

**IMPROVING CIVIC ENGAGEMENT THROUGH A SOFTWARE-ASSISTED
COMMUNITY NEWS HARVEST**

A CREATIVE PROJECT

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BY

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Abstract

The availability of comprehensive, representative sources of local news remains core to a community's level of civic engagement, whether in local politics and elections, community improvement efforts, or general public life. While many business models for gathering, producing and publishing local news are evolving, and some succeeding, they still often have significant gaps, whether in efficient use of already available community information, inclusiveness of diverse voices and perspectives, or financial sustainability and the model's repeatability or scalability.

In this creative project I explore one of these new models and the intersections of local journalism, software publishing tools, civic engagement and improving diversity and inclusion by combining my studies in the Ball State Journalism program with my skills and experience in web software application development to research and contribute improvements to an existing community news service. In doing this I have contributed to not only helping that news service to thrive, but also to establishing a template and methodology that could be repeated in other communities where a sustainable local news production model is still missