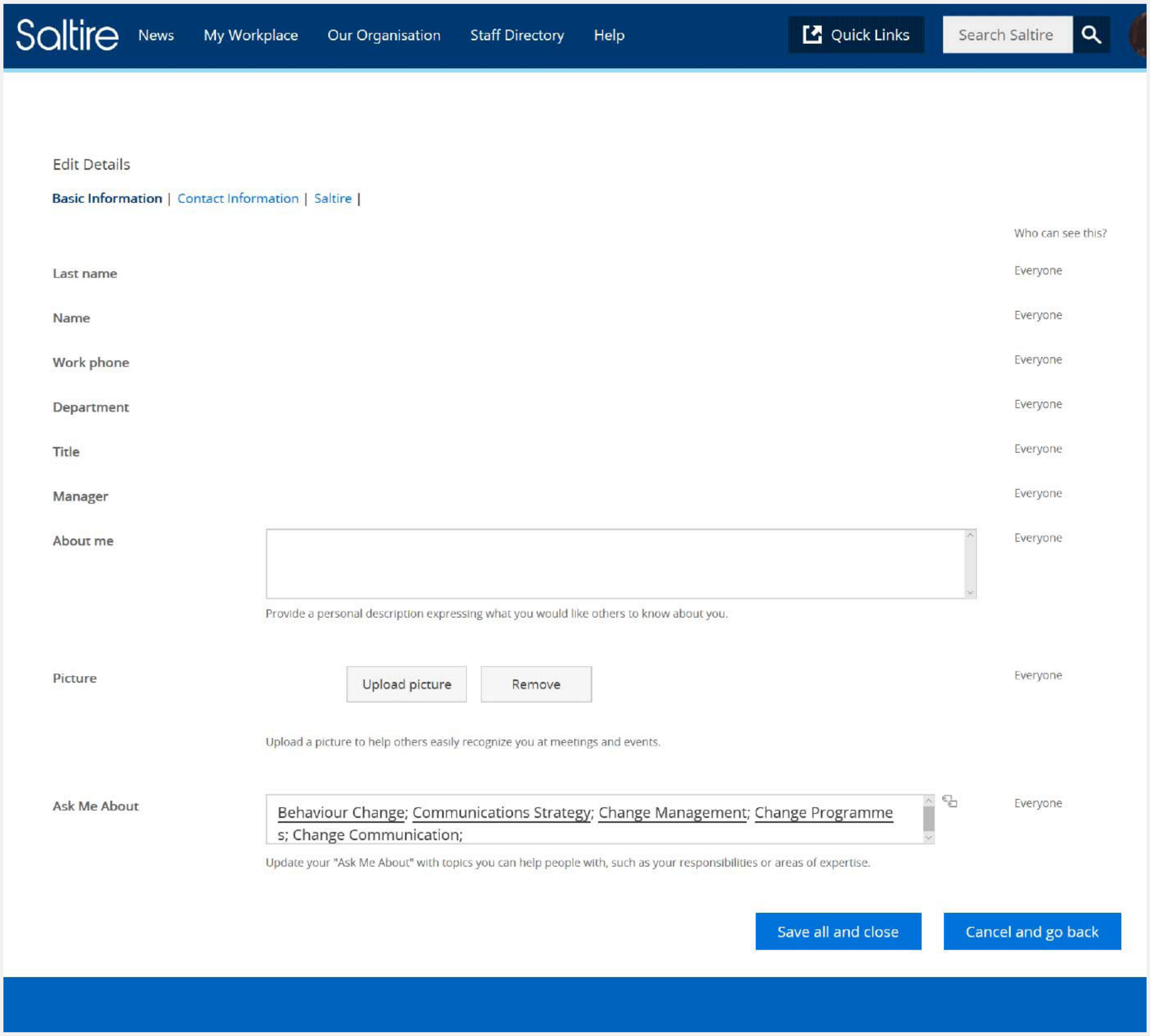
For example, the S*ubmit* button appeared in the upper right corner of a general inquiry web form at the Mayo Clinic. This button is placed too far up and to the right of where the employee would be looking to submit the form. Additionally, a bug with the button's CSS appeared to have rendered more than half of it invisible in the interface. A better approach would be to place the button below and left-aligned with the *What is your question?* field, with the same style of white text over blue.



The button placement on the Mayo Clinic's HR inquiry form is incorrect.

Employees could use a web form to update their profile on the Scottish Government's intranet. Two buttons appeared at the bottom right of the form. The first button was the primary button to *Save and close* after making updates, and the secondary button was to *Cancel and go back*. Each button's background was bright blue with white text overlaid, which would be a perfectly acceptable design choice for a primary call-to-action. However, the secondary call-to-action also used this same style when it should have appeared in a different visual style.

An improvement to this design would be to use either a simple blue text link or the opposite of the primary button style, using a white background with blue text to indicate its secondary importance. Moving the buttons over to left-align them with the left side of the form fields would also help provide better visual balance to this form because it would fit with where employees will naturally look to submit the form. Aligning with this natural behavior may seem like a small detail, but as an intranet designer, you control where users' eyes move on the screen and where to direct people's attention. Small touches matter and are what separate mediocre intranet design from great intranet design.



The Save *and* Cancel *buttons on the Scottish Government's intranet could benefit from being visually differentiated from one another since one is primary and the other is secondary. Moving them to be left-aligned instead of right-aligned would also improve this form's design.*

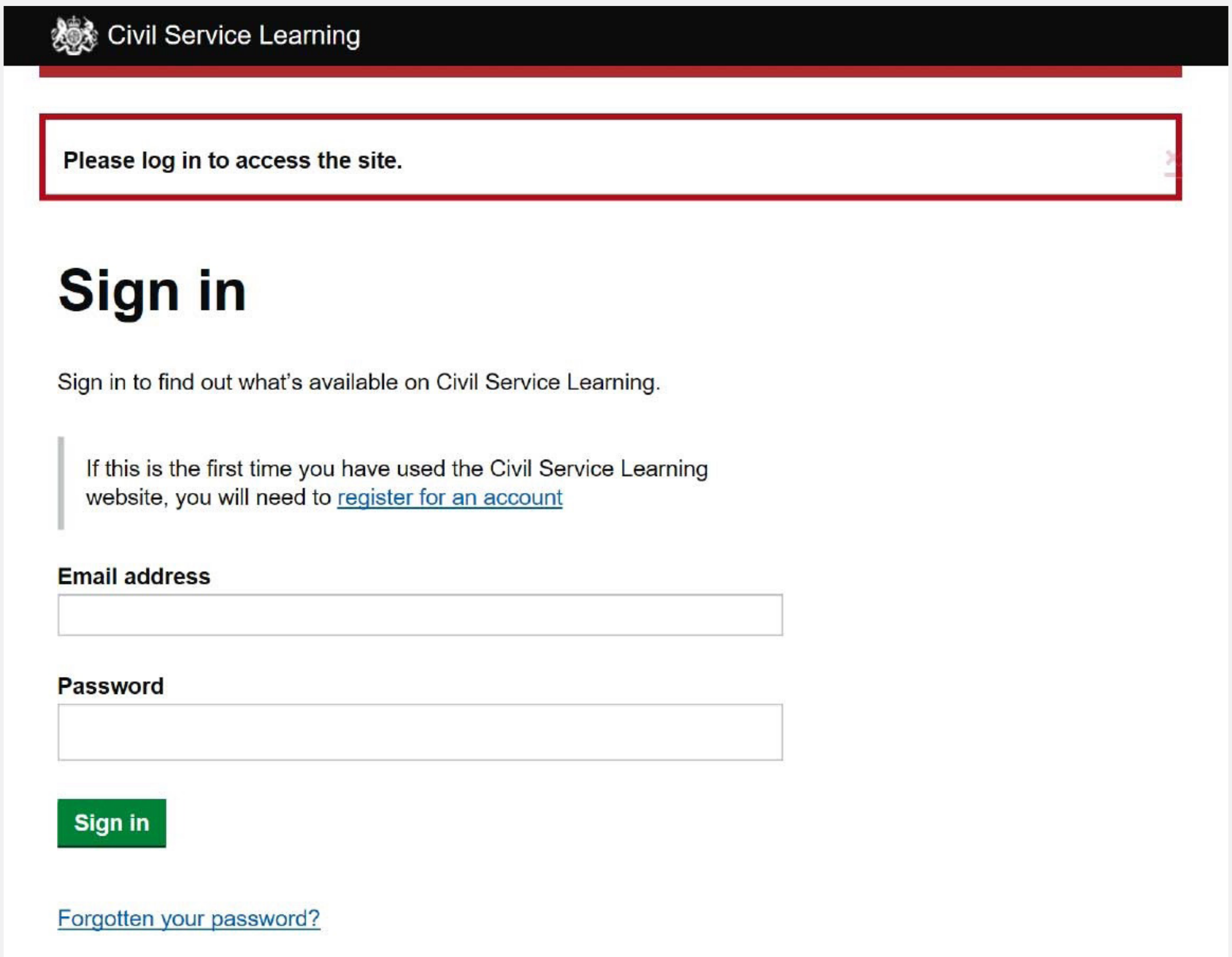
Sometimes, designers encounter debates about button placement. The logic often used to justify right-aligned button placement is based on the Gutenberg diagram. There's also a general perception that a right-aligned button either indicates employees will move on to the next step or that the form will "close." Right-aligned button placement can be beneficial in a multistep workflow or a dialog box that opens in software but not in simple web forms. It is acceptable to center-align buttons in intranet forms, especially on mobile, but only if the form fields are also center-aligned on the screen, and the button spans the same width as the form fields.

Gutenberg diagram

Definitions, Principles, and Methods

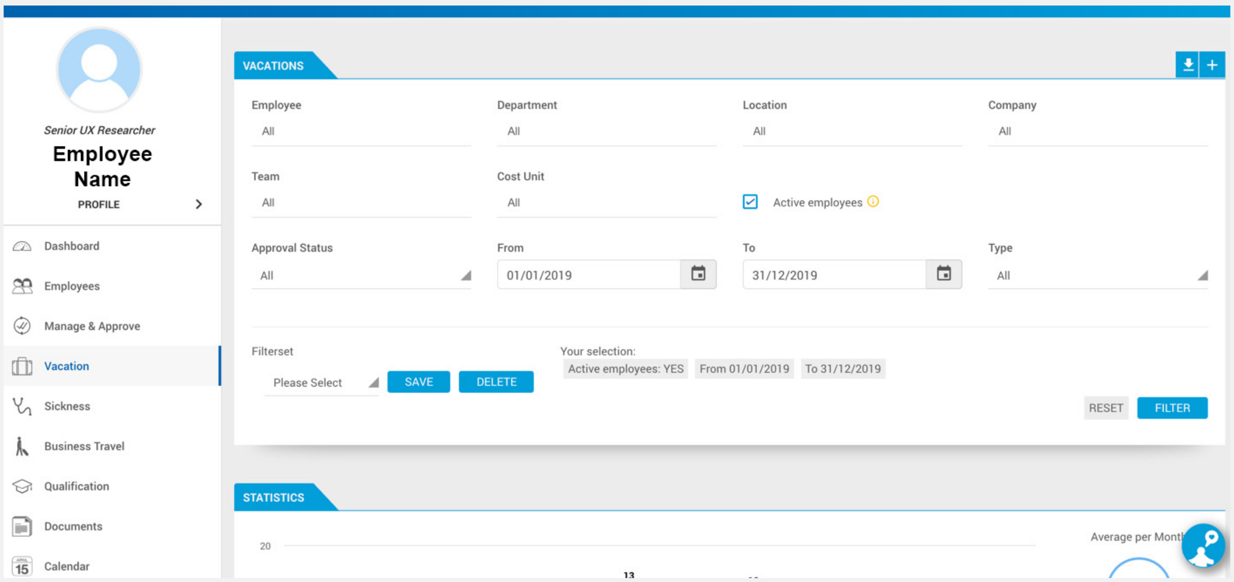
The **Gutenberg diagram** is a general pattern the eyes move through when looking at evenly distributed, homogenous information.

The login form on the Scottish Government's *Civil Service-Learning* platform represented a good example of form design, button design, and primary and secondary button placement. The bright green *Sign in* button was left-aligned with the form fields, and the secondary action of *Forgotten your password* appeared below the button as a text link.



The design of the primary button and secondary link on the Scottish Government's Civil Service-Learning *platform represented a great example of proper button and call-to-action placement in web forms.*

Avoid including *Reset* and *Clear* buttons in intranet forms. The risk of accidental deletion outweighs the unlikely need to start over. In forms that collect sensitive input such as financial information, provide a *Cancel* button to support those employees who abandon the form and want to delete their information. Ensure that the *Cancel* button appears to the right of the primary call-to-action and has significantly less visual prominence than the primary button to avoid accidental clicks.



It's not necessary to include a Reset button on intranet forms. Instead, provide a Cancel button in complex forms but ensure it's not placed in areas where employees naturally gravitate to and also ensure that it's visually different from primary buttons.

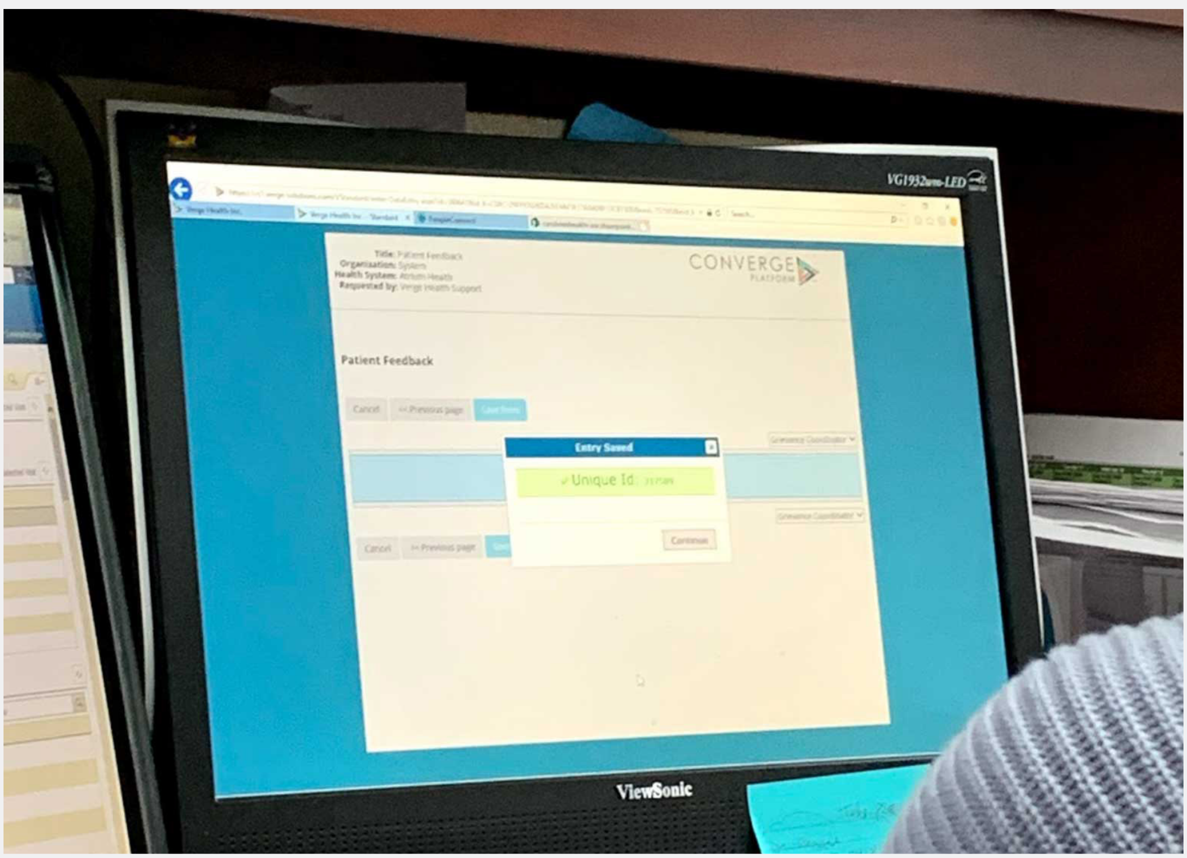
Consistently left-align primary buttons and place them at the bottom of all intranet web forms. This way, employees won't have to stop and ponder which button is primary and which is secondary as they vertically scan the form. This way, employees will save time and encounter fewer form errors, which they always appreciate.

50. Provide a clear and visible confirmation message after employees submit forms.

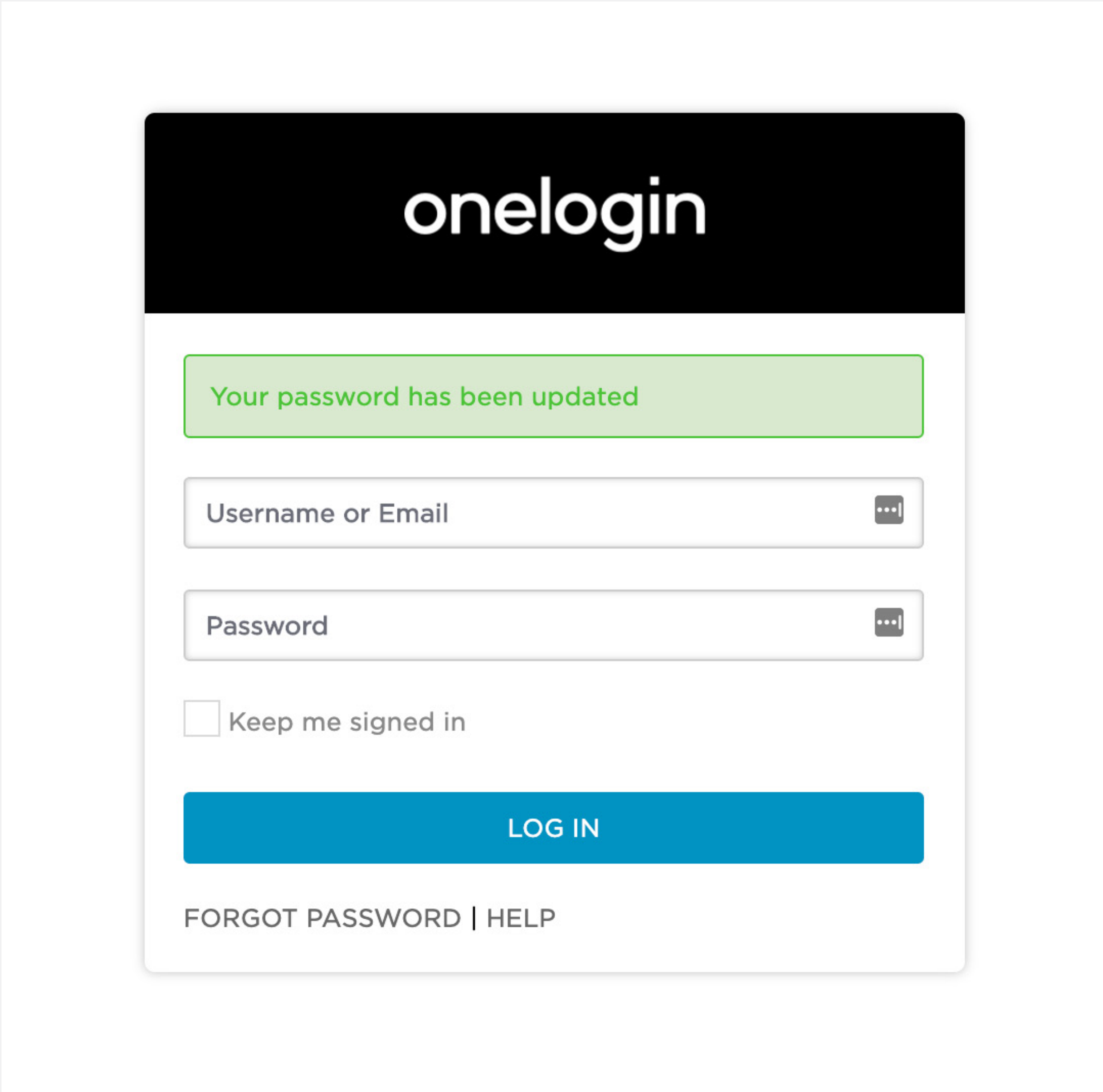
Just as errors must be highly visible, both at the top of the form and at the field or control level, it's also important to show employees a visible and clear confirmation message after they successfully submit their form. This way, employees know the process or task is complete, and they aren't left wondering whether they're done with the form and if their information was successfully submitted.

Confirmation messages for form submissions usually appear on a subsequent screen or in a modal dialog box. In other cases, they can appear at the top of a new screen with a blank version of the form displayed below. A confirmation message is usually less important for login forms, as the indicator of success isn't message-based, it's whether the employee can access their account.

Visual design cues shouldn't be the only indicator of a form's submission; clear and coherent messaging must also appear to communicate that the form was completed and successfully submitted. It's even appropriate to include messaging in the confirmation that sets employees' expectations about what to do next, what will happen next, how long they'll have to wait for a next step or to hear back from another person or department. For example, at Atrium Health, after a nursing supervisor filled out a lengthy form, she saw a confirmation dialog that said, *Entry Saved* at the top and a green message below that said *Unique ID*. While the *Entry Saved* message helped communicate the form had been saved successfully, a better approach would have been to include this clear, meaningful message in the green visual style down below instead of presenting the employee with a random unique ID that didn't carry any meaning as to whether or not her form had saved.



Though form submission confirmation messages can appear in modal dialogs, the corresponding message should be clear, coherent, and free from system-oriented language such as "Unique ID."



In a better example of submission confirmation messaging, after an employee completed the workflow to reset their password, a simple and clean message appeared at the top of the login form. The green color palette and clear messaging helped employees feel confident that the process was complete.

Interaction Design

NAVIGATION

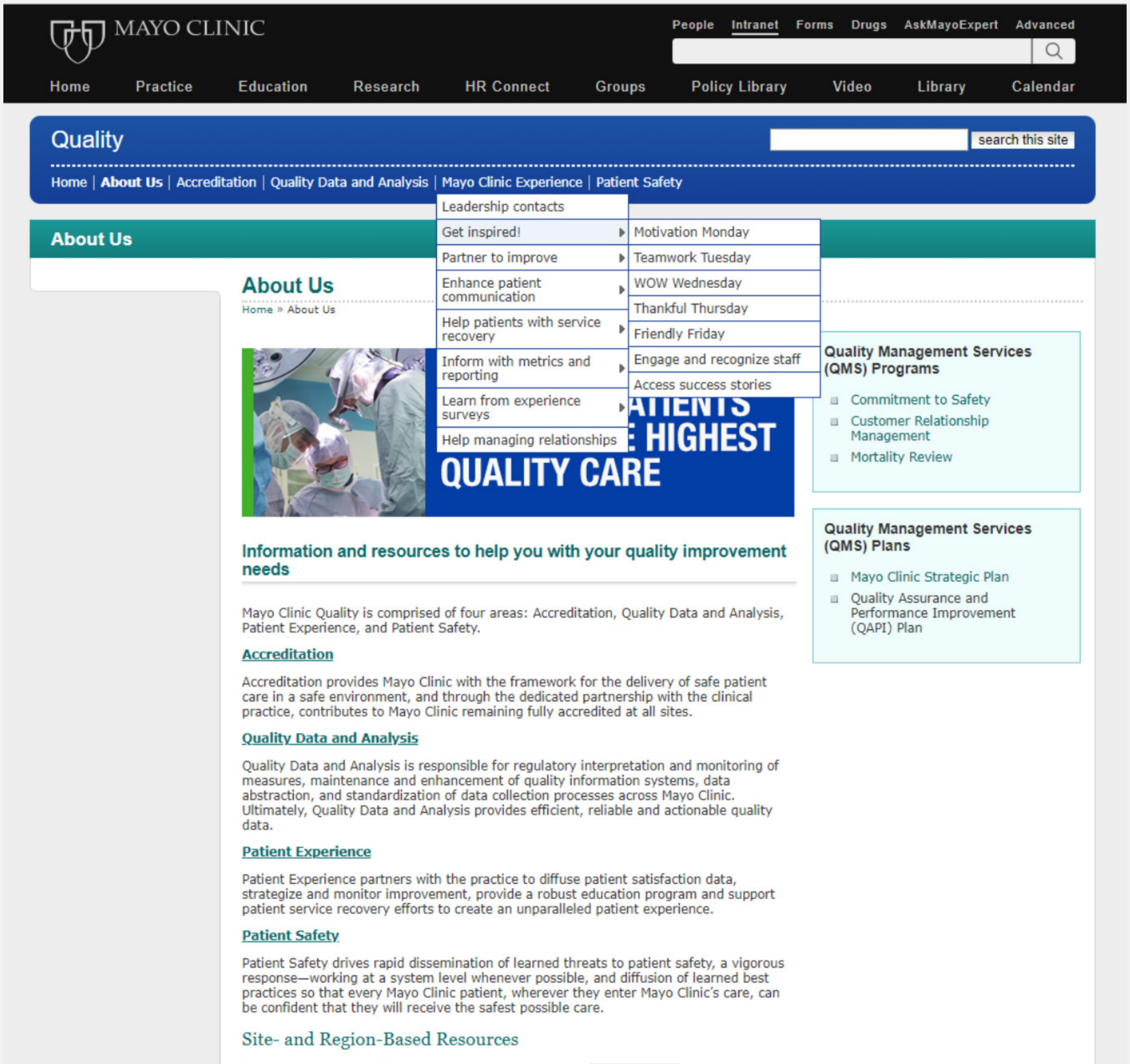
51. Design navigation that looks and behaves consistently across the intranet.

Ensure the visual styling of the intranet's navigation and menus makes them easy to notice. Navigation and menus shouldn't be easily mistaken for banners or advertisements. The design of the intranet's navigation should be much more task-oriented and less promotional than the organization's public website. A company should have only a single design for the intranet's navigation and menus, so employees must only learn it once. Even in this most recent round of research, we still saw many companies with multiple intranet navigations and styles. We suggest you eliminate that in favor of a unified intranet design and consistent navigation approach.

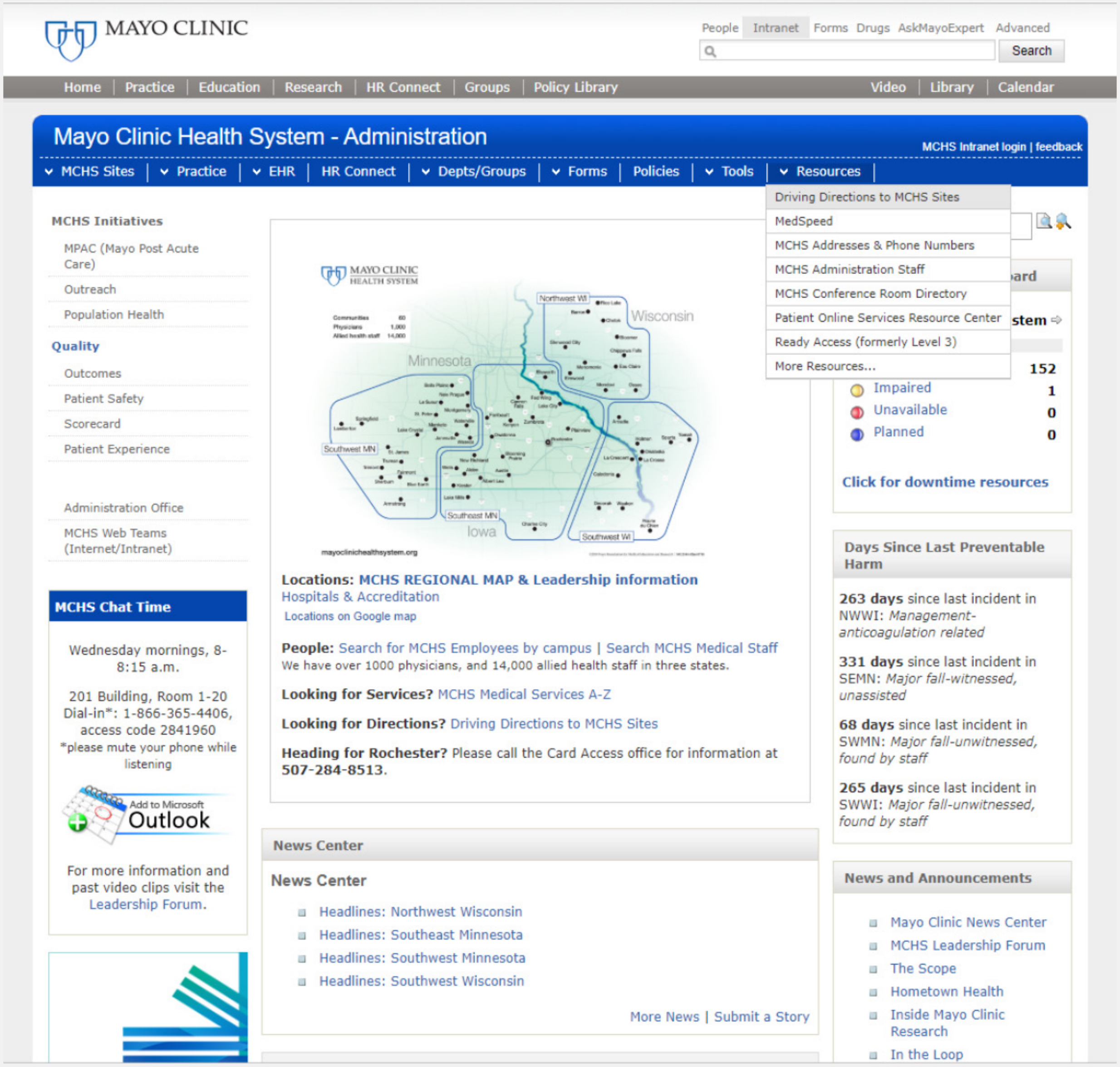
For example, some pages on the Mayo Clinic's intranet had different styles for the main navigation. One version of the topmost navigation, which the team called the "universal banner," appeared in black, while the other appeared in white. Even though the same links appeared in both styles, when employees reached pages where the universal banner style changed, it caught them off guard and made them feel lost. They had to pause and intentionally look to see if the navigation had changed, which wasted their time unnecessarily.

The Mayo Clinic also had another secondary row of navigation that appeared in department-specific areas of the intranet. The team called this navigation the "empire navigation." Departments were allowed to determine which links appeared here, whether to add another search field in the upper right corner, and other customizations relative to the department's needs. While this might support department needs, it caused other employees who may need to access these areas of the intranet for information about other teams and departments to become lost and disoriented as they navigated to these areas where the design had changed.

Additionally, many departments chose different colors and link treatments for the empire banner and its corresponding menus, adding additional inconsistencies to an already inconsistent system. Some used dropdown menus, and others did not, which made the intranet's navigational system visually disjointed and cognitively impossible to learn.



The Mayo Clinic's intranet called its global navigation the universal banner. It appeared across the intranet in either black or white, depending on the location. A better approach would be to use one consistent visual treatment, either the black or the white background across the entire intranet, instead of switching the color scheme arbitrarily.



The navigation row below the Mayo Clinic Health System – Administration *department title shown above was referred to internally as the "empire navigation." Teams could customize the links, dropdown menus, and search fields that appeared here, which made the navigation inconsistently designed across the intranet.*

A successful intranet needs a strong navigational system that's visually consistent because it has to encompass more information, links, and tools than a mainstream, public website. It's usually best if the intranet has a single, well-structured information architecture and well-designed navigation system under the control of a single or a few designers. The entire intranet should always follow a well-planned (and usability-tested) information infrastructure that facilitates navigation. The following elements should be standardized and visually consistent:

- The main navigation background color and main link style
- Dropdown menus and secondary link styles
- Left navigation menus with secondary and tertiary link styles
- The footer background, layout, and link styles

Don't change the intranet's navigation design just to signify different team or department sections. For example, the Northern Alberta Institute of Technology used a consistent visual style for its navigation across the entire intranet. The design used a fixed left panel to help employees access frequently accessed resources, while the global navigation appeared in bright blue with white text links. The left navigation always used a blue header label and bolded link labels. The fact that the design didn't change and behaved the same way across the entire intranet made the system much more learnable, familiar, and efficient for employees to use.

The Northern Alberta Institute of Technology used a clean and consistent navigation design that behaved similarly across the intranet, which helped employees reliably navigate without having to waste time or expend cognitive energy to relearn or reorient to a new navigational appearance as they moved from section to section.

LINKS, BUTTONS, AND OTHER ACTION-ORIENTED ELEMENTS

52. Use visual treatments that make links, buttons, and other action-oriented elements look clickable and interactive.

Whether or not you adopt a **flat-design** style for the intranet, interactive components must retain sufficient clues to suggest they are clickable. Using design treatments such as borders, color, size, consistency, placement, and adherence to web standards can give interactive components the proper look. Employees need to know which areas of the page are static content and which are clickable or tappable. Make clickable elements obvious so employees don't need to ponder the meaning of design elements or encounter productivity-lowering surprises when something doesn't work as expected.

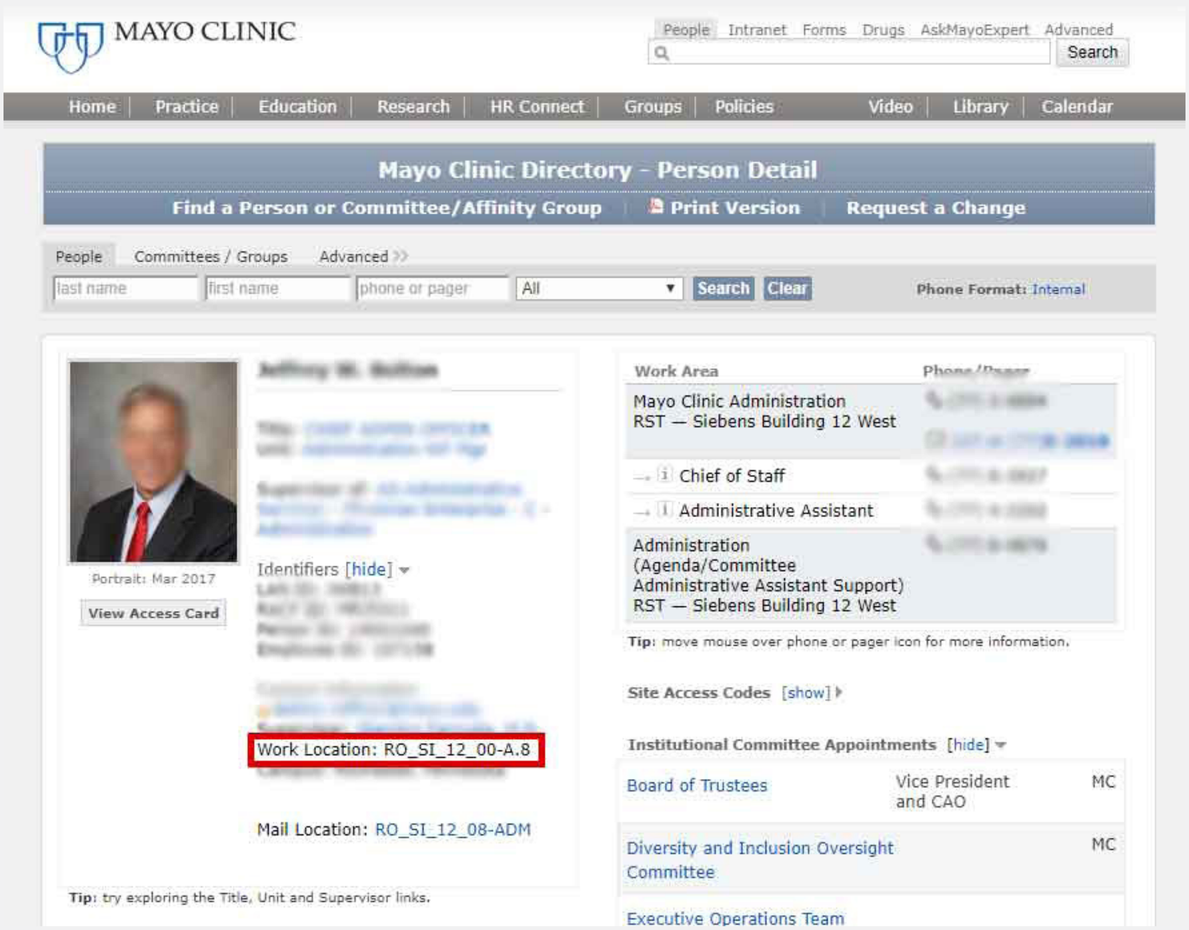
Flat design

Definitions, Principles, and Methods

Flat design is a minimalist web-design strategy that seeks to simplify interfaces by removing unnecessary elements or content that does not support user tasks.

For example, at the Mayo Clinic, when we asked an employee to identify where a colleague's office location was, they knew from experience that clicking on the *Group* link in the *Work Area* in a user's profile would show all the people in that group. They said, "If I want to see who works in that area, I can click on the building."

However, there were no signifiers within the employee profiles to indicate these were clickable links. When responding to a post-task interview question, the employee shared that they had learned about this feature over time, but the text doesn't appear to be a link. A better approach, in this case, would be to make links look visibly clickable and different from normal text. Using a consistent visual treatment for all text links will help employees learn which areas are active and which are not.

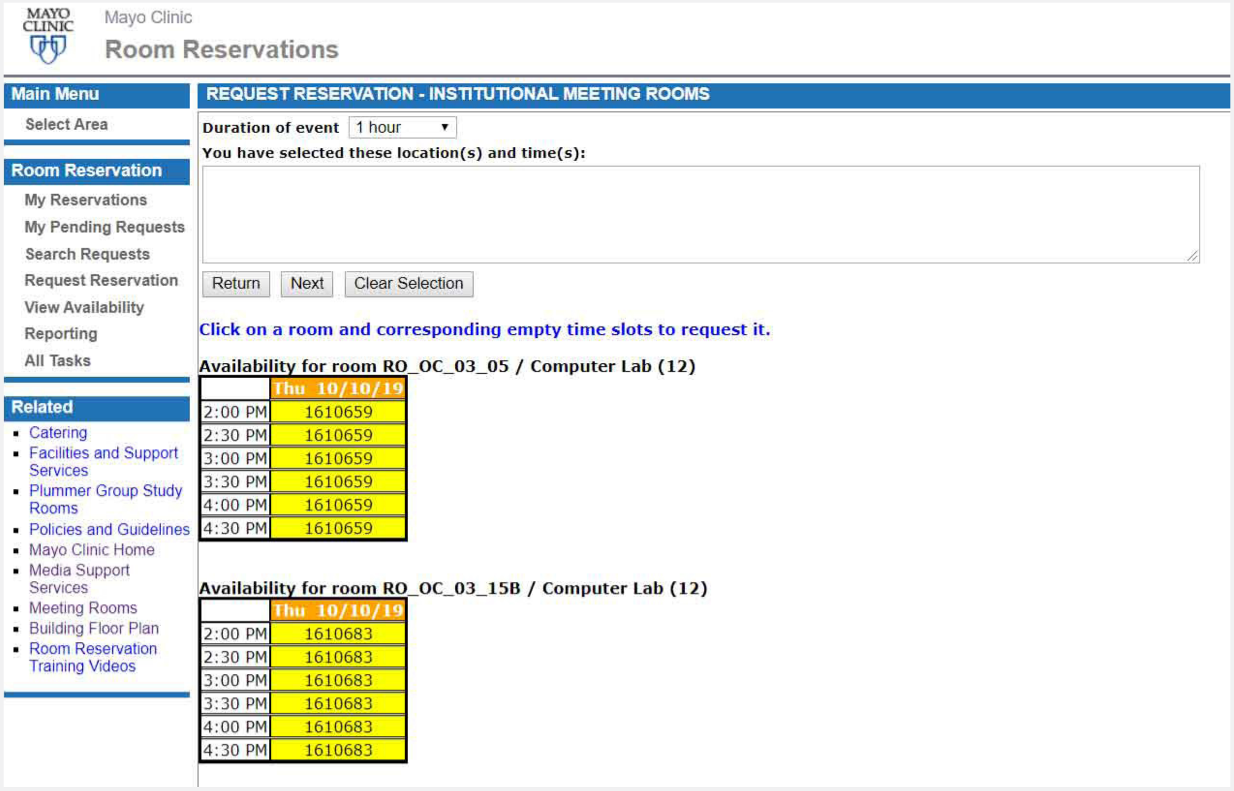


Seasoned employees at the Mayo Clinic knew to click on the Work Location *link in employees' profiles to find everyone who worked in that location. Unfortunately, this didn't look like a link, so new employees would not know it was clickable using this design.*

It was also difficult for employees to discern which areas were clickable in other parts of the Mayo Clinic's digital workplace. While trying to book a conference room, an employee clicked on a black, underlined word. When it didn't work right away, she tried clicking multiple times, then said, "Anything that's underlined, I expect would be a link. I think I can click it. Yeah, I can. Okay, there it goes."

Soon after, she encountered some data tables in the design, and based on her prior uncertainty about what was clickable, she said, "I don't know if these are clickable." She repeatedly clicked on the underlined text and said, "C'mon!" urging it to respond.

Don't underline any text that's not a link. Reserve underlining for links. Because underlines provide a strong perceived affordance of clickability, employees will be confused and disappointed if underlined text doesn't have an actual affordance to match this perception.



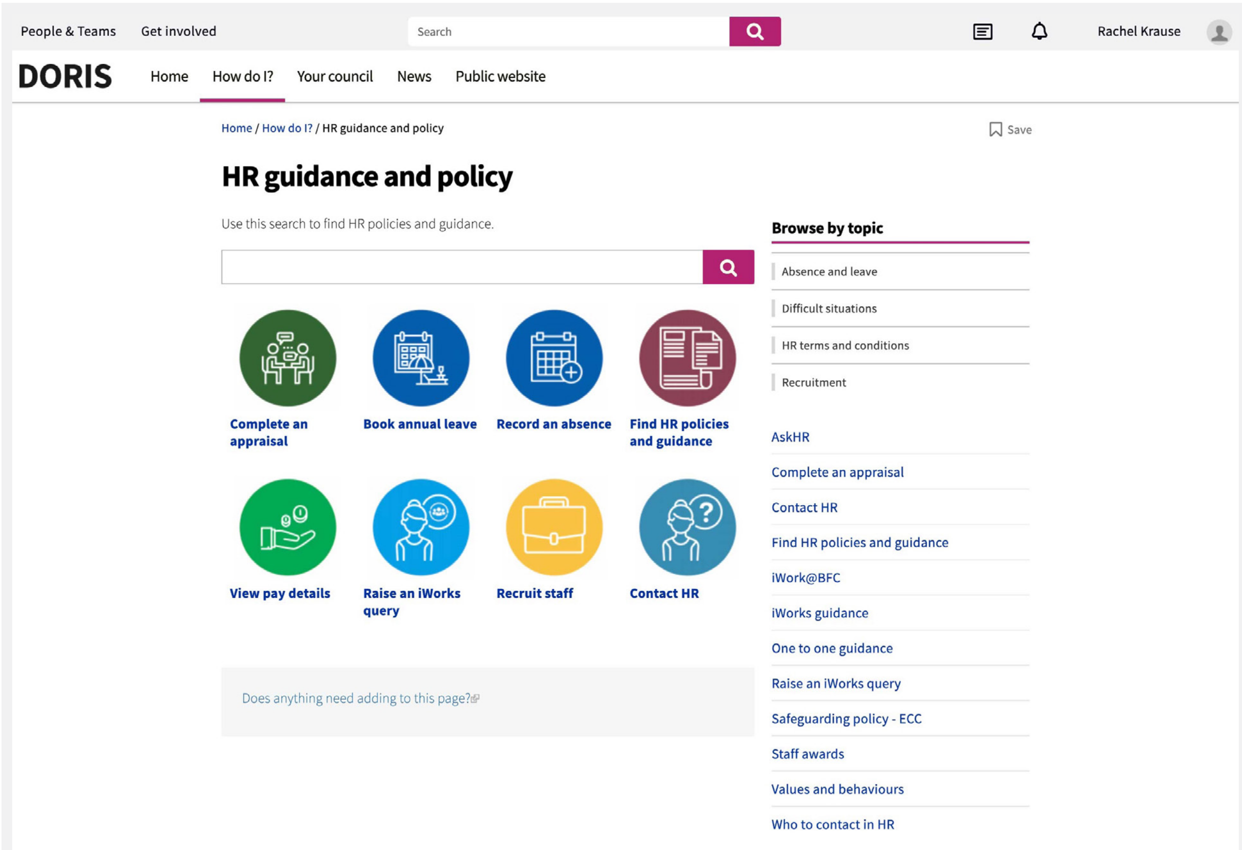
When trying to schedule a conference room on the Mayo Clinic intranet, one user looked at the text for a room and hesitated before clicking, not knowing if it would be clickable given its low signifiers.

The traditional cue for hyperlinks is blue text. While blue is still the safest link color, other colors work just as well, as long as the links stand out clearly from the body text. If you don't have a specific reason to prefer another color, we recommend blue as the safest choice.

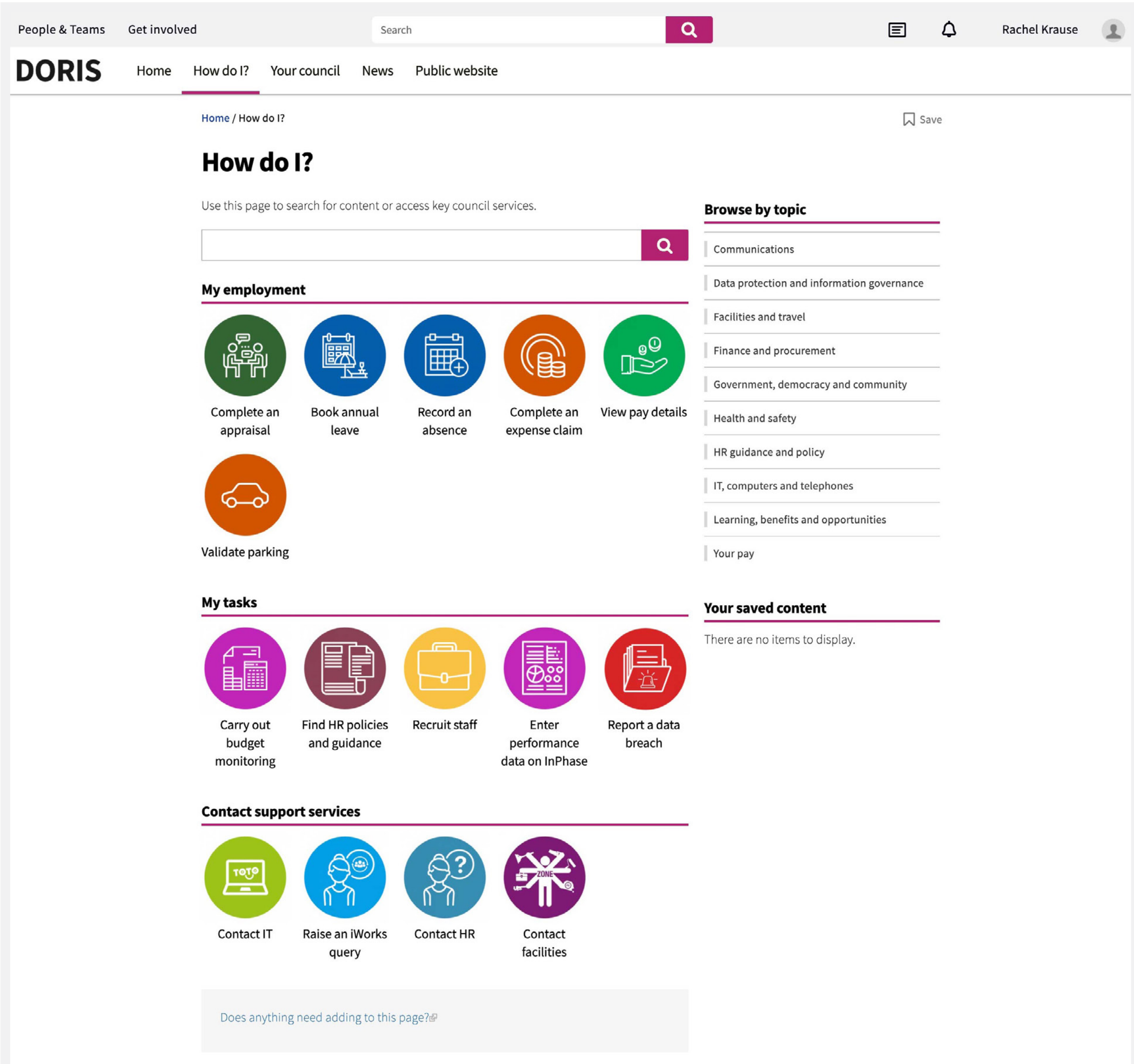
Other visual clues that can help communicate active states and clickability are bolded text and underlining. The position of links can help you determine whether or not underlining is necessary. The navigation menu and lists, especially along the peripheral areas of the page, don't require underlining. Their locations identify them as links.

Like their real-world counterparts, buttons are rectangular, often with a color treatment. These conventions provide the strongest perceived affordance of clickability. Never make employees rely on scrubbing the screen with the mouse to determine if text is clickable. Hunting for links takes effort, and employees won't do it for long. Whatever appearance you choose for buttons, hyperlinks, and other active elements, make sure to apply the same treatment consistently throughout the intranet.

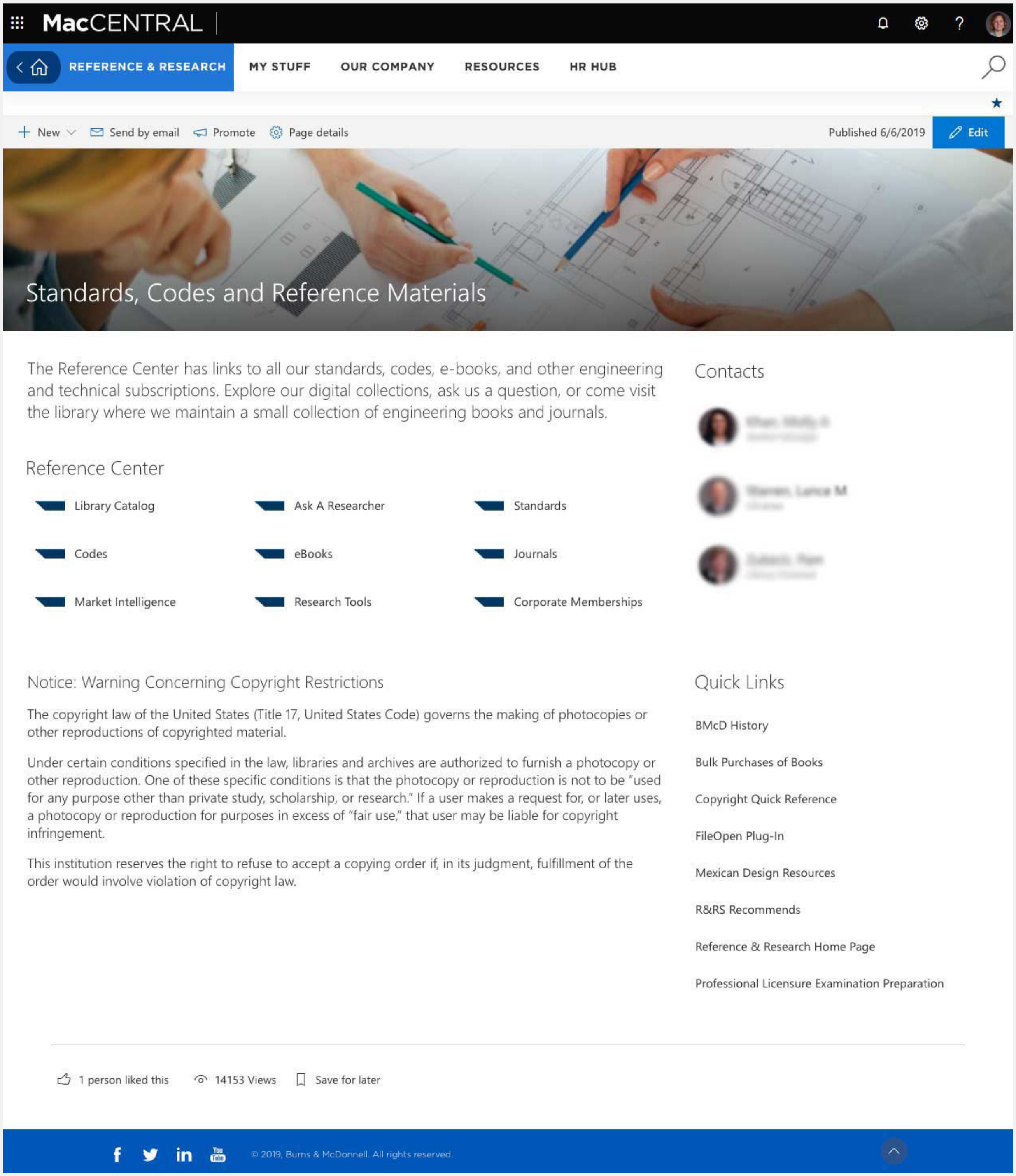
On several intranets we studied, signifiers to indicate which areas were clickable varied across the intranet and sometimes were nonexistent. In many cases, there was no unified treatment for hyperlinks and buttons. A better approach would be for these design teams to work to ensure all links across the intranet are given the same visual treatment and that design system or style guide standards are clearly in place to maintain the consistent appearance of clickable elements.



Bracknell Forest Council's HR guidance and policy *page represents a good example of making links look clickable. The bolded and blue treatment tells employees they can click the label or icon to reach the respective page or initiate a task. The blue links in the right rail also had strong and consistent signifiers to indicate clickability.*

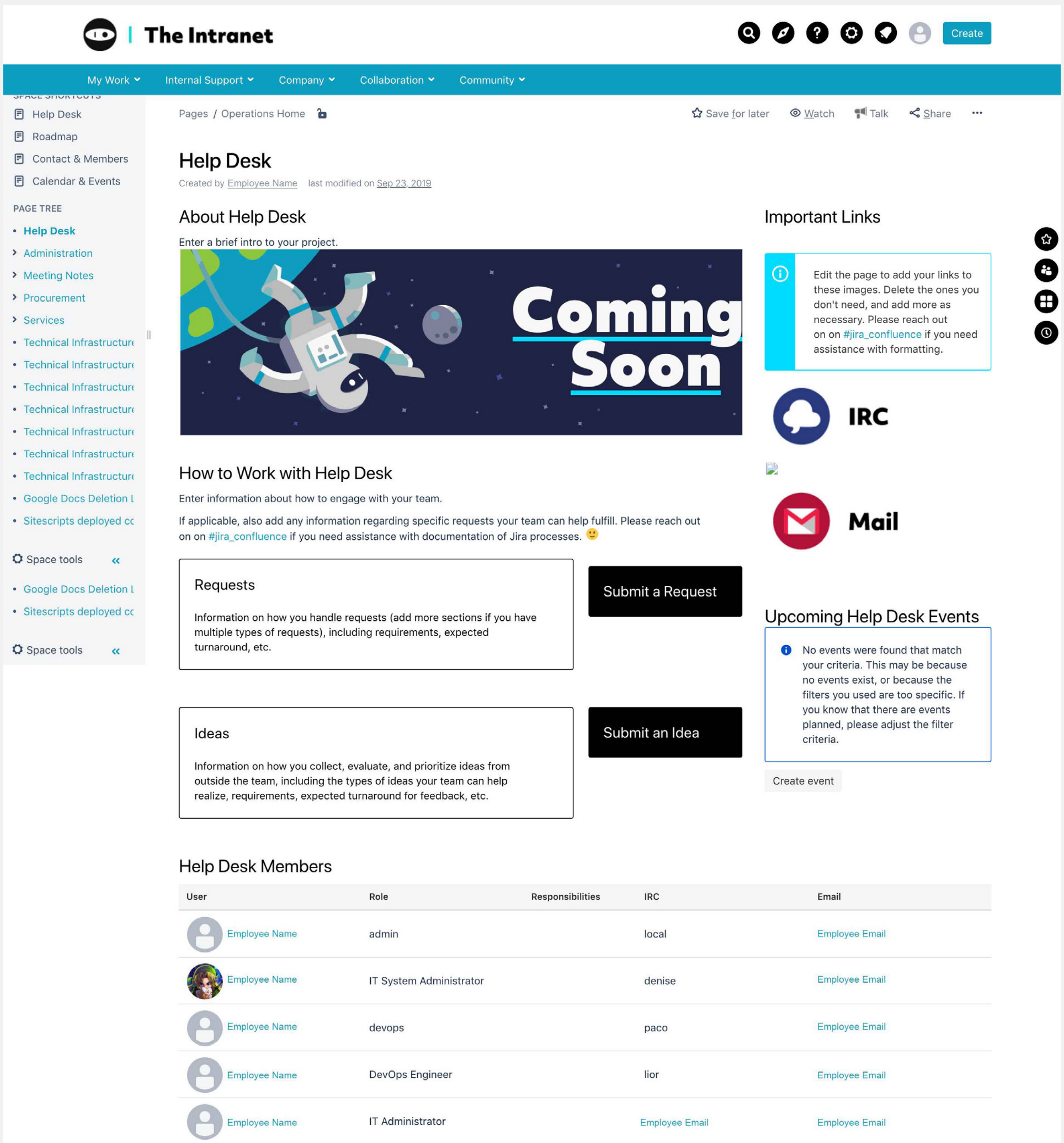


Unfortunately, Bracknell Forest Council did not consistently use the bolded and blue visual treatment throughout the entire intranet. On the How do I? *page, which was a page that employees frequently visited, it was hard to tell what links were clickable vs. which were static, as they did not have the same blue style.*



The Quick Links *on Burns & McDonnell's intranet also did not look like links. A better approach here would be to use a blue text color to indicate they're links.*

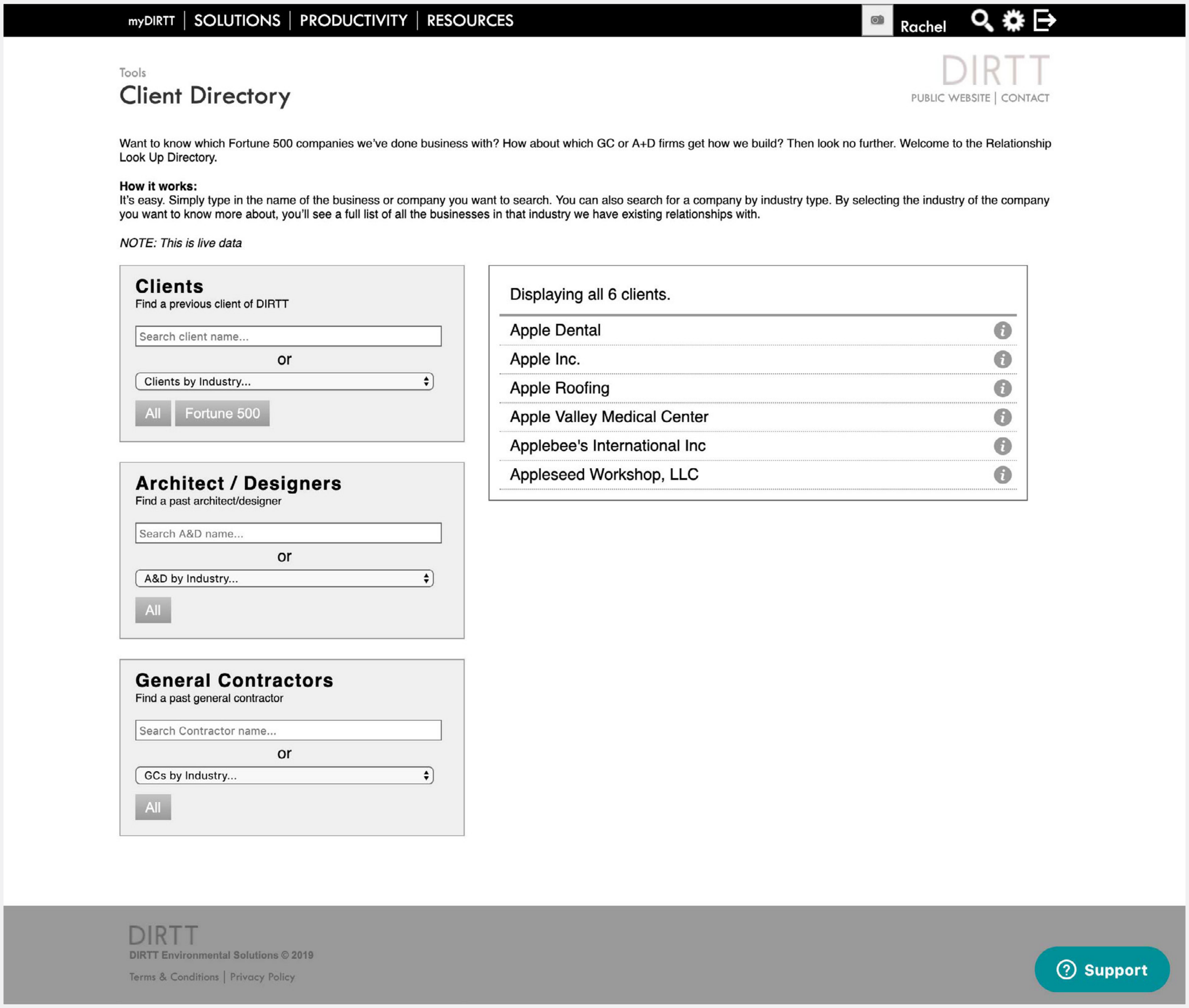
At Eyeo, employee names appeared to be clickable links from the team and department pages. The teal blue text treatment made it immediately clear to employees that clicking on an employee's name to view their profile was possible. An underline appeared on hovering over the person's name. When looking for a colleague's office location, an employee found the individual's name on their team page and realized they could click on it to find the person's profile which contained their office location. As a result, they successfully completed the task.



On Eyeo's intranet, links appeared in teal blue text with an underline on hover which strongly signaled to users which items were clickable.

On DIRTT's intranet, some interactive elements were not styled to be distinct from non-interactive elements. Interactive elements that lead to a different page, move a carousel forward, or submit user input should be styled to clearly signal to users that an action can be taken. If static (non-interactive) elements are visually similar to interactive elements, users must guess how to use the interface. A better approach would have been to make the *More* link blue, and the buttons on the *Client Directory* filled in with an active-state color other than gray, such as blue or green.

Interactive links (More ››) were styled similarly to the non-interactive text about the Calgary Greens menu on DIRTT's intranet.

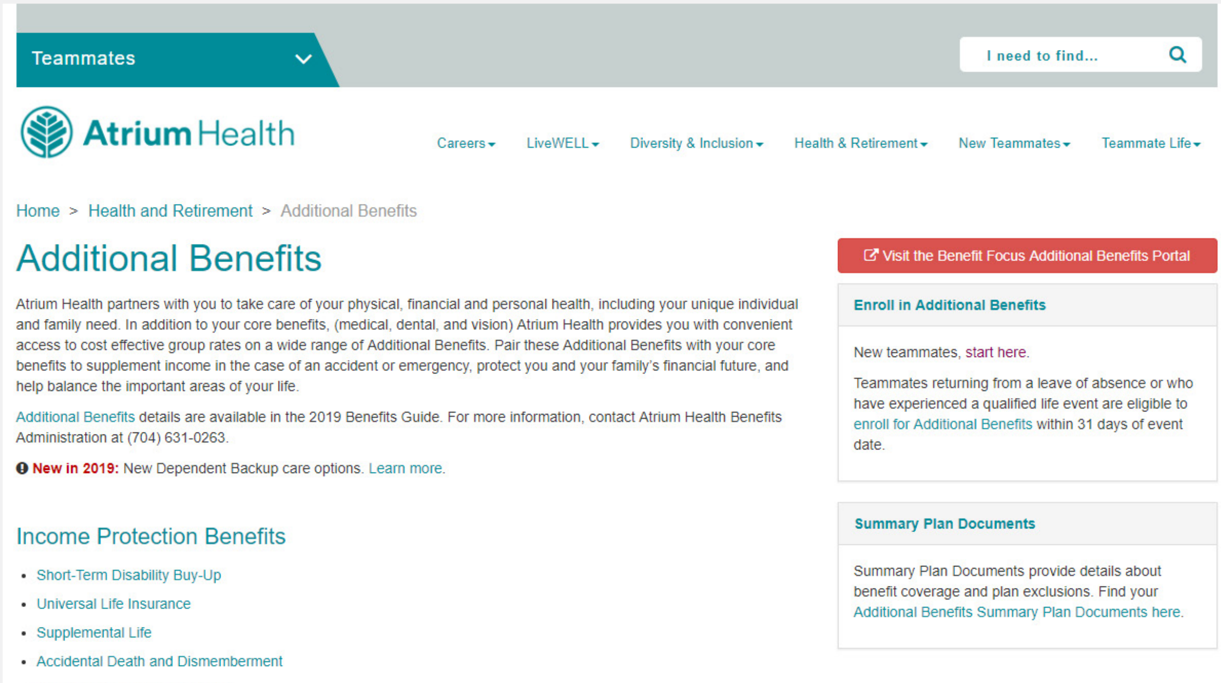


Buttons on DIRTT's intranet, specifically on the Client Directory *page, also looked inactive. Using a brighter button color would signify that buttons and icons were clickable.*

Avoid using red for clickable or interactive elements, as it's associated with errors.

Timeless Design Tips

On the web, blue equals clickable. Avoid using red for clickable text or links as users typically connotate red with error messages.



On Atrium Health's intranet, a red button appeared in the upper right corner, which took employees to their benefits portal. While the button's design is acceptable, the red color suggests an error. A better color choice would be to use the primary brand color, which was teal.

An arrow icon may help suggest clickability when no other clickability cues are present; however, this is the least favorable approach. The arrow is not a standard cue, so it is often too subtle for people to recognize. If you decide to go this route, use arrows sparingly, as they can undermine the goal of keeping your interface simple. Encourage intranet engagement by designing clickable items so that employees easily recognize them as clickable. Although it's okay to veer away from traditional link design to denote clickability, straying too far from familiar patterns can be problematic.

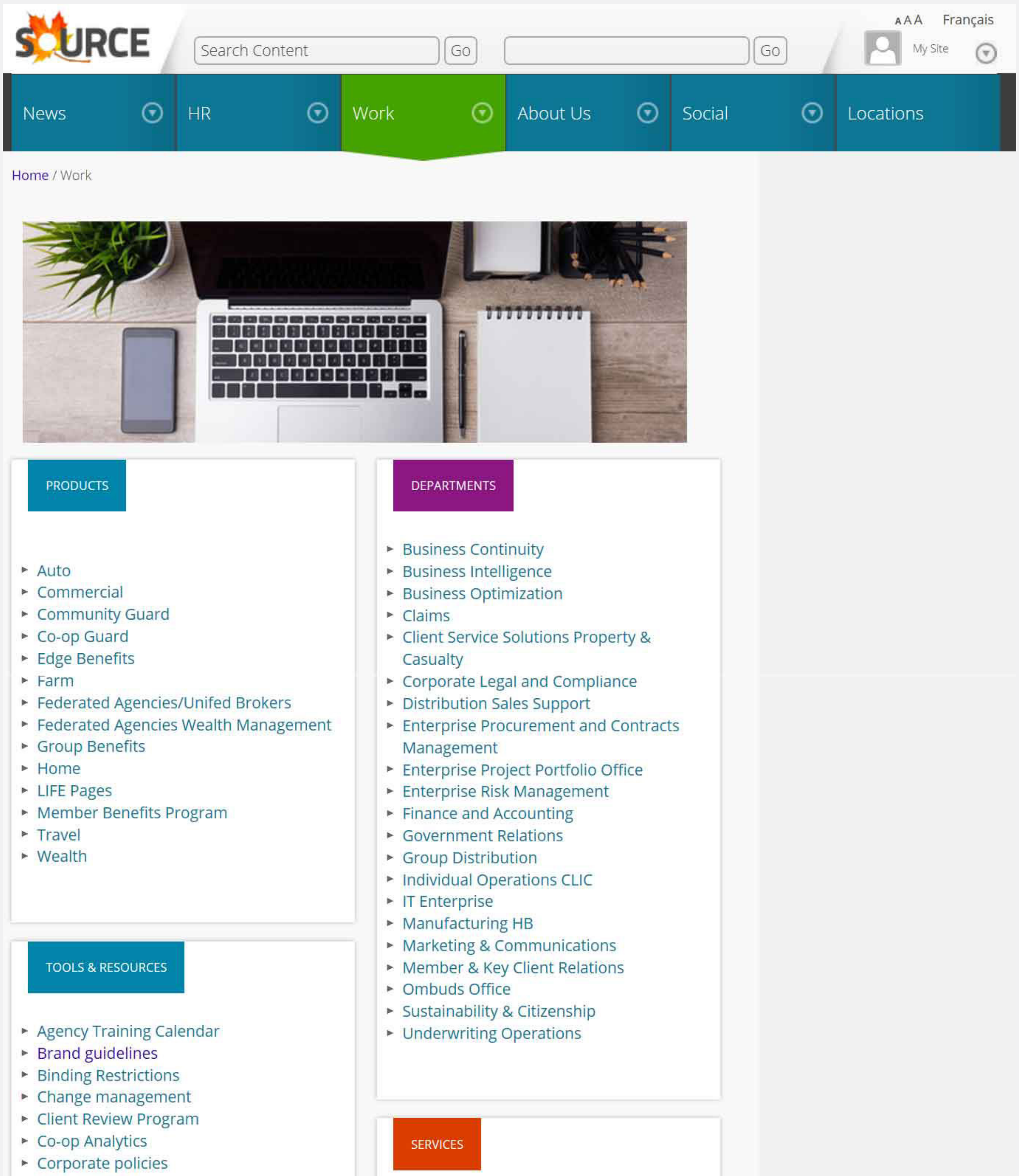
53. Ensure that link and touch targets are large enough and have sufficient space between them.

Adequately sized touch targets are critical for using an interface. We've all experienced the frustration caused by small touch targets or those that lack adequate space between them. They're often visible yet unresponsive to our taps — or worse, force us to trigger nearby links accidentally. These moments can make us feel like gawky giants in a too-small world.

This issue is often described as a "fat finger" problem because users' fingers are larger than the desired targets — clumsy cocktail sausages poking at screens. But fat fingers are not the real culprit; the blame belongs squarely on the tiny targets. Designers who prioritize aesthetics over functionality often forget to create targets that can be easily and accurately selected.

Small targets take longer to reach and increase the chance of a slip, accidentally tapping a wrong target placed too close to the desired one. Even when an error is avoided, just noticing that an element could be problematic to select adds to the perception that the interface is difficult to use.

Lists of links and stacked buttons also often fall victim to touch-target errors because the spacing between the elements is too small. For example, on the Co-operators' intranet, padding around text links was very small, which made it difficult for employees to select the correct link. This often occurs when links are placed in the main body text and are displayed in list format. Increasing the padding and line spacing between links in bulleted lists can help employees achieve greater precision when navigating lists of links. Of course, if the targets are too small, adding space between them will likely not help. Targets must first be big enough and then spaced well enough to avoid accidental taps.



The lists of links on the Co-operators' intranet could have benefitted from more space (padding) between them so employees could more precisely click on the links they needed.

Touch targets need to be large enough to (1) discern what the target is, and (2) to accurately acquire them. **View–tap asymmetry** occurs when elements are large enough to be seen (e.g., read the label text), but too small or densely packed to select without struggling. View–tap asymmetry is often caused by desktop intranet designs that are not well-adapted for touchscreen use.

View-tap asymmetry

Definitions, Principles, and Methods

View–tap asymmetry occurs when elements are large enough to be seen (e.g., read the label text), but too small or densely packed to select without struggling.

Elements that are easily clicked using a mouse are not always accessible using fingers. The minimum size for a tap target is 1cm (0.4in), and there are many cases where an interactive element on the intranet should be even larger. For example, primary calls to action often deserve great visual prominence and thus deserve a larger tap target.

The context of use may also demand tap targets larger than 1cm x 1cm. If an app or mobile site is to be used when the employee is on the go, targets will be harder to hit and should be bigger to allow for more room for error. Controls requiring precise manipulation will be difficult, if not impossible, to use when driving or walking.

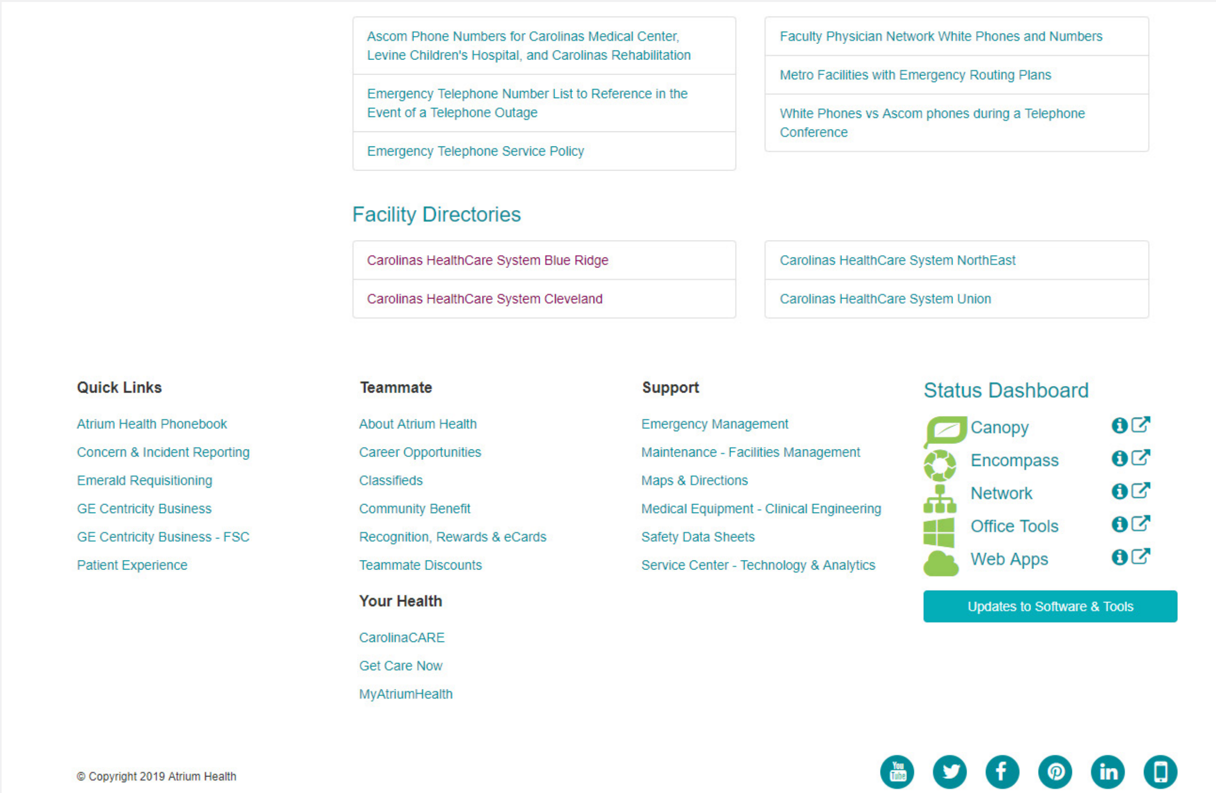
As an intranet designer, it's important to consider the different ages of people who make up your workforce. Older individuals may benefit from larger controls that are more forgiving. Limiting the number of elements on the screen can allow key touch targets to be larger, spaced further apart, and thus easier to tap. The screen size can also influence the size of the touch targets. Large touchscreens often require larger targets to be noticeable and to minimize the time to reach them.

Ensure that all interactive elements are at least 1cm × 1cm (0.4in × 0.4in) in physical, rendered size and positioned with enough space from other competing touch targets to be easily and accurately acquired. Too-small targets lead to longer acquisition times and errors and are bound to cause employee frustration.

54. Change the color of visited links.

It's important to help employees understand where they've been on the intranet, where they currently are, and where they can go next. Links are a key part of employees' navigational processes, and changing the color of already visited links allows employees to quickly exclude links that were unsuccessful in earlier visits. Knowing where they've already been makes it easier to understand where to go next and frees employees up from unintentionally revisiting the same pages repeatedly.

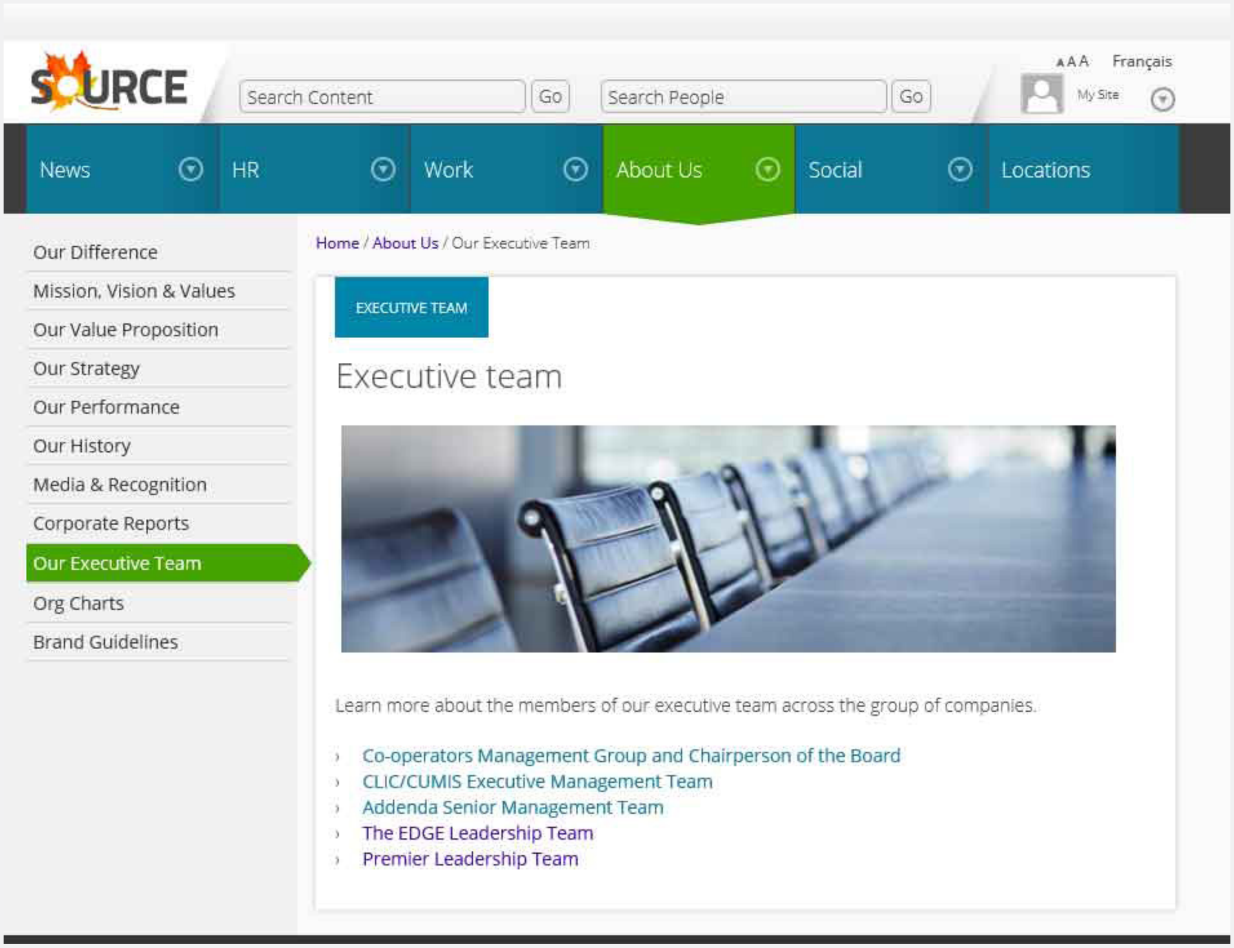
For example, the standard link style on Atrium Health's intranet was teal text. Once employees had navigated to a link, anywhere that link text appeared on the intranet turned purple, which was favorable and visually indicated the employee had been on that page before.



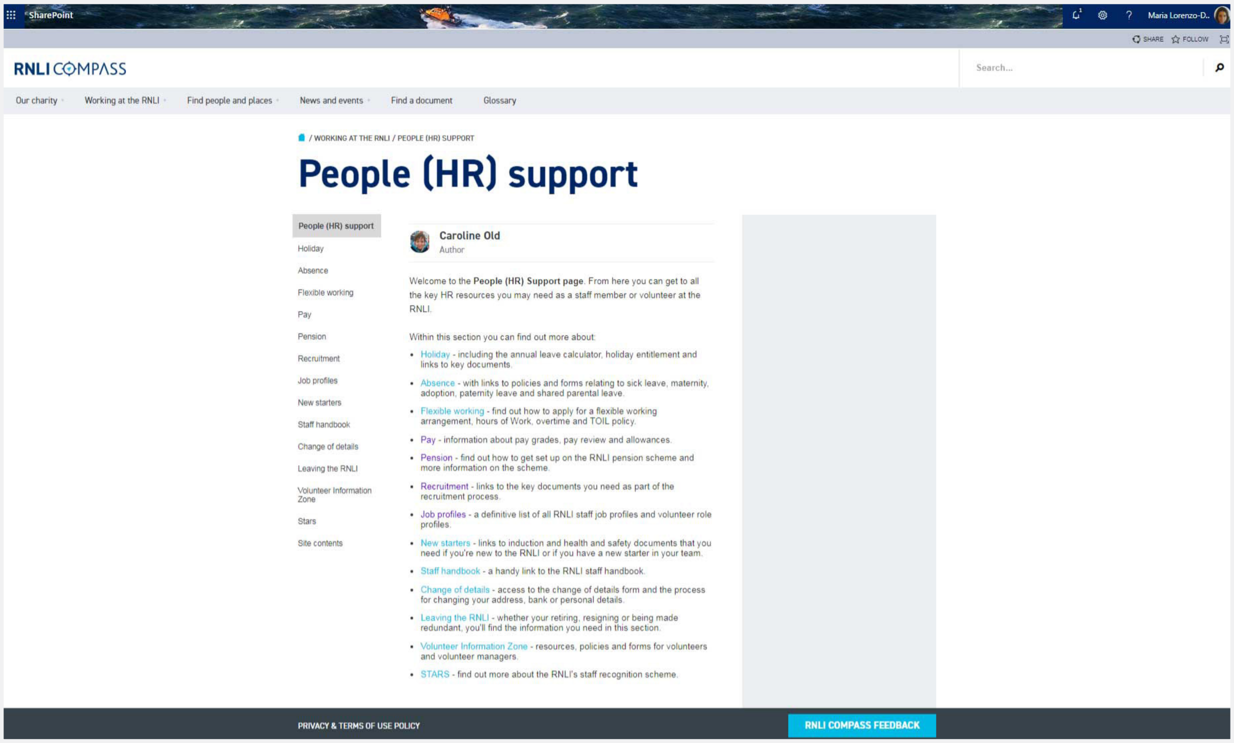
After employees had visited links to pages on Atrium Health's intranet, the link text color changed from teal to purple, which was favorable.

The color for unvisited links should be more vivid, bright, and saturated than for visited links, which should look "used" — duller and more washed out. The two colors should be variants or shades of the same color so it's clear they are related. Using drastically different colors (say, orange and green) makes it hard for users to understand the relationship between the two types of links and to identify which color is the used version of the other. Shades of blue provide the strongest signal for links, but other colors work almost as well.

As always, when using color to signal information, you should also provide redundant cues to help colorblind users. Making unvisited links brighter and more luminous than visited links will usually accomplish this goal.



The Co-operators also used teal links, which changed to purple after employees visited the page.



The Royal National Lifeboat Institution also used teal links that turned purple after employees visited the link.

Using different colors for visited and unvisited links makes the intranet easier to navigate, which always increases employee satisfaction.

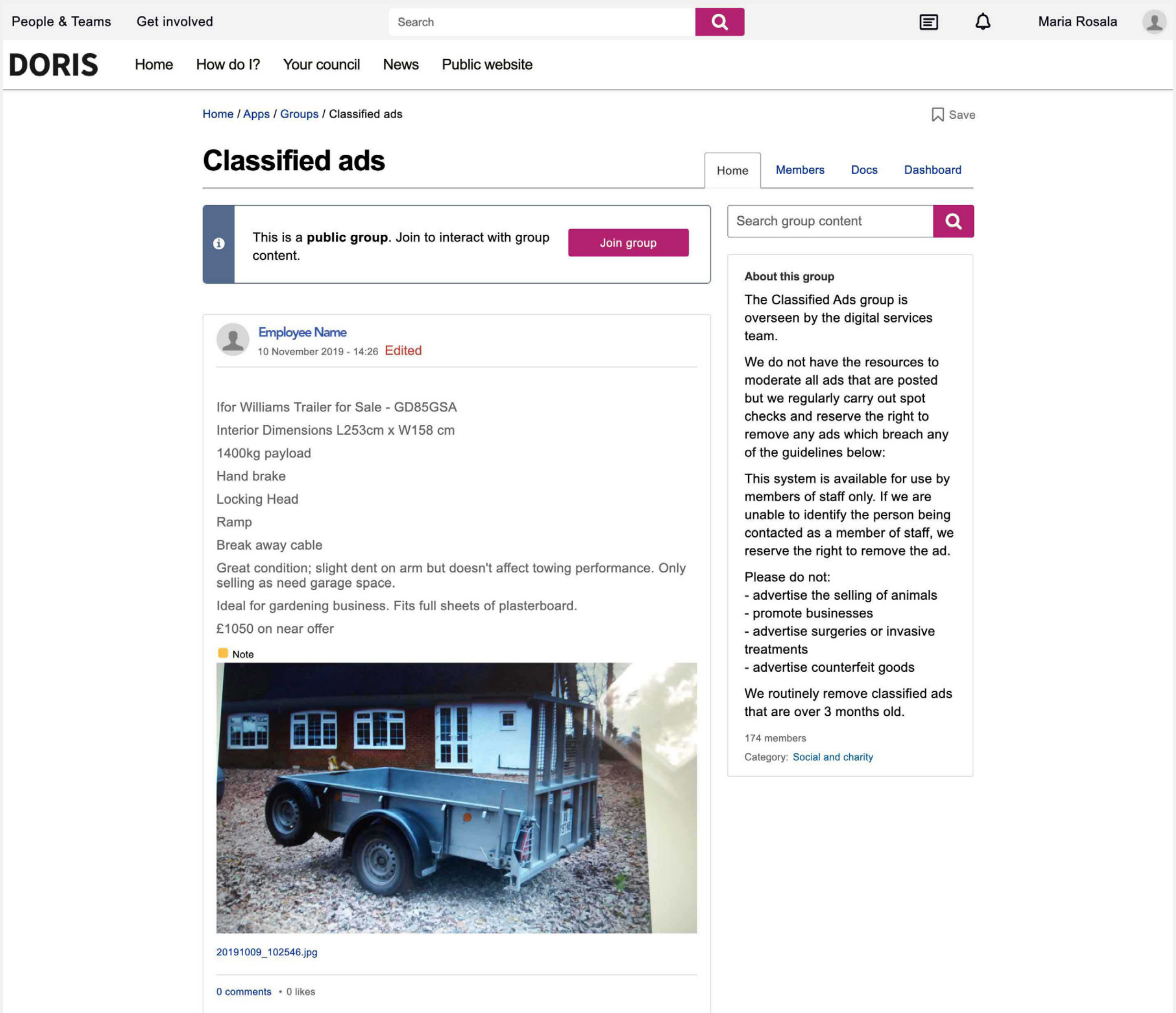
TAB DESIGN

55. Design tabs carefully and use them sparingly; favor anchor links or accordions to break up long content.

Tabs should be used to switch between alternative, but related, views of information within the same context. Tabs should not take employees to other areas of the intranet or digital workplace. If you're considering using tabs on the intranet, logically chunk the content behind them so employees can easily predict what they'll find when they select a given tab.

If you don't find clearly distinct groupings, then tabs are likely the wrong interface control for managing the content. Metaphorically speaking, using tabs is like leafing through index cards in an old-fashioned card catalog drawer, so employees must be able to tell at-a-glance what constitutes an "index card" (i.e., tab panel).

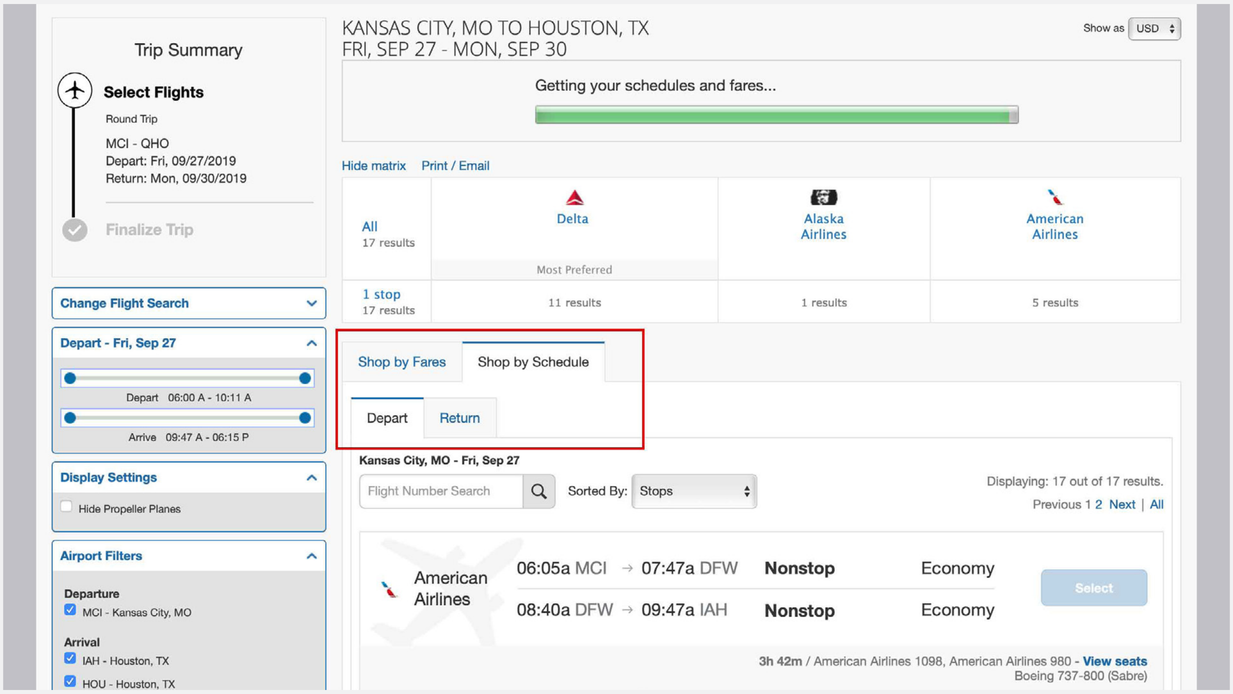
In a good example of tab use, Bracknell Forest Council had a standardized information architecture for the *Groups* area on its intranet, with an overview/homepage, a list of group members, documents, and a dashboard. It was appropriate to use tabs to switch between the alternative views while retaining the main context and illusion of being at a single location on the site, as in the example below, the *Classifieds* group.



Bracknell Forest Council used tabs to allow employees to switch between information related to a group's member list, documents, and a dashboard.

It's best to stick to only one row of tabs. Multiple rows create jumping UI elements, which destroy spatial memory and make it impossible for employees to remember which ones they've already visited. Additionally, multiple rows are a sure sign of excessive complexity: if you need more tabs than will fit in a single row, you should simplify your intranet's design.

For example, on Burns & McDonnell's travel booking tool, Concur, the section where employees explored flight options used a double row of tabs. The approach broke the metaphor of file tabs and was confusing to skim and scan, let alone navigate.



Two stacked rows of dependent tabs on Burns & McDonnell's travel booking tool broke the best practices for tab use. The top row of tabs is disconnected from the corresponding content below. A better approach would be to revise this design to use only one row of tabs or a different navigation approach other than tabs.

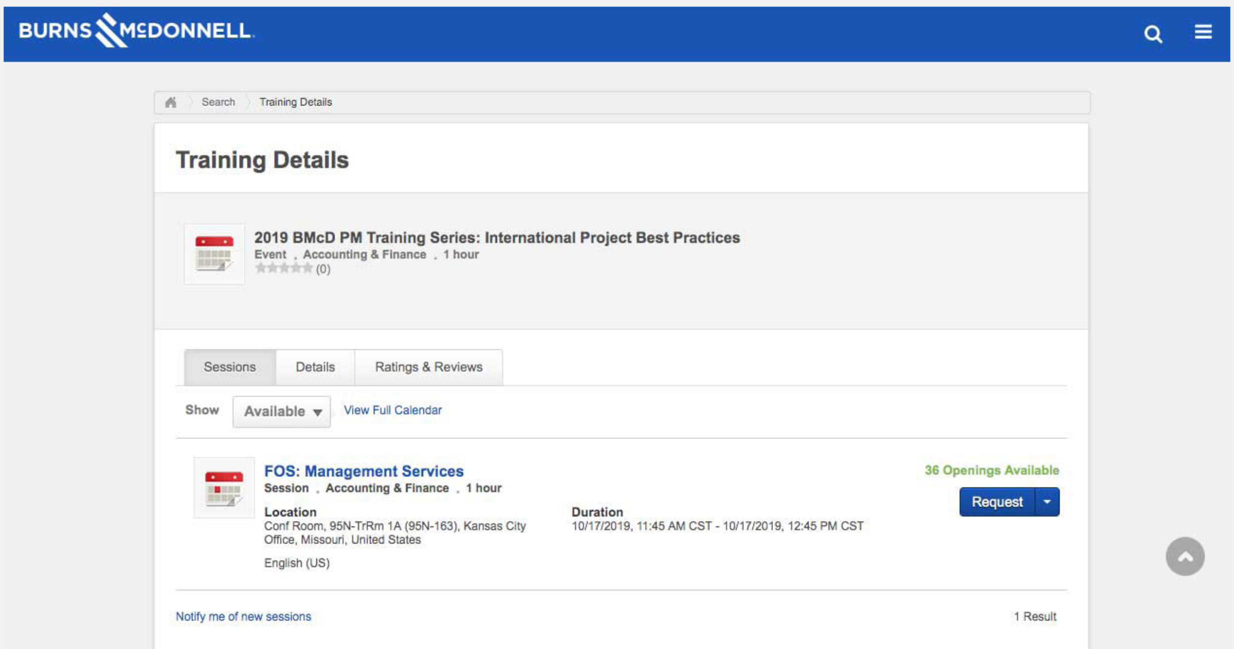
Only use tabs to switch between alternative views of information within the same context.

Process and Strategic Considerations

Use tabs only when employees don't need to see content from multiple tabs simultaneously. If they do need to compare the information behind different tabs, then having to switch back and forth puts an added burden on their short-term memory, increases cognitive load and interaction cost, and lowers usability compared to a design that puts everything on one big page.

The scope controlled by the tabs should be obvious from the visual design. Be sure to prominently highlight the selected tab so employees can tell which tab is selected. In addition to highlighting, you can signal the currently selected tab by making it slightly larger, adding a boldfaced label or an icon, or by making it appear to be in front of the other tabs. This additional signaling is important if there are only two tabs. The unselected tabs should also be clearly visible and readable, reminding the employee of the other options. If the nonhighlighted tabs fade too much into the background, there's a risk that employees will never click them or discover the content they contain.

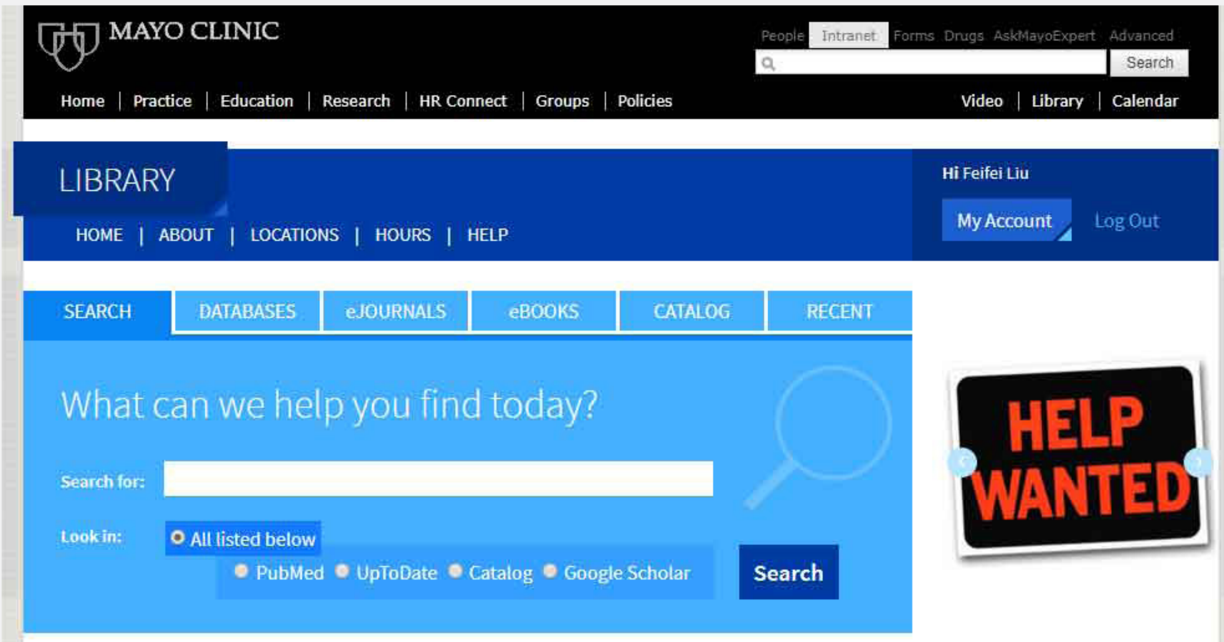
As shown below, Burns & McDonnell also used tabs on its intranet's training pages to house *Session* information, *Details*, and *Ratings & Reviews*. Because employees would likely need to see all of this information related to a course, a better approach would be to list all of this information on the page. In this case, the tab design makes the selected tab visually known, and the nonhighlighted tabs fade into the background since everything appears in various shades of gray.



Instead of subtle tabs on its training course pages, it would be more favorable for Burns & McDonnell to list all of the information contained in the tabs directly on the page, allowing employees to review and compare this information in context of the training session.

Write short tab labels and use plain language rather than made-up or branded terms. Short labels are more scannable; if you need longer labels, it's a sign that the choices are too complicated for a tab control. Tab labels should usually be one to two words. Additionally, do not use ALL CAPS for tab labels. ALL CAPS are rarely a good idea because they're harder to read and scan.

Design tab labels that are parallel in nature. If the tabs are significantly dissimilar, users will interpret them as site navigation.



The homepage of the Mayo Clinic's Library *used tab controls to feature its various sources. The last tab,* Recent, *shows items recently viewed, while the other tabs describe the sources available. It would be better to remove the* Recent *tab to keep the tabs parallel. Because these tabs appear so close to the library's navigation, employees may misinterpret the tabs as such.*

The Mayo Clinic also used tabs to organize its news articles in a right rail module, separating them into Recommended, Read, *and* Commented *groupings. Using sentence case on the tab labels and making the* Read *and* Commented *tabs slightly more prominent would help improve the design.*

Tabs should look and work the same across the intranet. Consistency is important in visual and interaction design because it builds employees' feelings of mastery over the interface in several ways:

- **Recognizability.** When something always looks the same, employees know what to look for and what it is when they find it.
- **Predictability.** When something always works the same way, employees know what will happen when they interact with it.
- **Empowerment.** When employees can rely on their past knowledge of all the available features, they can easily compose a set of actions to achieve their goals.
- **Efficiency.** There's no need to spend time learning something new or worrying about the effect of inconsistent features.

Tabs shine on intranets when they facilitate access to content.

MICROINTERACTIONS

56. Include microinteractions such as saving pages, rating a piece or page of content, and liking comments.

One of the greatest joys of using technology comes through user empowerment and engagement. An enjoyable experience means more than just usability — it needs to be engaging, and that's where microinteractions can play a macro role. On an intranet, well-designed microinteractions such as saving pages, rating a piece or page of content, or liking comments can positively impact your employees' digital experience. They provide value by serving as an extra visual vehicle to communicate.

Microinteractions

Definitions, Principles, and Methods

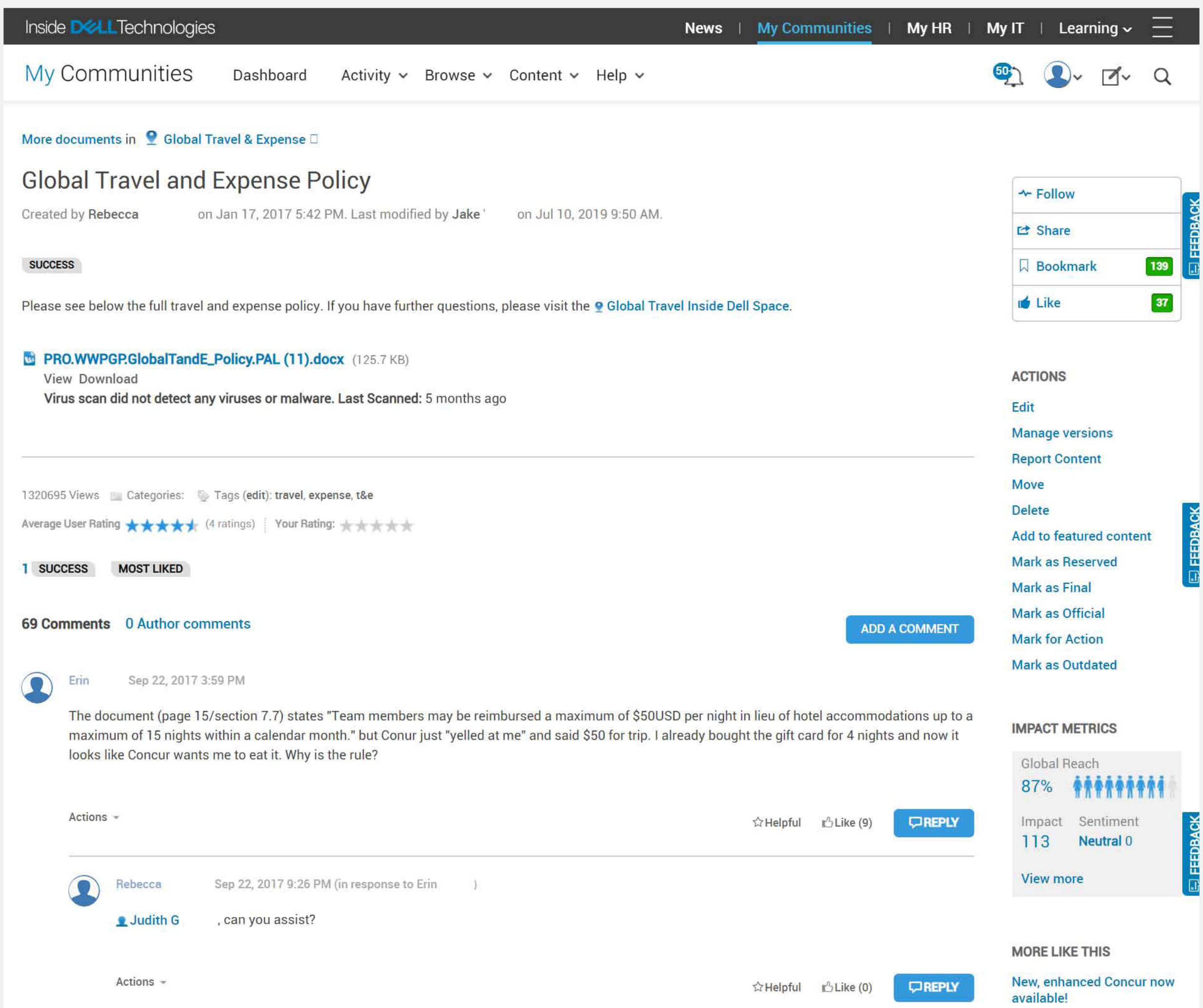
Microinteractions are trigger-feedback pairs in which (1) the trigger can be a user action or an alteration in the system's state; (2) the feedback is a narrowly targeted response to the trigger and is communicated through small, highly contextual (usually visual) changes in the user interface.

Microinteractions encompass a substantial number of digital elements, but not every element is part of a microinteraction. Static elements that are always present on the screen are not microinteractions because they do not have a distinct trigger.

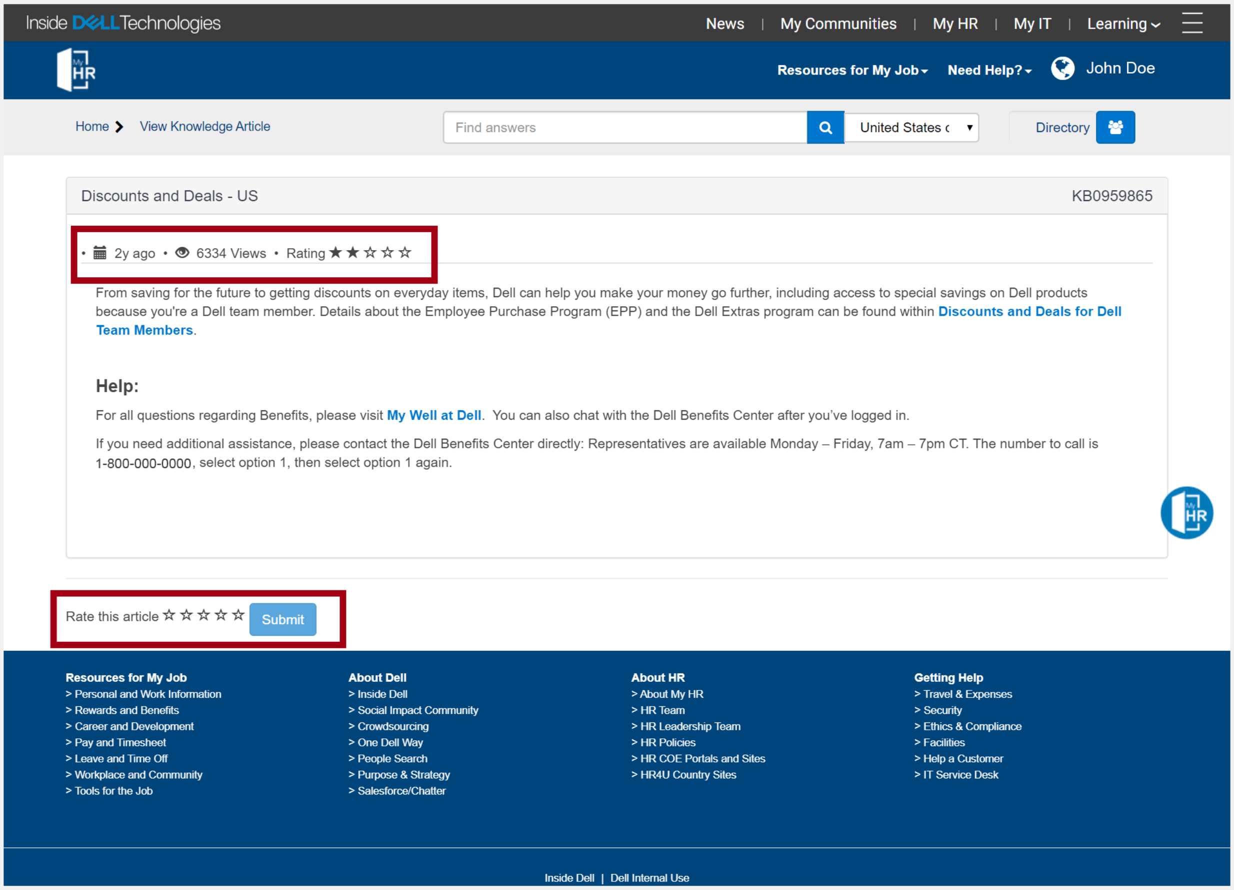
Microinteractions can improve an intranet's user experience by:

- Encouraging engagement
- Displaying system status
- Providing error prevention
- Communicating brand

These use cases show the value microinteractions can add to an intranet, making them a key method for elevating your design. Microinteractions provide feedback, which keeps employees informed and engaged. The most valuable microinteractions we observed in our research were those focused on helping employees save pages, rate a piece or page of content, and liking other employees' comments on longer-form pieces or in intranet social channels.



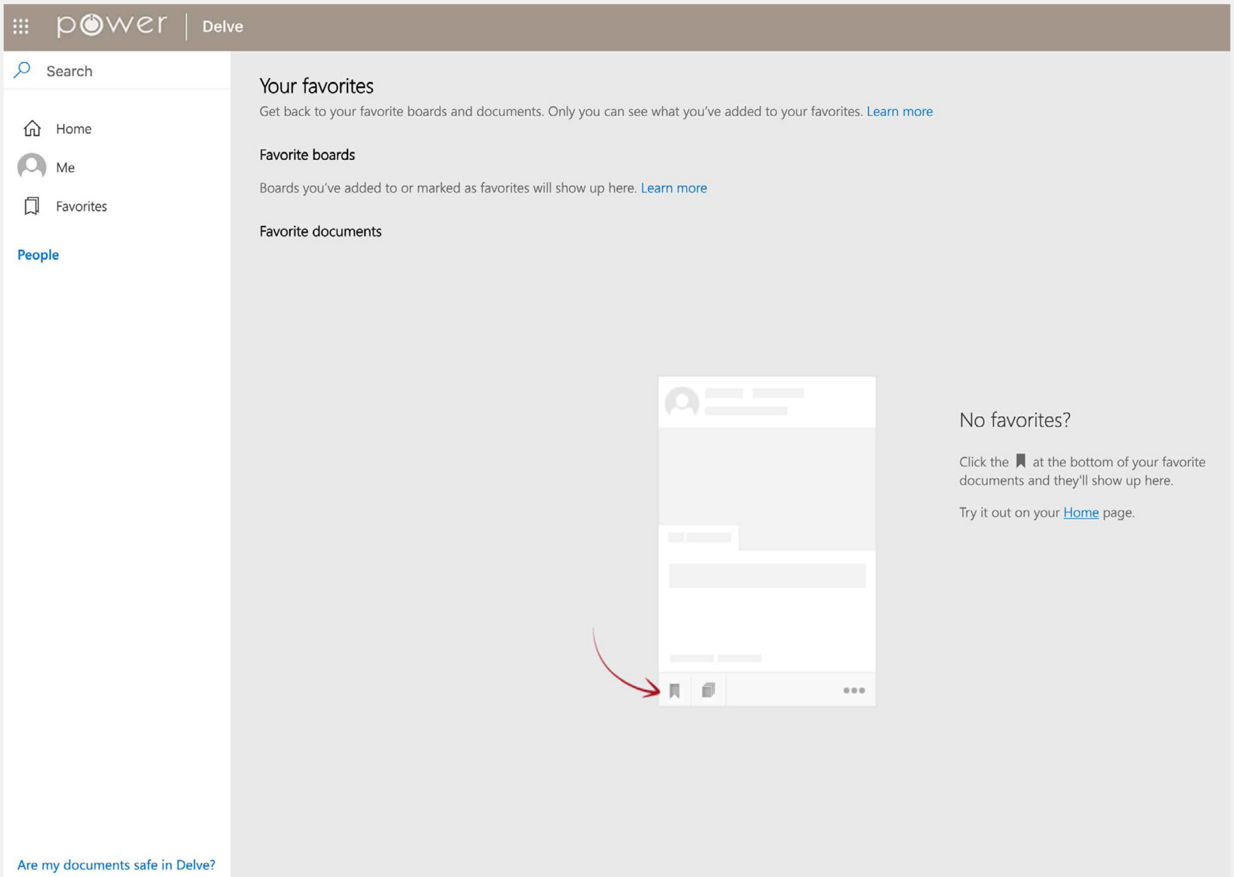
Microinteractions on Dell's intranet meant employees could rate content, add comments, star comments as helpful, or like comments, which drove engagement and improved communication on the intranet and among employees.



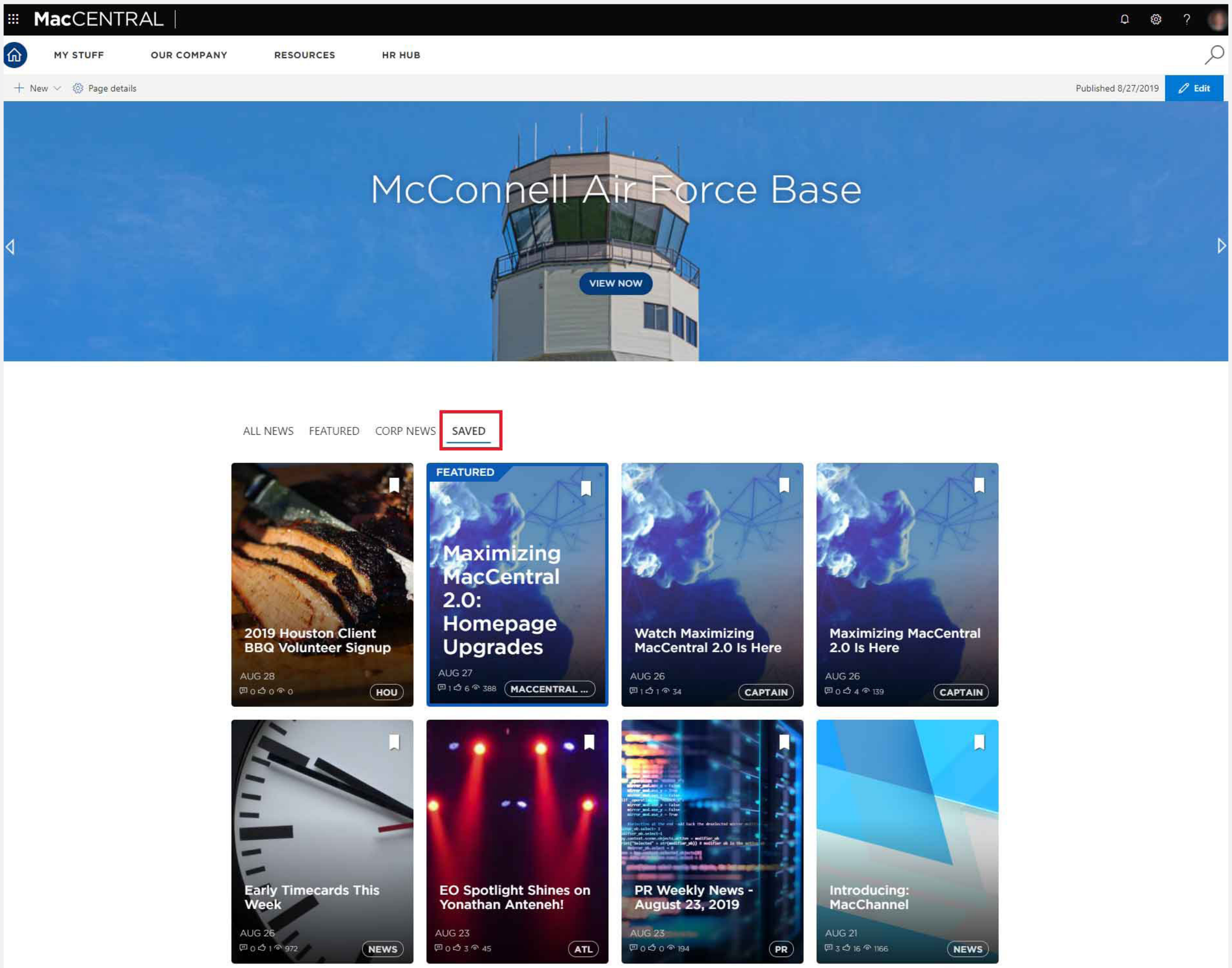
On Dell's intranet, employees could also rate content pages to signify how helpful or informative they were, which is an example of a microinteraction.

Any display of a system's status is a microinteraction because the interaction naturally includes a trigger, either a user action or a change of system state and feedback. Microinteractions communicate the state of a UI component and suggest that further interaction is possible.

For example, First Solar and Burns & McDonnell allowed employees to favorite or save content by clicking on a ribbon icon in the corner of an item's featured card. The microinteraction uses a filled-in ribbon icon to communicate that a person has saved or favorited the content. Employees could easily undo this action by clicking on the ribbon icon again, which reverted it to its original open state. This microinteraction is subtle enough not to divert the user's attention away from their primary task and is helpful to communicate the change in system state and direct the employee's attention to the effect of a potential accidental activation, something that's sadly all too common in touch-driven user interfaces.



Employees at First Solar could click on the ribbon icon in the lower corner to favorite a piece of content on the intranet.



Burns & McDonnell used a similar microinteraction on its intranet to allow employees to save content. The ribbon icon was located in the upper right corner.

Microinteractions and their corresponding results must be clear so employees aren't left wondering what will happen if they click on something. For example, Eyeo employees didn't understand what *Watching* a community space meant and were discouraged from following pages when they realized they would receive email notifications.

Users had to click on the *Watch* icon before seeing a message about what watching meant. When looking at the icons, users also weren't clear about what *Save for later* meant versus *Watch*. Hovering over the icon did not provide any information about what watching meant, which would have been a better way to set expectations for the microinteraction. One employee said, "I'm not sure if I watch all content, if that means everything in animal lovers or anything in recreational communities."

None of the employees who received this task wanted to receive email notifications after initiating the microinteraction. One employee said:

> "I will start wondering whether there is a way to subscribe to a community without getting emails. I'm probably going to click on *Watch* and then hope that I can unsubscribe."

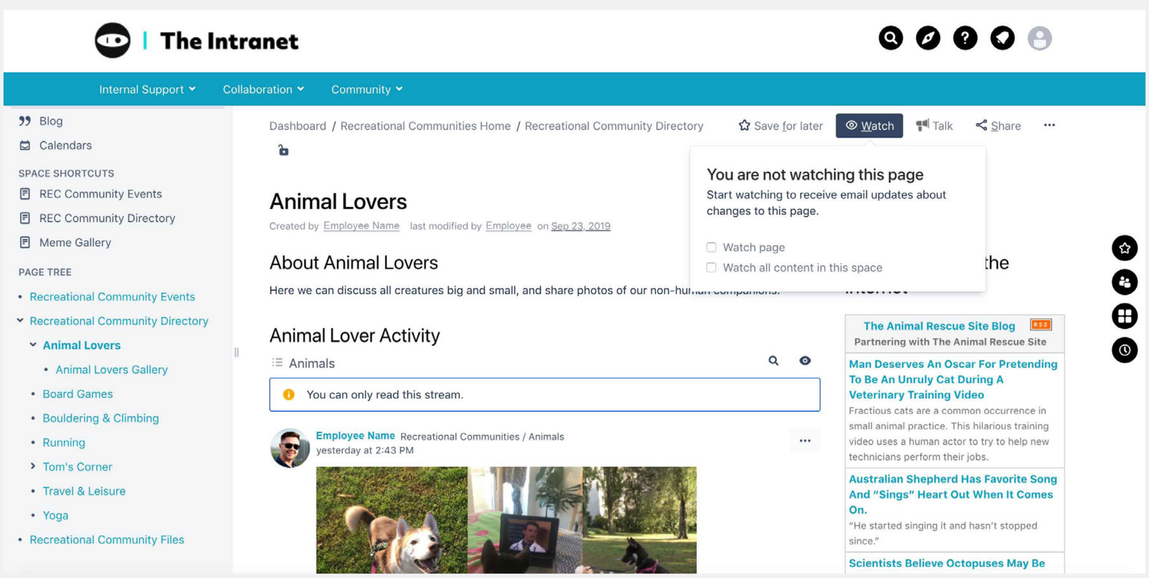
Another employee elaborated by saying:

> "If notifications get sent to my email, that can be very distracting. I don't want that distraction; I don't want emails when someone is interacting at all hours of the day. I want to get a notification [on the intranet] and then choose when I interact instead of someone else choosing for me."

And yet another said:

> "I'm not really sure if I want to receive emails because it's a personal thing."

Instead of emails, use microinteractions to notify employees about changes on the intranet or changes to communities they follow. Our previous research shows that users don't like receiving workplace notification emails and switch off email updates altogether, meaning they will miss out on useful content. Eyeo could also consider exposing what *Watching* or *Saving for later* means rather than expecting users to know they should click the icon to find out.



Users on Eyeo's intranet weren't immediately sure what the difference was between Watching *a space and* Saving the page for later. *When they found out that* Watching *a space might result in them receiving emails to notify them of content updates, they were less inclined to watch the space and hoped they'd still receive notifications on the intranet but not in their inbox.*

Employees email themselves links.

User Behaviors

A valuable microinteraction would be to give employees an easy way to save content on the intranet, so they don't have to email themselves links to remember where things are nor rely on lengthy lists of bookmarks.

Be very clear that the microinteraction refers to saving content for later. Some employees in our studies didn't know the difference between saving a page, following a community, and managing their favorites. When so many similar features are available, employees will likely get confused about each type of microinteraction.

Additionally, employees did not always know how to save pages or where to go to refer back to them, or how to follow new communities. They wondered if communities were in social channels if they were pages or sections of content, or groups of people with like-minded interests.

Limit the number of similar microinteractions and let employees save the content they access most, regardless of its type or origin.

Well-designed microinteractions can make a positive impact on your employees' digital experience. They provide value by serving as an extra visual vehicle to communicate. These little details can transform a good intranet into a great one and help disengaged employees become engaged.

PROGRESS INDICATORS

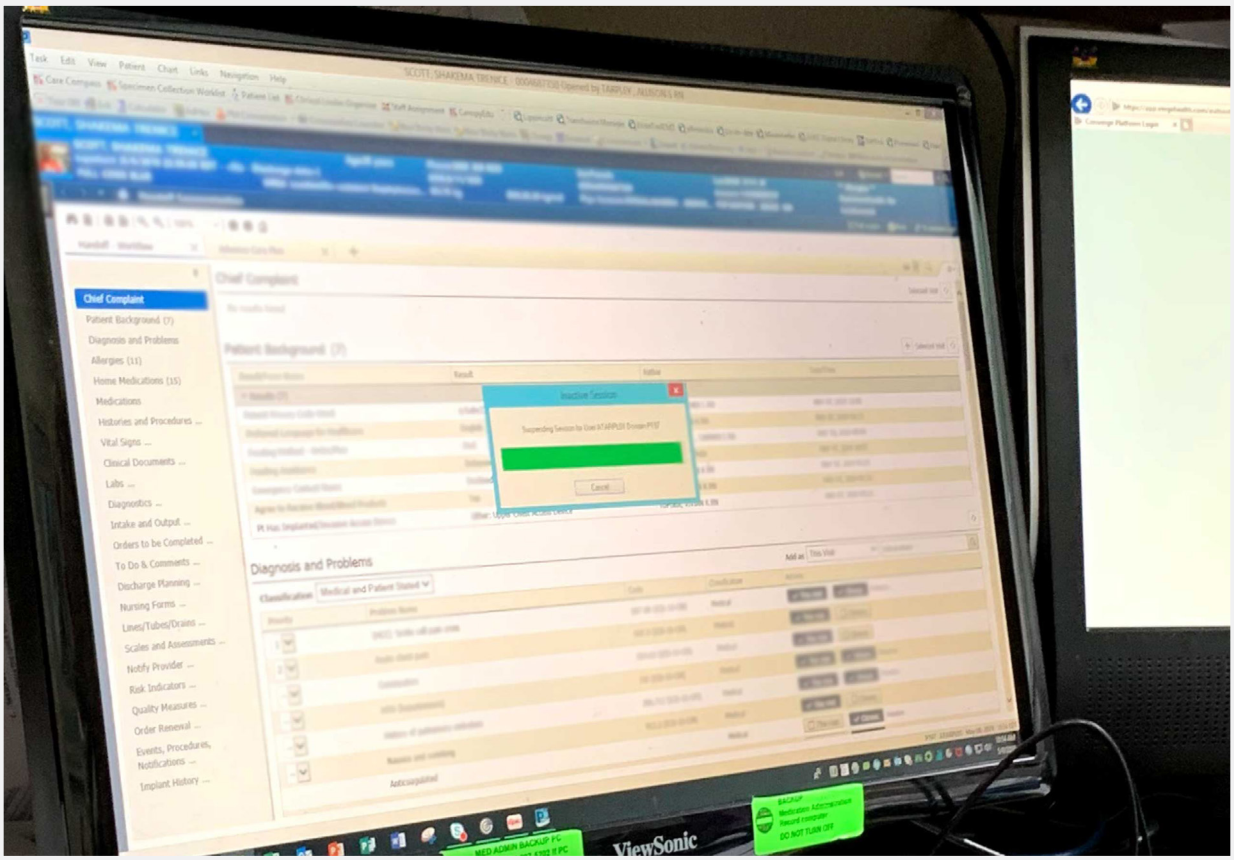
57. Use progress indicators for long load times, document downloads, and multistep processes.

Progress indicators and wait-time animations, such as percent-done bars and spinners, inform employees of the current system state, reassure them that the intranet is working, and make processes more tolerable by reducing uncertainty. Employees experience higher satisfaction with the intranet and, in some cases, may be more patient and willing to wait longer when the intranet uses a dynamic progress indicator.

Progress indicators are a subcategory of microinteractions. They let employees know the system is still working to respond to their actions. They can show a specific or undetermined wait time and may include components such as linear or circular progress indicators. These elements encourage employees to remain committed to their task while they wait for something to happen.

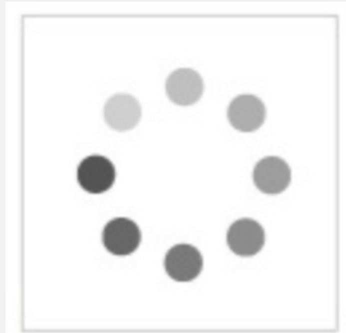
Many intranet designs neglect to show feedback until the system is completely done processing the employee's input and can display the final answer. This creates anxiety as the employee is uncertain whether the intranet received the command, or the system crashed. Plenty of extra clicks and double submissions have resulted from such a design.

If the results of an action take more than one second to appear, it's best to show not only some sort of progress indicator but also an estimate of when the intranet will be finished with the request. For example, while observing a nurse manager at Atrium Health, we noticed a progress indicator immediately after she filled out a long form and pressed *Submit*. This was good as the system provided immediate, visual feedback that it had received and was processing the request. The progress indicator also gave her something to look at while she waited, which made the waiting period easier to tolerate.



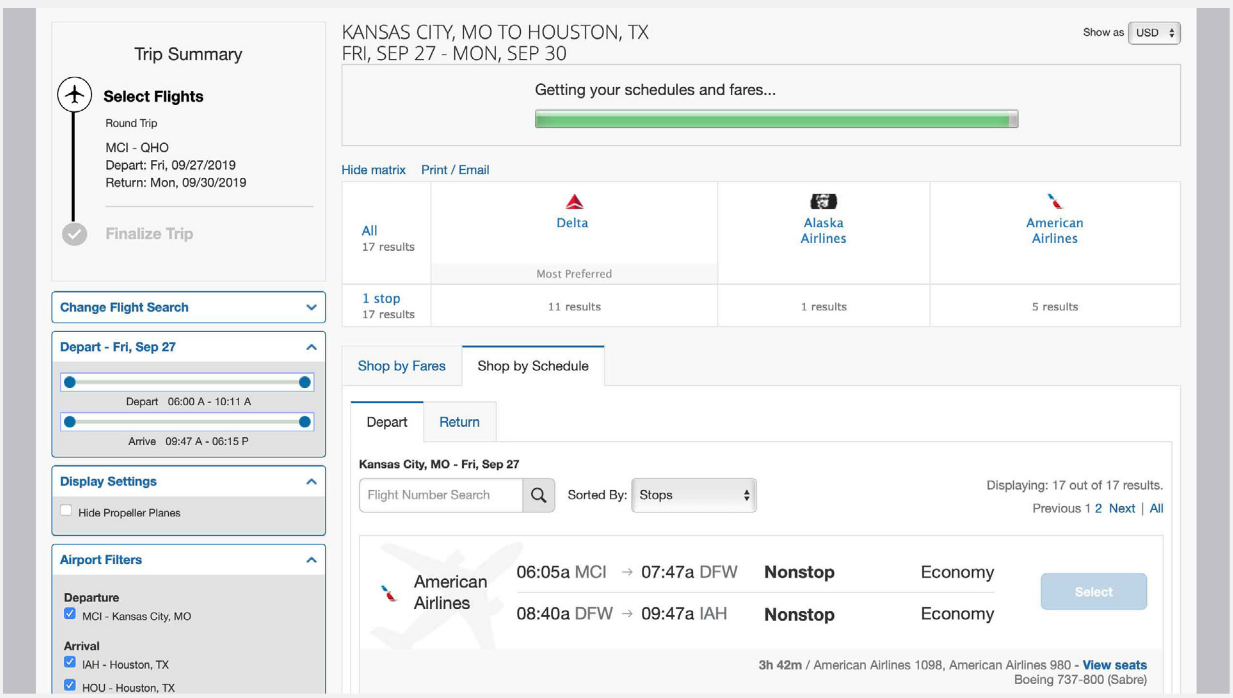
A progress indicator on Atrium Health's intranet helped ease uncertainty about whether the system had received a nurse manager's request, and it gave her something to focus on while she waited for the system to respond.

Use loop animations for fast actions to show employees that the system is working without providing information about how long the user will have to wait. The animated spinner icon is an example of this common progress indicator.



An example design for an animated spinner icon. This indicator should be reserved for fast actions that take between two and 10 seconds.

Including text that explains why users are waiting can add another layer of clarity to progress indicators. For example, after employees searched for a flight on Burns & McDonnell's travel booking tool, *Concur*, a progress indicator bar appeared at the top of the page and included helpful text, *Getting your schedules and fares.*



A progress indicator bar and clear messaging about why the employee was waiting appeared on Burns & McDonnell's travel booking tool, which was favorable.

Use percent-done progress indicators, either in bar or circular form, that fill from 0–100% for actions that take 10 seconds or more. These are the most informative type of wait-animation feedback. They show the current progress, how much has already been accomplished, and how much is left to be done. This information gives users control (that is, they can decide whether to wait or not); it decreases uncertainty about the length of the process and may reduce the perceived wait time.

A percent-done indicator may be used for actions that take less than 10 seconds if the action involves processing a series of documents or forms because the user understands that the system is working with a set number of records. As with looped-animation indicators, include a text explanation of the process, for example, “Updating address 3 of 50.” For actions that take a little while, give users the option to stop the process if they decide they cannot wait. Otherwise, your design may be hijacking control of the system, leaving the user powerless.

One issue for designers is calculating how long the process will take. Here are a few ways to handle this:

- **Start the animation slower and allow it to move faster as it approaches the end.** This way, you don’t risk establishing a faster expectation than the system can maintain. Exceeding employee expectations always creates more satisfaction than disappointing them by delivering less than promised. (Note that this slow-fast recommendation only applies to wait animations; research has shown that for surveys, progress indicators that start fast and end slow reduce drop-off rates.)
- **Provide a general time estimate.** Don’t try to be exact; it will inevitably be inaccurate at some point, and the intranet’s credibility will suffer. A simple, *about 3 minutes remaining* message can be enough to inform the employee and encourage them to wait it out. Always allow for extra time, just in case. If the action goes faster toward the end, it’s a pleasant surprise.

Providing feedback is fundamental to a positive employee experience. By being forthcoming and transparent about wait times, designers can reduce uncertainty. Use a looped indicator for delays of two to nine seconds and a percent-done indicator for delays of 10 seconds or more. Ultimately, good progress indicators can make employees stick around to finish the task and generally have a more favorable impression of the intranet.

HOW TO HANDLE NEW BROWSER TABS AND WINDOWS

58. Open links to pages, tools, and documents in new browser tabs or windows only in specific contexts.

Since 1999, it's been a firm usability guideline to refrain from opening new browser tabs and windows for several reasons. All of these apply to intranets and are still valid today:

- More windows or tabs increase the clutter in the employee's information space and require more effort to manage.
- New windows or tabs cause disorientation as employees often don't realize a new window or tab has opened. This problem is exacerbated on mobile, where the old window is never visible.
- Less-technical employees struggle to manage multiple windows and tabs, especially on mobile. On tablets, where users can have both multiple windows and tabs for the browser, it's even more confusing.
- New windows or tabs prevent the use of the *Back* button for returning to the previous page and force the employee to expend effort to find their way back to the prior content.
- New windows or tabs are not inclusive for blind or low-vision employees — especially when they open outside of the area magnified area.

There is generally one good reason to open a page in a new window, and that is **when the employee will need to refer to that content to complete a task in another window.** For these situations where a linked page or document will be used as a reference while completing some other flow (e.g., when a PDF has instructions for a process), it's helpful to have it open in a new tab or a new window, so employees can easily switch attention between the main flow and the reference material. However, if the page link is likely to be used by itself, having it in a different tab can burden employees by increasing browser clutter (too many tabs). And, on mobile, multiple tabs are often confusing and hard to manage.

Employees struggled with multistep processes that required information from different pages.

User Behaviors

When reporting an incident or submitting a ticket on a separate digital workplace tool outside of the intranet, employees in our research studies often referred back to the intranet content about what type of incident or ticket to report and what to include in the form.

Two users had difficulty remembering the instructions for how to complete forms as soon as they clicked on the tool link because those instructions were on an intranet landing page. This is one case where opening a page or form link in a new window or tab could be helpful.

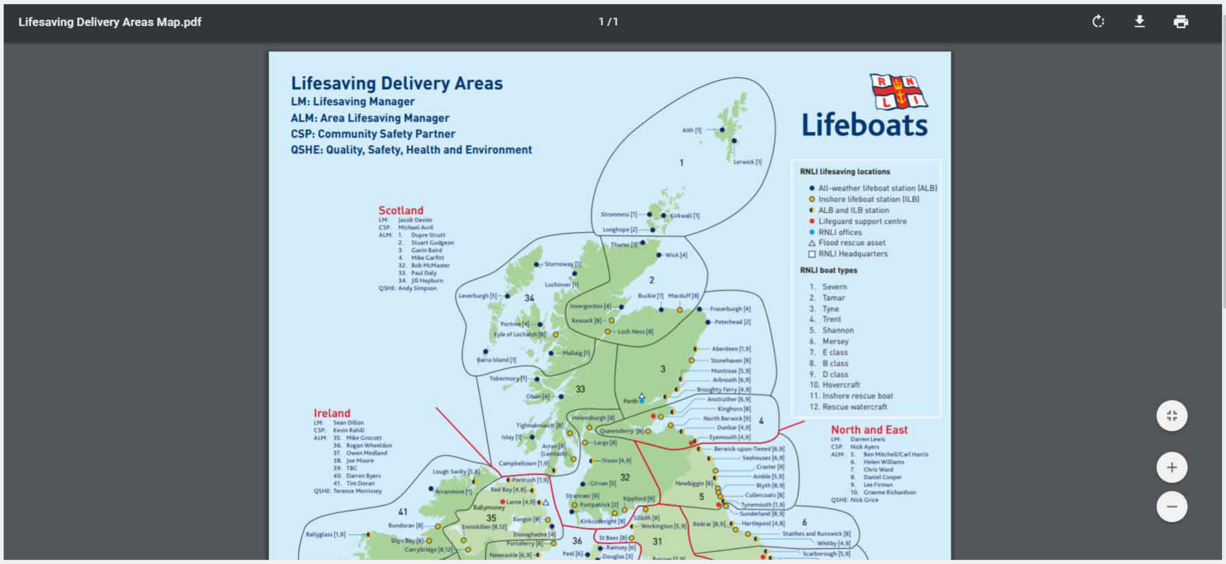
One user said, “This time, I would right-click in a new tab so that I could actually see what I was meant to be doing at the same time. What type of incident am I trying to report?”

In addition to opening the link in a new tab, always ensure contextual information about multistep processes or form nuances is available instead of forcing employees to reference multiple sources or pieces of information.

In most cases, it’s best to keep employees in the same browser window or tab, so they can click the *Back* button to return to the previous page. However, after finishing with a page or document, we often see users close the browser window instead of clicking the *Back* button, so they lose their navigation history.

The generalization often used as the rationale for opening links in new browser tabs or windows is to do it when it’s a link to a different content type or site. This argument is problematic because it assumes employees will always do the same things with certain pages, tools, and file formats, which isn’t always true. The reason we can’t just generalize about when to open a link in a new browser tab (or window) versus when to keep users in the same browser tab is because users’ needs, expectations, and reactions aren’t triggered by a file format or link type (internal or external). This decision has much more to do with people’s context, task, and what they’ll do next with the content housed at the link.

For example, at the Royal National Lifeboat Institution, we noticed that a lot of content was posted as PDFs, which caused many new browser tabs to be open in users’ browsers. This also contributed to slightly longer task times overall, as PDF documents are more difficult for employees to skim and scan. In certain situations, employees did not expect PDFs and new browser tabs. After clicking on a *Lifesaving Strategy* link, an employee remarked: “I didn’t think it would be a document.” After returning to maps and selecting the *Lifesaving Delivery Areas* map, the same employee said frustratingly, “Oh, goodness!”



Royal National Lifeboat Institution employees grew frustrated by PDF documents opening in new browser windows and tabs.

Open Links to PDF Documents in New Tabs on Desktop

The reason we advise you to open links to PDF documents in new tabs on desktop is because, as we observed with our study participants, they usually needed to combine information in the PDF with that in the original tab, so they often had to go back and forth between the two. Or they wanted to print out the PDF. In either case, when they were finished, they would often close out of the PDF rather than click on the *Back* button.

Again, however, if your employees are primarily completing tasks on mobile, don't use a PDF in the first place, or if you must, at least open it in the same tab so they can get back to it more easily.

In one example, an employee needed to print a PDF of a flyer to post on the wall in their office, but in another, they referred to a multipage PDF of directions on their mobile phone to assemble a piece of office furniture. In the first case, opening the PDF in a new tab was favorable, as the employee was finished with the document after printing and closed it. But in the second case, the employee needed to refer back to information on the website where the directions were originally linked. Since they were on their mobile phone, opening the PDF in the same tab preserved the back button and better suited the employees' channel, context, and task. However, if this employee had been on desktop and needed to reference the PDF and the website together, opening it in a new window would have been more favorable.

Downloading a PDF may also be a good option to protect employees from the agony of reading a PDF in a browser window, but we've also observed employees who were bothered by having to first download the PDF and then reopen the file in another platform. These are all real problems you must consider before including a PDF in the user experience. Research with your employees is the only way to understand the best action to take.

Context Always Matters

Employees' reactions to links opening in new tabs or windows depended on the following:

1. **Context:** Employees performing casual, laid-back tasks were far less bothered by new browser tabs or windows than employees in high-pressure or time-sensitive scenarios.

2. **Device:** Employees on mobile were more annoyed when links opened in new tabs, as they couldn't use the *Back* button to return to the previous screen, and accessing the previous tab was difficult.

3. **Task:** Opening a page in a new window or tab was well-received when the task involved one of the following types of activities:

   a. Comparing content across browser tabs or windows. For example, a content manager may edit a page in a content management system in one tab or window and view a preview of the page in another. When the link to the preview opens in a new browser tab, content managers could easily see how changes in the content management system impact the page's appearance before publishing. The same could also be accomplished with two separate browser windows.

   b. Combining information from different tabs or windows. For example, a nontechnical user attempted to complete paperwork online. One of the windows had three tabs open, each with a different piece of reference material from the same website. Because each link opened in a new tab, she could easily use them together to confidently complete the forms she had opened in the other window.

   c. Using multiple browser tabs to keep track of items. For instance, an employee looking at different flight options for an upcoming work trip. They would review the available flights on the main page, then click on fare options, and the flight would open in a new tab. This made it easy to keep track of the items they wanted to review in more detail before making a purchase decision.

   d. Using the original browser tab as a launching-off point to others (e.g., exploring multiple alternatives listed on the original page). For example, one user was browsing a Google Drive folder that contained links to various forms and documents. Because each link opened in a new tab, she could easily close out of it when she was finished and return to the original Google Drive tab to access the next document or form needed.

With these types of activities, we often saw employees close the browser tab(s) after they were finished (rather than trying to click the *Back* button), so, in these instances, it's more fitting to open links in a new tab.

Tasks that Should Not Open in a New Tab or Window

For the following types of tasks, employees did *not* appreciate being sent to a new browser tab or window:

- **A quick inspection of a new page**, followed by resuming the activity in the original tab or window. For example, while one employee was completing an expense report, he couldn't remember if his organization allowed an 18% or 15% gratuity on company-covered meals. A link to the company's expense policy revealed the answer, but it opened in a new tab. The user grew frustrated when he noticed the browser's *Back* button wouldn't work to take him back to his expense report.
- **Multistep workflows** in which new steps appear in a different window or tab. In these cases, employees preferred to click the *Back* button to get to previous steps in the process, regardless of if they were on the same or separate sites. For example, one employee was trying to submit an IT ticket to get a broken printer fixed. First, he scanned an intranet page to understand what type of ticket to open. Next, he clicked a link he thought would take him to a form to open the ticket. Instead, the homepage of a completely different website appeared in a new tab. Then, finally, when he found the link to initiate a request on the new website, the form opened in yet another new tab. Needless to say, he struggled to get back to the original intranet page from which he started. Opening links in new tabs was *much less* problematic when there wasn't a next step, and the user's task concluded shortly after clicking the link. Users could simply close out of the tab without fear of losing their session history.
- **Many tabs or windows are already open.** Busy employees often have many browser tabs open at a time while they work. If employees already had many tabs open, they were often annoyed when another one opened.

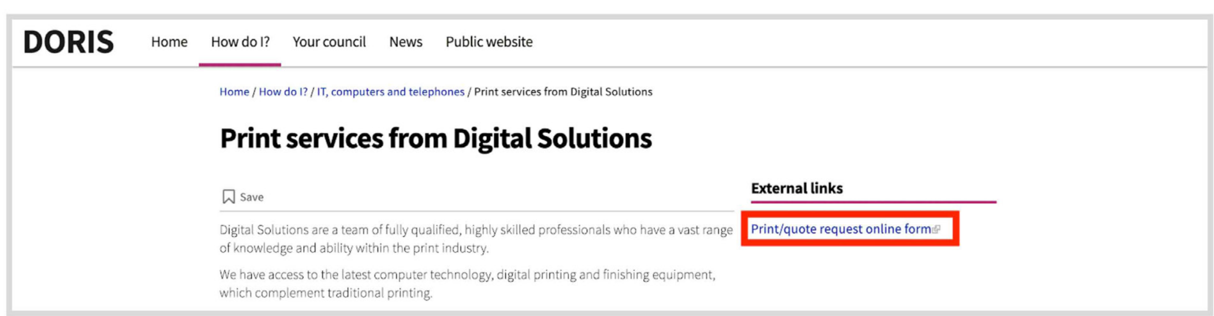
As a rule, always open links in the same browser tab or window. However, if you hypothesize that opening a new tab or window may help employees in their task, don't base this decision on the type of link or content alone. Rely on observational research methods, such as usability testing, contextual inquiry, and field studies, to help you make the right call.

Don't go overboard with opening links in new browser tabs or windows simply because you think employees might need them to display that way for certain use cases. If links open in a new browser tab or window and users don't notice, they'll wonder why the browser's back button doesn't work and how to get back. Or, if the link opens in the same browser window or tab and the user doesn't notice, they close the window or tab, assuming it did, in fact, open in a new one. They'll then have to start their session all over again.

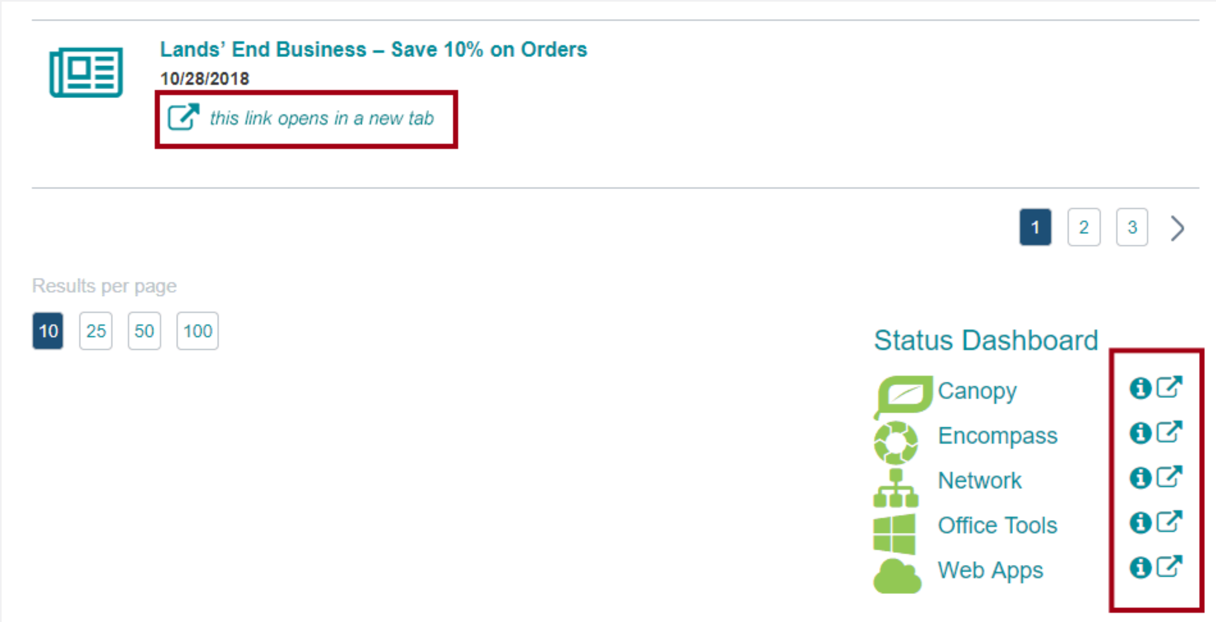
59. Label links that will open a new tab, window, or external site to set users' expectations before they click.

It's important to watch employees so that you can better understand their task, context of use, and environment before opening a page in a new tab or window. There may be too much variability across possible user tasks, so you may not know the best decision. If you decide to open the link in a new browser tab or window, **use contextual messaging and perhaps even an icon** to let users know about it before they click.

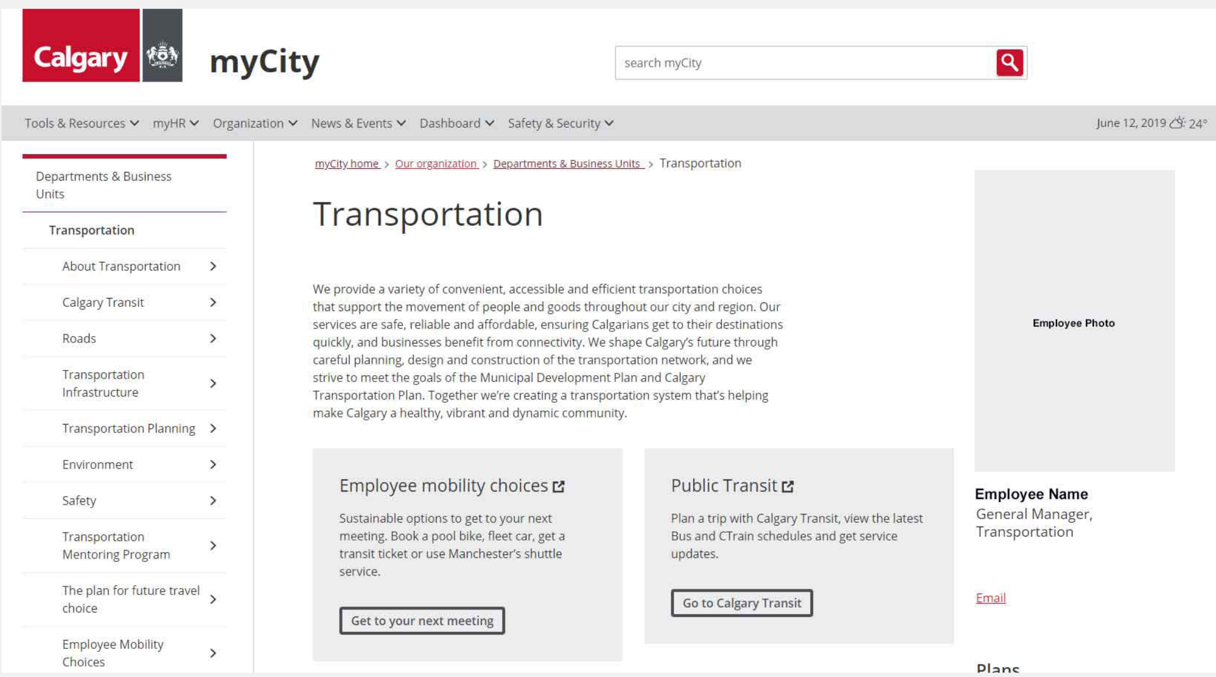
For example, on Bracknell Forest Council, Atrium Health, and the City of Calgary's intranets, external links were labeled with a clear, consistent format throughout the intranet. This visual treatment of icons and messaging sets employees' expectations before clicking the link that they will be leaving the intranet.



Bracknell Forest Council used a small arrow icon next to links to signal to users that a new window or tab would open. Though this was a good approach, increasing the size and visual prominence of the icon would make it even better.



Atrium Health labeled links that opened a new tab or external application (other than the intranet) with a bright teal arrow icon, which helped set employees' expectations before they clicked.



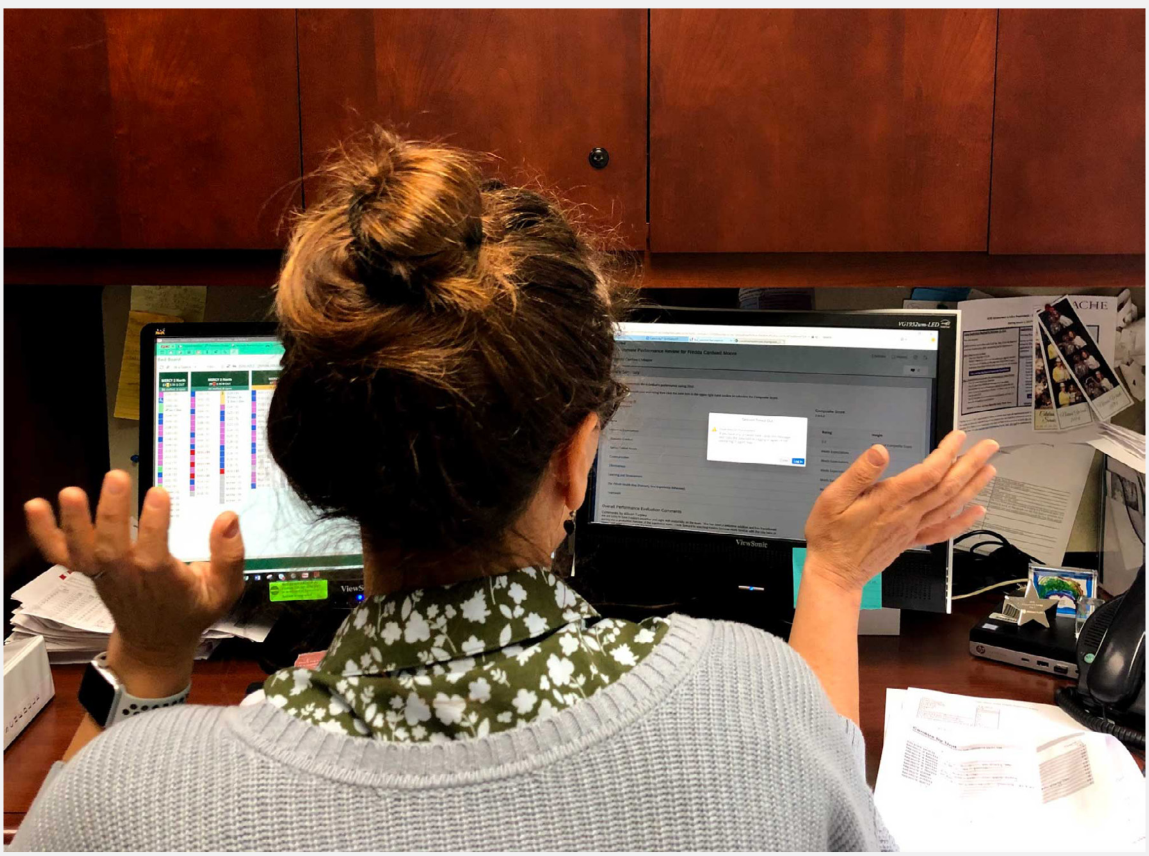
The City of Calgary used a similar icon on its intranet, only it appeared bold and in black, which was a favorable treatment.

POPUPS AND MODAL OVERLAYS

60. Design popups and modal overlays that are easy to dismiss but helpful for key use cases.

Use modal dialogs and popups for important warnings on the intranet and as a way to prevent or correct critical errors. When employees' work may be lost, or an action may have destructive, irreversible consequences, interrupt the employee to avoid a disaster. However, do not overuse popups or display them at inopportune times, such as when the employee lands on the intranet's homepage. This will deter them from having a good experience.

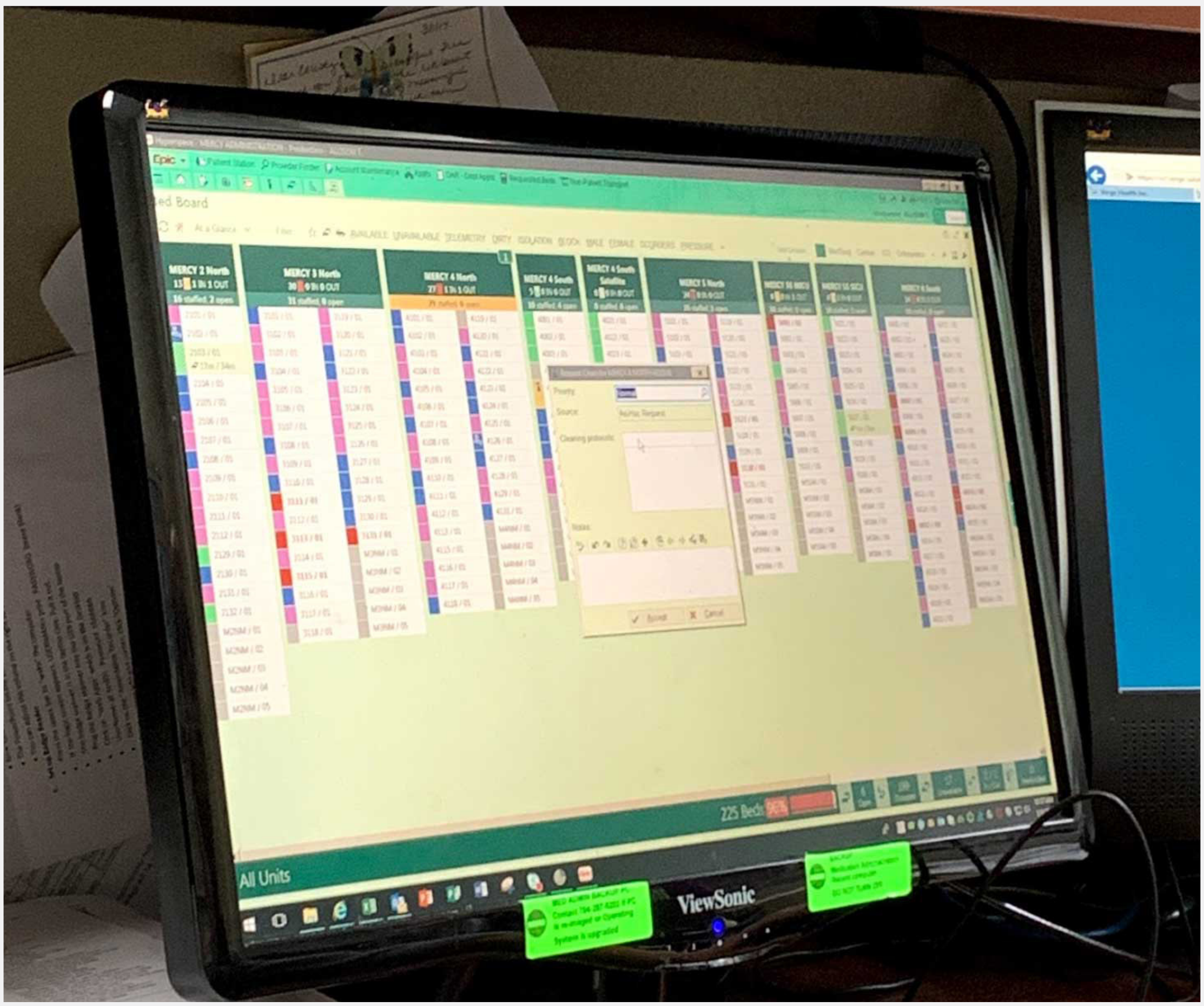
To determine whether a popup or modal overlay is appropriate, ask yourself if the problem would be easier or harder to correct if the employee's attention is taken away from the task. It is always good to prevent human error before it happens, if possible. For example, a message to inform an employee that their computer will restart or that they will be logged out of the intranet in 10 seconds could be displayed in a modal dialog to ensure the employee notices the message.



One study participant encountered a modal that informed her that her session was about to time out. From her body language, we can tell she was displeased this was happening, but because the popup was highly visible, she was made aware.

Before designing a modal, determine if the error is irreversible. Irreversible errors often result in a loss of information, which can be especially damaging for complex and time-intensive tasks. When missing information prevents the system from continuing an employee-initiated process, a modal dialog can prompt the employee for that information.

For example, an Atrium Health nurse manager was filling out information related to a patient when a modal appeared. This was a good example of using a modal because it drew her attention to the information that needed to be saved before proceeding to her next task. The modal popup was easy to close using the prominent *x* icon in the upper right corner. The *Save* and *Cancel* commands were also easy to understand. The *Cancel* command would also close the popup, which was good, giving employees multiple options to close it.

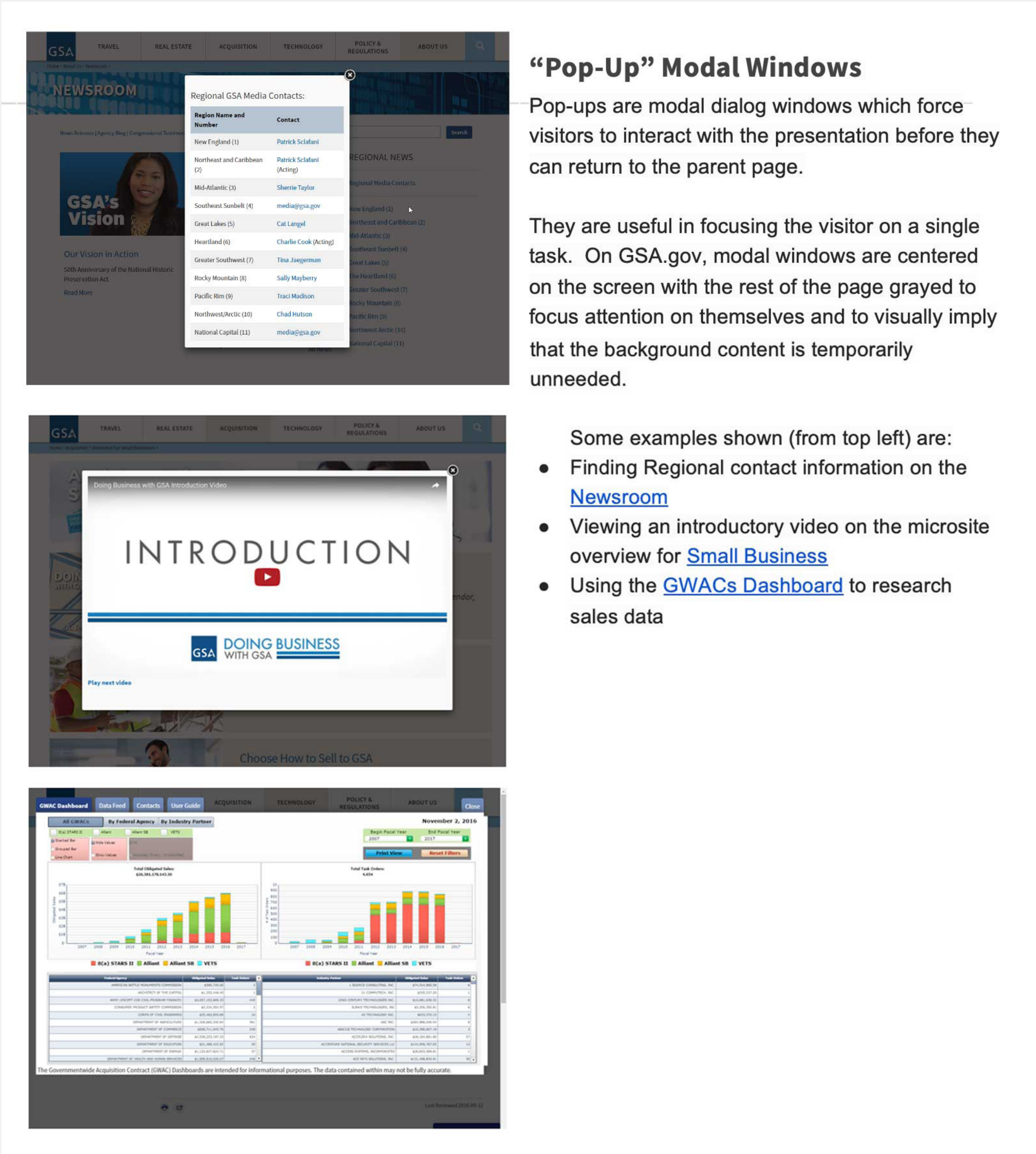


Atrium Health's digital workplace software used modal windows to ensure employees entered information critical to continuing their current process, which was favorable.

For time-consuming and mentally involved tasks, it can be overwhelming to ask for lots of information all at once. In those situations, use modal dialogs to break complex information into simpler, more digestible chunks. Wizards are typical instances of such use of modal dialogs. However, it's important to note that a modal with multiple steps will just prolong the time spent away from main tasks, making it more likely that employees will forget what they were doing in the first place.

If you must do multiple-step modals, give employees a sense of their progress so they don't abandon the task immediately. If something requires multiple steps, it probably justifies dedicating an entire page to it.

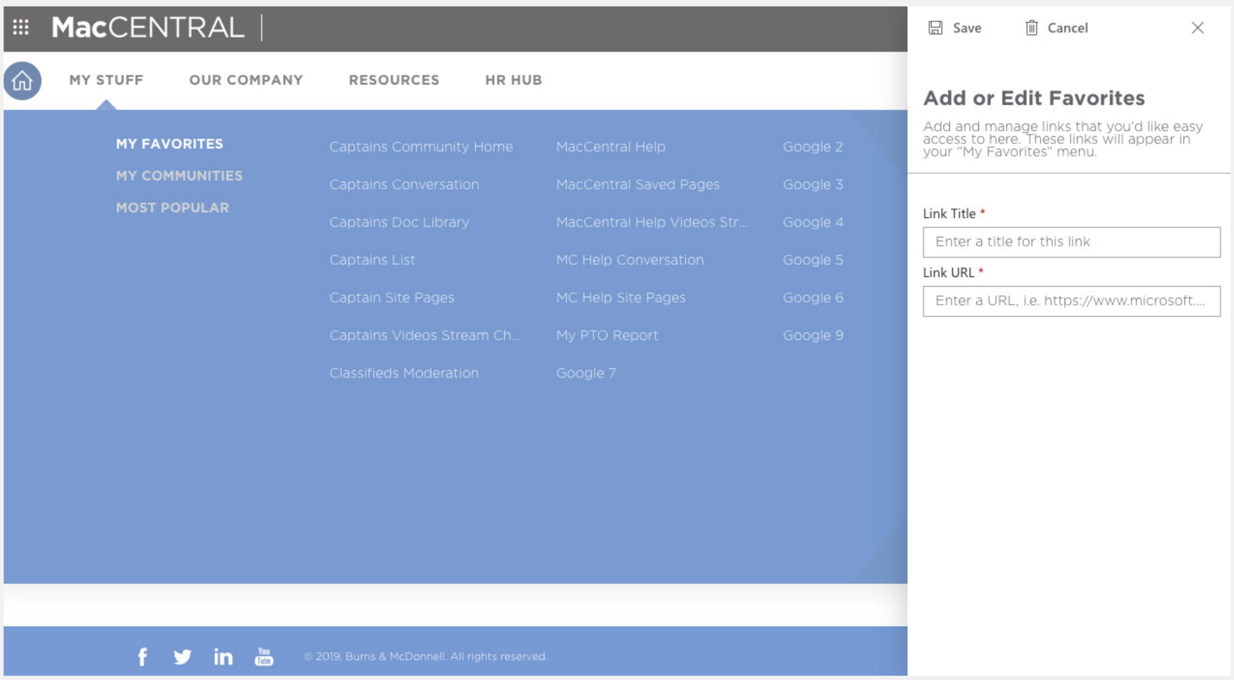
Use modal dialogs to ask for information that, when provided, could significantly lessen employees' work or effort. Modals can be effective when the information being requested or presented is relevant or can streamline the current task's completion.



The General Services Administration clearly explained popups and modal windows in its style guide.

Do not use modal dialogs for nonessential information unrelated to the employees' current workflow. When nonessential information is presented in a high-priority format, such as a modal dialog, employees will refuse to give attention to further instances of this format. Also, avoid modal dialogs that interrupt high-stakes processes or for complex decision-making that requires additional sources of information unavailable in the modal. Use modals for short, direct dialogues with the user. If a modal requires the user to do complex research or consult additional information sources (potentially blocked by the modal), it's not the correct UI element for that interaction.

In situations where the task is not critical, a nonmodal dialog might be appropriate. Nonmodal dialogs are less offensive than modal ones because they allow users to continue their activity and ignore them if they are irrelevant. However, they can still be disruptive, especially if they obscure important information on the screen or if they require too complex interactions.



Burns & McDonnell used a nonmodal dialog for employees to add or edit pages saved to their favorites. The only improvement would be to move the Save *and* Cancel *commands down below the form fields.*

Both modal and nonmodal popups are useful and request or encourage employee participation. When deciding between these two types of dialogs, consider the user context and the workflow. Avoid unnecessarily interrupting employees and disrupting their workflows. No one likes to be interrupted, but if you must, make sure it's worth the cost when considering using modals or popups.

Style Guides and Design Systems

DESIGN SYSTEMS

61. Establish design and content guidelines using a style guide, component library, or design system for the intranet.

As an intranet design evolves, the scale and speed at which new pages and screens must be created also increase. Many intranets and digital workplaces have hundreds or even thousands of pages and screens. With this enormous scope encompassing content and tools comes a dire need for organizations to find ways to streamline intranet design work. Many intranet teams leverage robust design systems to manage their intranet and digital workplace designs at scale.

Design system

Definitions, Principles, and Methods

A **design system** is a complete set of standards intended to manage design at scale using reusable components and patterns.

The primary benefit of intranet design systems is the ability to quickly replicate designs using premade UI components and elements. With these, teams can continue to use the same elements repeatedly, reducing the need to reinvent the wheel and risk unintended inconsistency.

Intranet design systems can also alleviate strain on busy or strapped design resources so they can focus on larger, more complex problems. Since UI elements are already created and reusable, designers can focus less on tweaking visual appearance and more on solving complex problems such as information prioritization, workflow optimization, and journey management.

Another benefit of design systems and style guides is that they help protect intranet teams from having to engage in wasteful debates with individuals in the organization who do not have a design background. For example, the functionality or appearance of a dropdown menu does not have to be debated when that term is reserved for a specifically defined element within the design system.

For example, the Atrium Health intranet team described the importance of its design system and style guide by saying, “We have a style guide, and we have tried to make our clients understand that we really need to be the ones who pick the layout for the content to actually go on the intranet.”

STYLE GUIDES

Style guides contain specific implementation guidelines, visual references, and design principles for creating intranet pages or other design deliverables. The most common style guides tend to focus on branding (colors, typography, trademarks, logos, and print media), but style guides also offer guidance on content, such as tone of voice and language recommendations, and visual and interaction design standards (also known as **front-end style guides**). These guidelines are sometimes also incorporated into the component library to provide relevant guidance in context.

Front-end style guide

Definitions, Principles, and Methods

Front-end style guides are a modular collection of all the elements in your product's user interface and code snippets for developers to copy and paste as needed to implement those elements**.** They include common UI components like buttons, form-input elements, navigation menus, modal overlays, and icons.

For example, standards, conventions, and style guides were available at the GSA, yet content editors still had to spend considerable time tweaking submissions for news and pages because of a lack of adherence to them. Also, tight timelines and content management platform limitations meant content editors had to quickly convert the content themselves rather than being able to take the time to educate each client on the submission requirements.

A better approach would be to make adherence to the style guides, standards, and conventions more stringent and to boost awareness of these standards by surfacing them at a higher level on the intranet. Educating content contributors on the standards and conventions would also help minimize the need for content editors to rework what was done by the content editors.

GSA.gov Visual Style Guide

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Introduction / Who This Guide Is For

1. Elements of GSA.gov Visual Style
    - Typography
        - Default Paragraph Style
        - Heading Styles
    - Color Palette
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        - Configuration Options
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        - Agency Initiatives
    - Specialized Content
    - Custom Microsites

Standards and accountability are required for intranet style guides to work well.

Introduction / Who This Guide Is For

This style guide reflects a new standard of simplicity and consistency for GSA.gov and provides guidance for content across the site.

The style guide is created with two key audiences in mind – **business owners** and **content managers**.

Business owners use GSA.gov to communicate about a program or offering. You can use this style guide to quickly understand what the site offers in terms of structure and scale and determine how best to deploy their message on GSA.gov.

"Business owners" is a term encompassing everyone who is responsible for the accuracy, timeliness, and relevance of information on GSA.gov. Business owners include:

- Individuals formally designated as "owners" of content on GSA.gov,
- Managers of programs and offices, and
- Subject matter experts seeking to have information published on the site.

Content managers create content using GSA's Content Management Platform (CMP). You can use this style guide to:

- Learn how different templates organize information to suit a range of communication needs,
- Understand the range of pages on GSA.gov, how they are used, and their layout and structure
- Prepare images for publication and use consistent page layouts to assure approved styles and typographic elements.

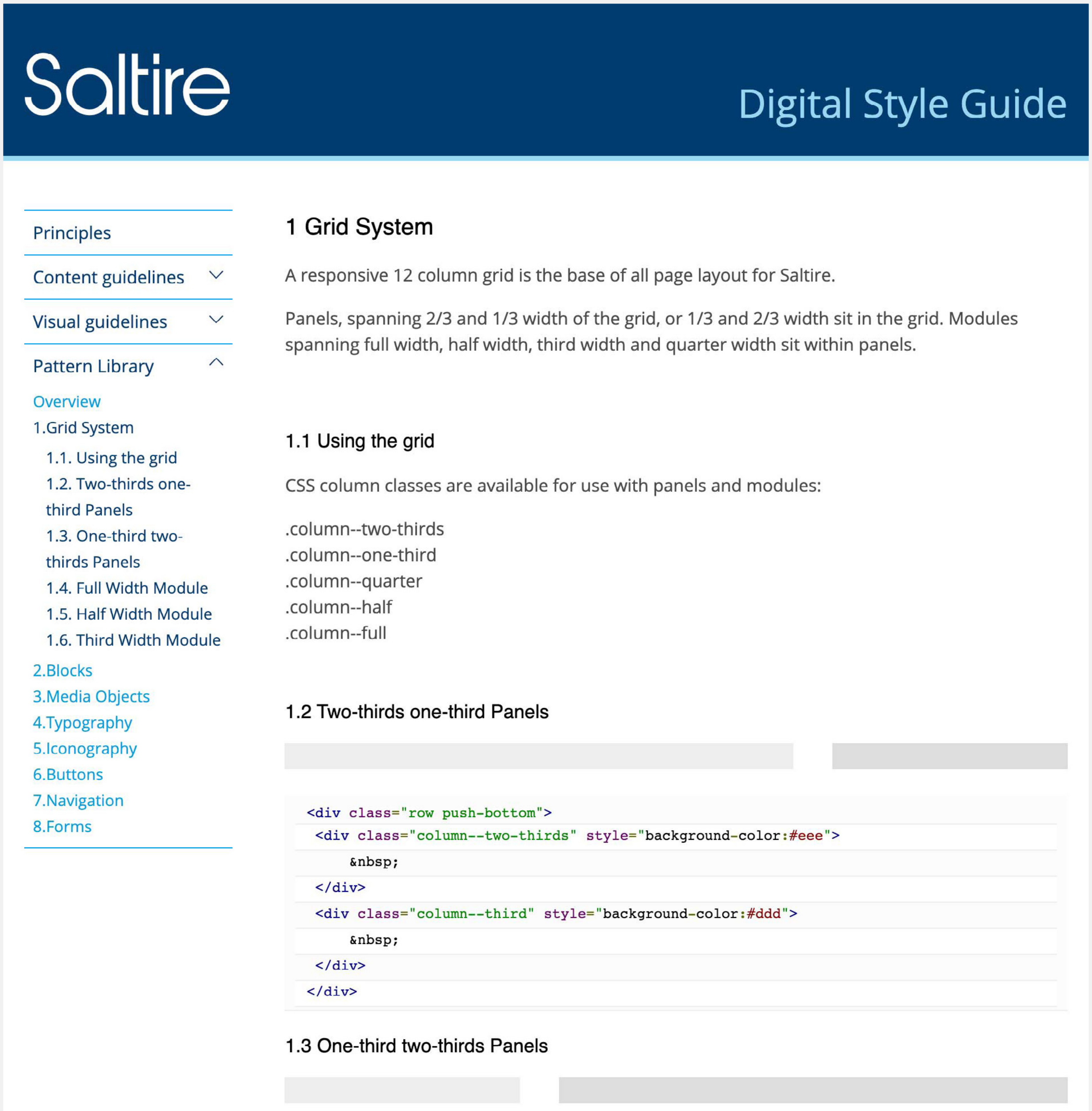
A favorable element of GSA's style guide was that it outlined who the guide was for and the purposes it served: familiarity and consistency.

Component libraries (also known as design libraries) are what many people associate with design systems. These thorough libraries house predetermined, reusable UI elements and serve as a one-stop shop for intranet designers and developers to learn about and implement specific UI elements. In addition to visual examples of components, they include:

- **Component names:** a specific and unique UI component name to avoid miscommunication between designers and developers
- **Descriptions:** a clear explanation of what the element is and how it is typically used, occasionally accompanied by dos and don'ts for context and clarification
- **Attributes:** variables or adjustments that can be made to customize or adapt the component for specific needs (i.e., color, size, shape, copy)
- **States:** recommended defaults and the subsequent changes in appearance
- **Code snippets:** the actual code excerpt for the element (some design systems go as far as sharing multiple examples and offering a "sandbox" environment to try out different component customizations)
- **Front-end and backend frameworks:** used to implement the library to avoid painful and unnecessary debugging

While component libraries specify individual UI elements, pattern libraries feature collections of UI-element groupings or layouts. Pattern libraries are often considered less robust than component libraries, but they can be as thorough or as high-level as needed. They typically feature content structures, layouts, and/or templates. Like the components, the patterns are meant to be reused and adapted.

For example, the Scottish Government housed its design standards and pattern library on a separate website, SaltireGuidelines.com, which was the best example of a comprehensive intranet design system in our most recent round of research. It was accessible, easy to understand, and included important design details related to content. The use of the design system was also evident on the Scottish Government's intranet, as it was clean and consistent.



Saltire

Digital Style Guide

- Principles
- Content guidelines
- Visual guidelines
- Pattern Library
  - Overview
  - 1.Grid System
    - 1.1. Using the grid
    - 1.2. Two-thirds one-third Panels
    - 1.3. One-third two-thirds Panels
    - 1.4. Full Width Module
    - 1.5. Half Width Module
    - 1.6. Third Width Module
  - 2.Blocks
  - 3.Media Objects
  - 4.Typography
  - 5.Iconography
  - 6.Buttons
  - 7.Navigation
  - 8.Forms

1 Grid System

A responsive 12 column grid is the base of all page layout for Saltire.

Panels, spanning 2/3 and 1/3 width of the grid, or 1/3 and 2/3 width sit in the grid. Modules spanning full width, half width, third width and quarter width sit within panels.

1.1 Using the grid

CSS column classes are available for use with panels and modules:

.column--two-thirds
.column--one-third
.column--quarter
.column--half
.column--full

1.2 Two-thirds one-third Panels

```
<div class="row push-bottom">
 <div class="column--two-thirds" style="background-color:#eee">
      
 </div>
 <div class="column--third" style="background-color:#ddd">
      
 </div>
</div>
```

1.3 One-third two-thirds Panels

The Scottish Government's intranet design system was an impressively comprehensive tool that helped scale the design and support consistency across the digital workplace.

The intranet design team needs bandwidth to support and sustain the design system.

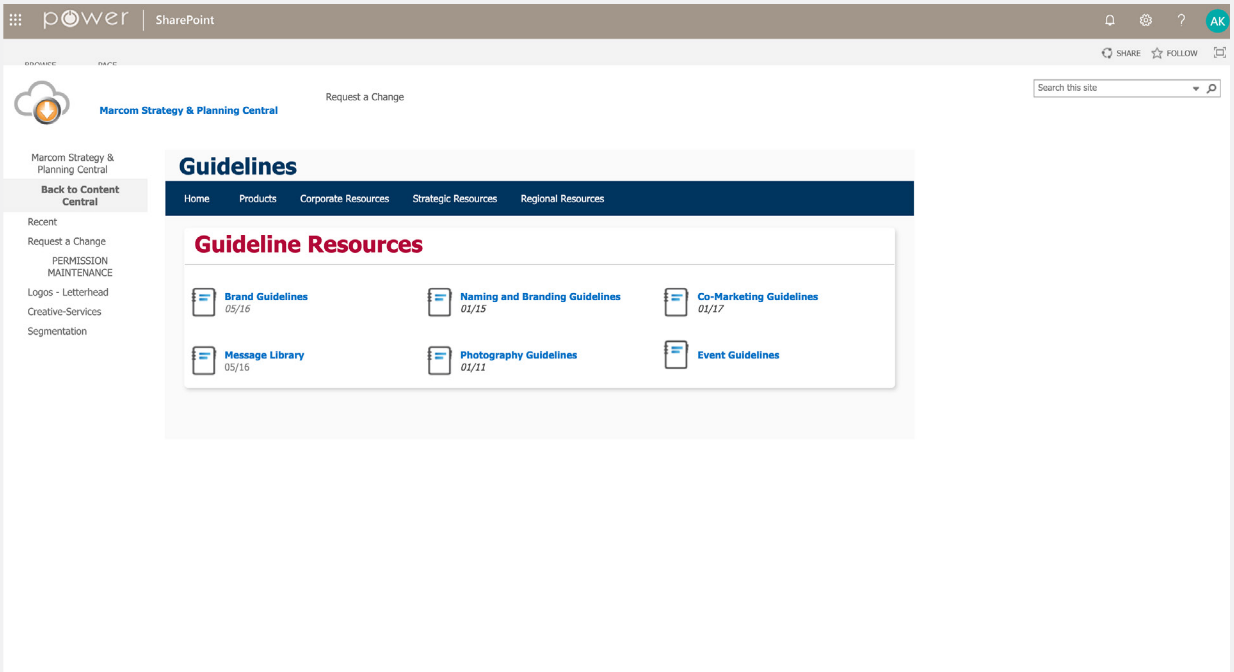
Process and Strategic Considerations

An intranet's design system is only as effective as the team that manages it — usually a design or internal communications team. Design systems require continuous maintenance and oversight to ensure they don't become outdated, obsolete, or overcrowded with redundant entries or submissions.

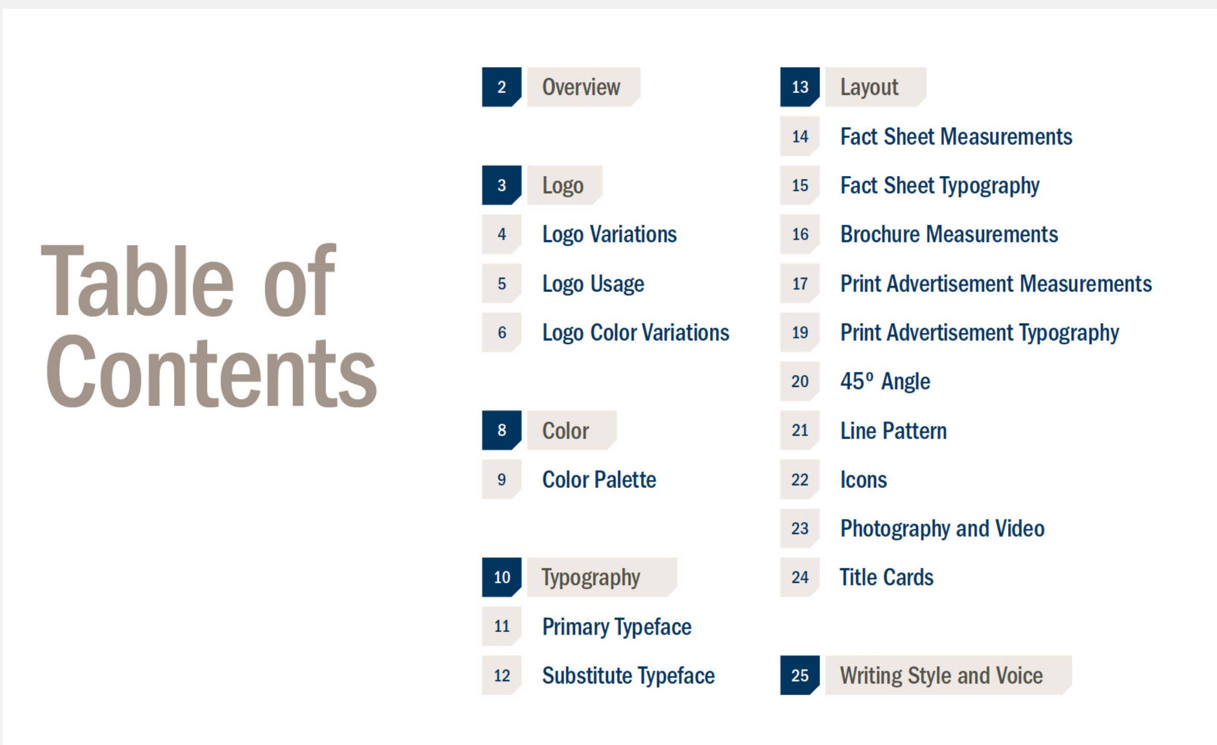
At a minimum, an intranet design and development team should include one interaction designer, one visual designer, and one developer. Each help write interaction design guidelines, create visual examples, and provide code snippets and implementation specifications for each element.

Consider securing an executive sponsor (from leadership ranks) to orchestrate design-system efforts and ensure the team has time to maintain it. While the lack of a sponsor won't be a showstopper, sponsors can secure money and resources while also conveying the strategic importance of the intranet's design system to the rest of the organization.

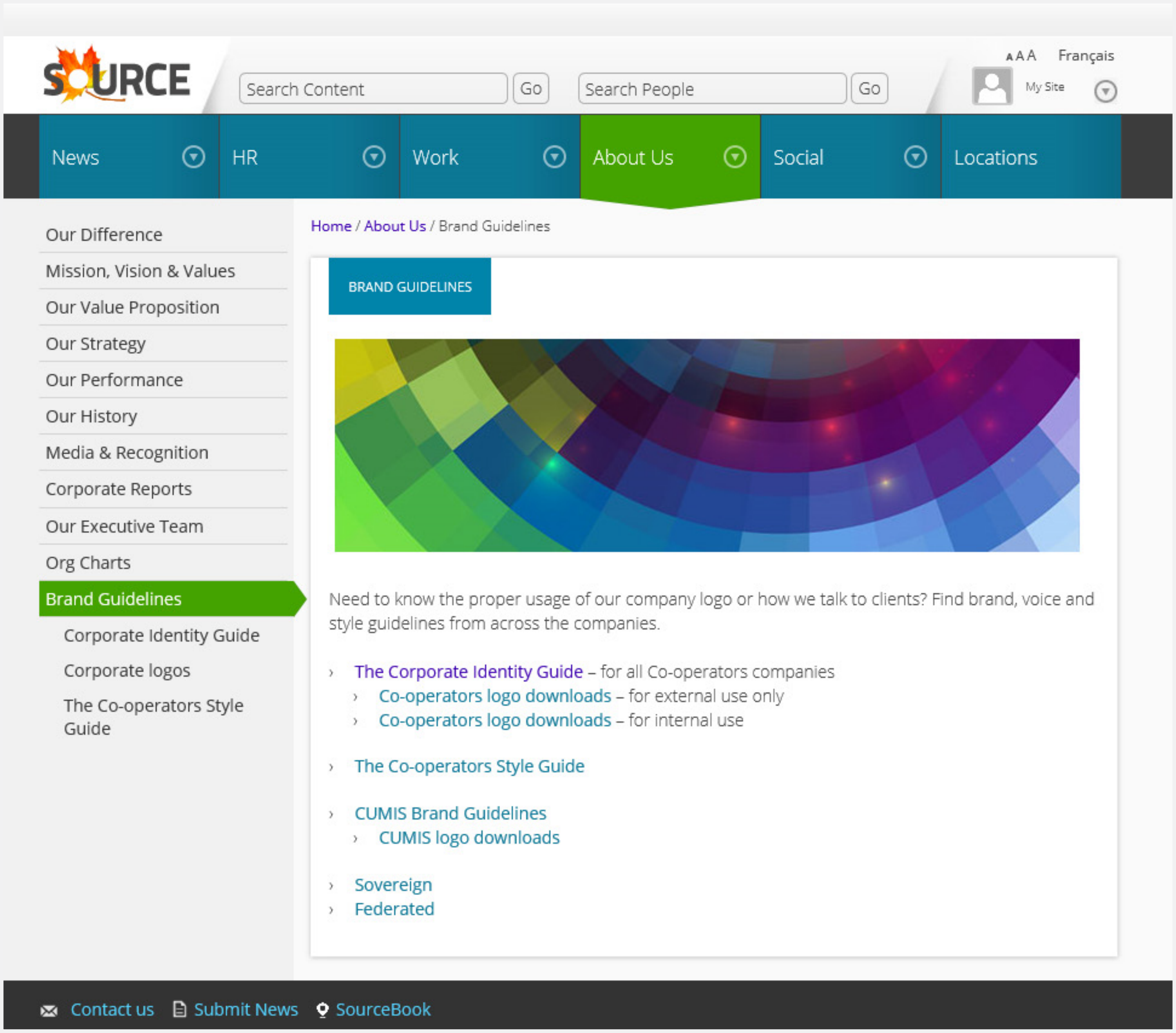
First Solar adhered to the company's main branding style for its intranet. Content contributors are trained to use the correct colors, fonts, and logos as part of the training process that goes with learning how to edit parts of the intranet. First Solar favorably placed the style guide and brand standards directly on the intranet so employees could easily access and reference them as needed. A team member said, "On the intranet, under libraries and templates, people can access style and design guidelines and logos, etc. As long as they are adhering to this, they're fine."



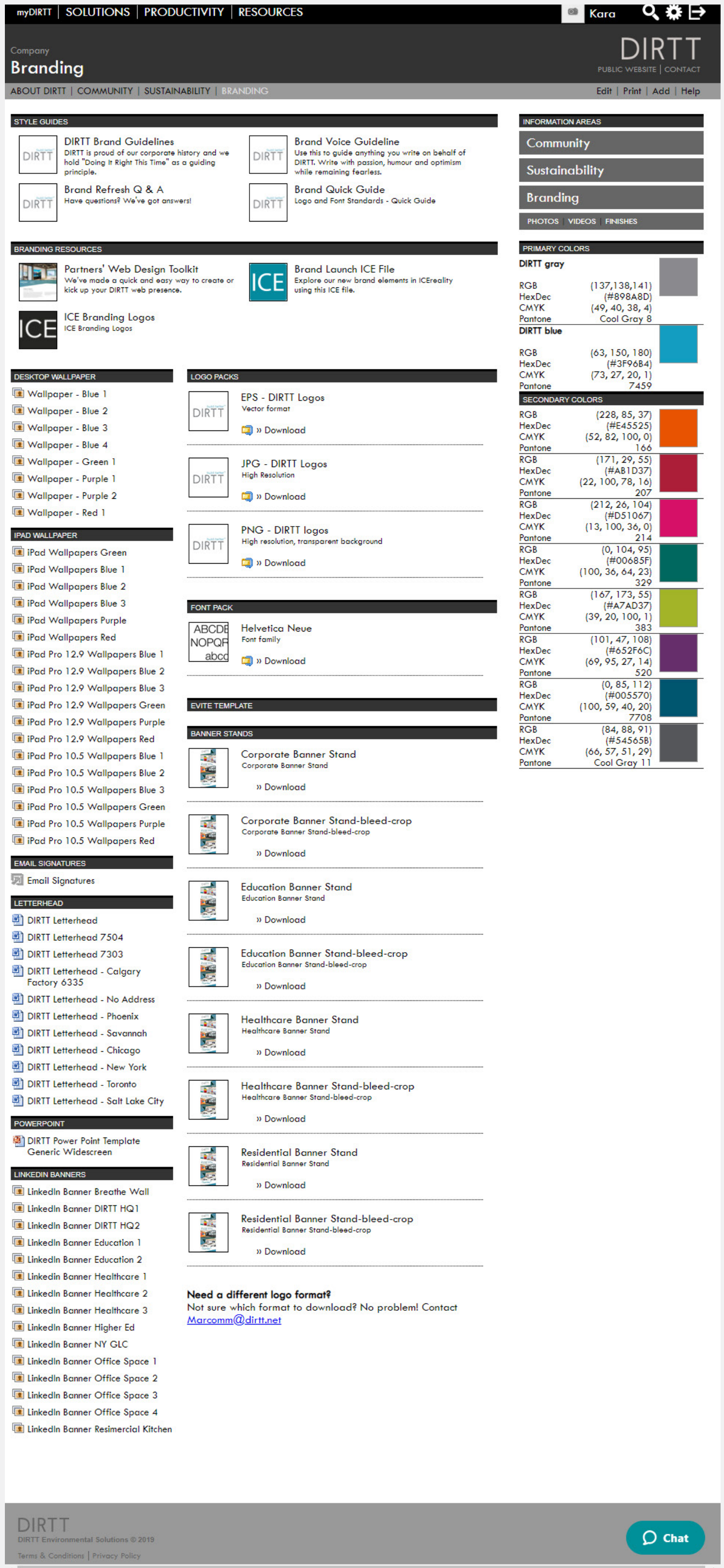
Designers, developers, and content creators at First Solar could find the brand standards in the intranet's Marcom Strategy & Planning *section.*



First Solar's brand standards were comprehensive and included writing styles and visual elements such as logos and colors, typography, and layouts.



The Co-operators also included brand guidelines directly on its intranet, making them easily accessible to all employees.



DIRTT also included a comprehensive branding section on its intranet, with topics related to digital channels and physical communication pieces.

The absence of an organization-wide intranet design system can lead to an inconsistent visual appearance and result in experiences that seem fragmented or unrelated to employees. Design systems provide a single source of components, patterns, and styles and unify disjointed experiences so that they are visually cohesive and appear to be part of the same digital workplace ecosystem.

As an added bonus, any major visual rebrands or redesigns can be managed at scale through the design system. Explicitly written usage guidelines and style guides help onboard individual contributors who are new to intranet design or content creation and also serve as a reminder for the rest of the contributors.

Design systems help teams scale and reuse the intranet's design for years to come, ensuring replicable design work over time. Design systems are made of many components, patterns, styles, and guidelines, which can help operationalize and optimize your intranet's branding, visual, and interaction design efforts.

Methodology

Intranet Guidelines Study Overview

In these studies, we used three methods — usability tests, contextual inquiries, and expert reviews — to gain a variety of insights into the usability and effectiveness of intranets as a whole.

USABILITY STUDIES IN A LAB SETTING

We watched employees use their company's intranet in a lab setting at every company, typically a small conference room or an office. Employees used either a company computer or their own company-issued computer. Some participants also used their mobile phones. Researchers observed four to six employees at each study location in organizations that ranged from small companies to large enterprises across the United States, Canada, and Europe in the 2019 study.

We gave users tasks to perform and quietly observed them as they worked. Users were asked to think out loud as they completed their tasks. They were also told to carry out each task as far as they would if they were on their own. Following the completion of each task, the researcher presented users with a brief satisfaction survey and asked follow-up questions.

There were two types of tasks given to users: directed and exploratory.

- **Directed tasks** require the user to find a specific piece of information (e.g., Who is the CFO?) or perform a particular task, such as submitting a support ticket to the IT department. When a directed task is given, there is a clear endpoint: the user either finishes the task or gives up.
- **Exploratory tasks** allow for a more natural exploration of content. There is no right or wrong answer when an exploratory task is given. Administering these tasks reveals how discoverable and engaging the content is on the intranet. For example, users were asked to find a community group they might be interested in joining or to see if there were any news articles they'd like to read.

In each session, users performed the directed tasks first and then completed as many of the exploratory tasks as possible in the time remaining.

For directed tasks, we recorded how long each employee took to complete the task and whether the task had been completed successfully. Employees were unaware they were being timed, and we did not tell them they were being assessed on whether their answers were correct. None of these quantitative measures were used to assess the performance of participants included in our study. Instead, they helped us to evaluate the usability of many different intranet designs.

Tasks

In each research study, we gave users similar types of tasks so that we could compare the performance of the same tasks across intranets, including those tested in previous studies. Although we tried to keep tasks consistent across organizations, the tasks administered varied slightly from one organization to another depending on what was offered on each intranet and what was realistic for employees to do. The table below shows the shell tasks (with an example) that were administered in many of the intranet studies.

TASK PREMISE	EXAMPLE	TYPE
Find a cafeteria menu	Use the intranet to find out what burger is being served in the cafeteria today. Tell the researcher your answer.	Directed
Find a colleague's office location	You've been told you need to speak to ‹name› from ‹a department›. Use the intranet to find where they are located. Tell the researcher your answer.	Directed
Sign up for training	Use the intranet to sign up for product owner training in October. Stop before signing up for the training but point to where you would click.	Directed
Find a specific piece of information	Your company offers tuition assistance. Use the intranet to find out how much money you can receive each year. Tell the researcher your answer.	Directed
Submit an IT request	Your office phone keeps dropping calls. Use the intranet to get it fixed. Go as far as you can without actually sending the request but point on the screen to where you would click.	Directed
Find the latest piece of news	Find the latest news article on the intranet. Tell the researcher your answer.	Directed
Find information about leadership	Use the intranet to find out when the Chief Operating Officer joined the company. Tell the researcher your answer.	Directed
Find a benefit	The company offers on-site childcare for employees. Use the intranet to find out how much it costs per month for a four-year-old child.	Directed
Request leave or vacation	Use the intranet to request a half-day off this coming Friday. Stop before submitting the request but point to where you would click.	Directed
Look for a job	A colleague mentioned there is a ‹certain job role› available. What level of education is needed to apply? Tell the researcher your answer.	Directed
Explore engagement with content types	Find a blog on the intranet that you'd be interested in reading. Say what you are thinking as you work on this activity.	Exploratory

Explore engagement with content types	Go to the intranet and see if there are any videos that interest you. Watch as many as you would like. Say what you are thinking as you work on this activity.	Exploratory
Explore engagement with content types	Read something interesting in Yammer. Say what you are thinking as you work on this activity.	Exploratory
Explore engagement with content types	Use the intranet to find a community you'd like to be a part of. Say what you are thinking as you work on this activity.	Exploratory
Explore engagement with content types	Use the intranet to find a piece of news you're interested in reading. Say what you are thinking as you work on this activity.	Exploratory
Explore engagement with content types	Read something interesting in Yammer. Say what you are thinking as you work on this activity.	Exploratory
Explore engagement with content types	Use the intranet to find a community you'd like to be a part of. Say what you are thinking as you work on this activity.	Exploratory
Explore engagement with content types	Use the intranet to find a piece of news you're interested in reading. Say what you are thinking as you work on this activity.	Exploratory

CONTEXTUAL INQUIRY IN THE USER'S ENVIRONMENT

We carried out contextual inquiries with employees at several organizations in 2005, 2011, and 2019. During these sessions, we observed employees wherever they worked, usually at a desk but occasionally in less traditional spaces, such as the floor of a retail store, at the ticket gate of an airport, or even at a quarry!

In a contextual inquiry session, instead of giving users tasks (as in a usability test), we simply watch what users do in their everyday jobs. Doing so reveals more about how employees actually work (outside the artificial setting of a usability test). We were also able to observe more atypical aspects of use, for example, the experience of content editors using a content management system (CMS) to update content on the intranet.

To ensure contextual inquiry sessions were useful, employees were told to save work that involved using the intranet for the time they would spend being observed by a researcher. The sessions began with a short, semi-structured interview, followed by a period of uninterrupted observation. Follow-up questions were asked of participants after the observation period ended. Sessions lasted 90–120 minutes. We observed users interacting with other people, their computer, and the intranet. Watching users do their routine work gave us valuable insights into how well the intranet facilitated users' productivity, motivation, and information finding, as well as their everyday work.

EXPERT REVIEWS

Based on watching hundreds of people use intranets over the years, combined with design and research experience and knowledge of design principles, researchers were able to make judgments about which designs might cause issues or help users as they reviewed the intranets on site. While watching actual users is far more important and telling, experts can provide insights about a design's potential effectiveness. Some of these thoughts are expressed in our reports.

PARTICIPANTS

The intranet teams at each organization recruited employees for the usability tests and contextual inquiry sessions. We provided guidance for the recruitment, including stressing the need to recruit a representative sample (such as a mix of genders, ages, tenures, and roles).

All research participants knew their company had an intranet, and many of them said they used it every day or at least every week. Although one might assume daily users would be expert users, we found this was not the case. Our participants typically worked with only a small subset of features, such as looking up a phone number or reading company news.

RECRUITING ORGANIZATIONS TO PARTICIPATE

To recruit for this study, we posted a call for participation on our website, on social media, and in our weekly email newsletter, asking organizations to allow us into their offices and give us access to both the intranet and its users. In return, the organizations received a usability study and an evaluation of their intranet's usability, plus they were promised a copy of these final NN/g research reports.

We selected a varied sample of intranets (custom-built versus commercial-off-the-shelf, tech stack, use of social features, etc.) and a varied set of organizations (industry type, size, country) to ensure our findings could be applied to many situations and intranet types.

Each intranet we studied had its own goals, lifespan, history, content, number of pages, and user types to support. They all had interesting qualities, whether it was a particular implementation approach or a design or organizational challenge. Our overarching goal was to study a widely diverse group of organizations and intranets. Our more specific research goals for this study differed somewhat from those of most design and development teams.

RESEARCH GOALS

In carrying out our research, we had several research goals:

- **Observe how users use the intranet and digital workplace tools**. This insight informed our guidelines and recommendations.
- **Learn which design elements make intranets and digital workplace tools easy or difficult to use and why.** We used this information to describe real user scenarios and write the guidelines found in this report about intranet design and the various tools, applications, and separate websites that make up the digital workplace.
- **Observe how teams and individuals manage intranet content.** This information informed recommendations for how to organize and audit intranet content.
- **Collect metrics about basic intranet tasks.** We collected these numbers to get a benchmark of intranet usability today. We also wanted designers to be able to reproduce the study at their own organizations and compare results from their intranets to the ones in our study.

Some organizations house critical workplace functions **on the intranet**, while others **link to separate websites and applications**. The intranet, in concert with these external systems and tools, make up what we call the **digital workplace**. Simply put, it's all the online systems a person uses to do their job, communicate with coworkers, and manage their well-being as an employee. Throughout this report, We'll refer to the intranet and various digital workplace tools (separate websites and applications).

Digital Workplace

Definitions, Principles, and Methods

All the online systems a person uses to do their job, communicate with coworkers, and manage their well-being as an employee.

Intranet Guidelines Report Series

NIELSEN NORMAN GROUP'S INTRANET REPORT SERIES

This is one of the report volumes generated from the findings gleaned from our intranet research studies. Based on these findings, we derived guidelines about many topics, each of which merited its own report.

The entire **Intranet Usability Guidelines** series is available for purchase and download from our website.

Volume 1: Intranet Content Strategy, Presentation, and Governance

Volume 2: Intranet Information Architecture, Navigation, and Menus

Volume 3: Intranet Search for Content, People, and Tools

Volume 4: Intranet Branding, Visual, and Interaction Design

The report series contains guidelines for good intranet design, along with descriptions and examples from the companies that formally participated in our studies. We also drew our recommendations from the intranet knowledge gained through our client work and from running our Intranet Design Annual.

We hope that by studying the examples and guidelines in this report series, other designers will learn more about how to design usable intranets.

About the Organizations in the Study

As the table below shows, we studied the usability of intranets at 57 different organizations from a wide variety of industries.

NAME	INDUSTRY	LOCATION
ABB	Power & automation technology	Zurich (Switzerland)
Allen & Gerritsen	Strategic marketing	Watertown, MA (US)
Amazon.com	Online retailer	Seattle, WA (US)
American Airlines	Airline	Fort Worth, TX (US)
Antigenics Corp.	Pharmaceutical	Lexington, MA (US)
Atrium Health	Healthcare group	Charlotte, NC (US)
Avery Dennison	Manufacturing	Headquarters in Pasadena, CA (US); study conducted in Brea, CA (US)
Bayer CropScience	Crop protection	Research Triangle Park, NC (US)
British Red Cross	Nonprofit/humanitarian aid	London (UK)
Burns & McDonnell	Engineering	Kansas City, MO (US)
Bracknell Forest Council	Local government	London (UK)
Cathay Pacific	Airline	Lantau, Hong Kong (China)
Chick-fil-A	Restaurant chain	Atlanta, GA (US)
CIT Group, Inc.	Financial services	Livingston, NJ (US)
City of Calgary	Local government	Calgary (Canada)
Consumers' Association	Nonprofit/publication	London (UK)
Co-operators	Insurance	Guelph (Canada)
Currie & Brown	Construction risk management	London (UK)
Dell	Technology	Round Rock, TX (US)
DIRTT	Design-build construction	Calgary (Canada)
Dispatch Printing Company	Four media outlets (network, cable, and two radio stations)	Columbus, OH (US)
Dubai Chamber of Commerce & Industry	Government	Dubai (UAE)
Easter Seals, Inc.	Nonprofit/health and human services	Chicago, IL (US)
Elsevier	Science, technical, and health publishing	Amsterdam (The Netherlands) and Philadelphia, PA (US)

Embry-Riddle Aeronautical University	Higher education	Daytona Beach, FL (US)
Eyeo GmbH	Software	Cologne (Germany)
First Solar	Energy	Perrysburg, OH (US)
Fortum	Energy	Espoo (Finland)
General Services Administration	Government agency	Washington D.C. (US)
HealthGrades	Technology/healthcare	Denver, CO (US)
Houses of Parliament	Government	London (UK)
Kaplan	Education and test preparation	New York, NY (US)
KeyBank	Bank	Cleveland, OH (US)
Kulicke & Soffa	Semiconductor	Willow Grove, PA (US)
Lower Colorado River Authority (LCRA)	Energy, water, parks, and community service	Austin, TX (US)
Luck Companies	Mining and stone retailing	Richmond, VA (US)
Mayo Clinic	Healthcare	Rochester, MN (US)
Millennium Pharmaceuticals	Biochem R&D	Cambridge, MA (US)
Nestlé Group	Food	Vevey (Switzerland)
New York Life Insurance	Life insurance	New York, NY (US)
Northern Alberta Institute of Technology	Technical school	Edmonton (Canada)
Microwave Data Systems (MDS)	Wireless networking	Rochester, NY (US)
NetApp	Computer storage	Sunnyvale, CA (US)
Rabobank International	Finance & banking	Utrecht (The Netherlands)
Royal National Lifeboat Institution	Charity	Poole (UK)
Salesforce.com	Customer relationship management	San Francisco, CA (US)
Scottish Government	Government agency	Edenborough (Scotland)
San Juan Unified School District	Public school district	Sacramento, CA (US)
Sharp HealthCare	Healthcare	San Diego, CA (US)
Shell UK (IT Intranet)	Energy, petrochemical oil	Study done in London (UK); but IT head office is in Houston, TX (US)
Sprint	Telecommunications	Overland Park, KS (US)
State of California Employment Development Department (EDD)	State government agency	Sacramento, CA (US)
Towers Perrin	Global professional services	Philadelphia, PA (US)

U-Haul International, Inc.	Moving, transportation, manufacturing, and retail	Phoenix, AZ (US)
University Health Network (UHN)	Healthcare	Toronto, Ontario (Canada)
Vytra Health Plans	Managed healthcare	Melville, NY (US)
Wildcard Systems, Inc.	Financial services	Maitland, FL (US)

Authors & Acknowledgements

Author Biographies

Anna Kaley is a Senior UX Specialist with Nielsen Norman Group. Before joining NN/g, Anna worked for more than 10 years in UX architecture and digital strategy. She has conducted complex user research and experience design for healthcare, agriculture, finance, tourism, retail, and engineering clients. Most recently, she worked at a large retailer where she was responsible for ecommerce UX in both B2C (business-to-consumer) and B2B (business-to-business) channels. Anna is skilled at using qualitative and quantitative research methodologies throughout the design process to drive conversion, increase revenue, and improve satisfaction. She also has expertise in digital media planning, search marketing, and graphic design.

Anna has held UX roles on internal product teams and in digital agencies of various sizes and understands the challenges that UX professionals face in both contexts. This familiarity helps her bring a well-rounded approach to her projects and instruction. Anna has a Bachelor of Journalism degree with an emphasis in strategic communication. She attended the University of Missouri, Columbia.

Maria Rosala is a Senior UX Specialist with Nielsen Norman Group. Maria has a decade of experience conducting UX research. At Nielsen Norman Group she provides research services and advice to clients across numerous industries including construction, fast-moving consumer goods, pharma, and education. Prior to joining NN/g, Maria worked as a UX researcher in the UK government, where she carried out research in the UK and internationally to improve numerous digital products and services, including internal casework systems, online visa applications, and public-facing websites.

Maria has conducted usability evaluations on a variety of intranets at public and private organizations in North America and Europe for the 4th edition of the *Intranet Guidelines Report*.

Maria has a BSc in Philosophy from the London School of Economics and Political Science and an MSc in Human-Computer Interaction and Ergonomics from University College London.

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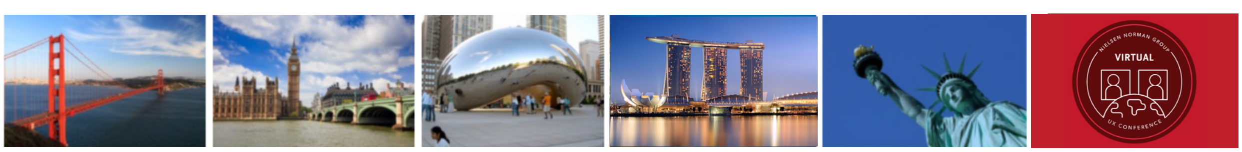

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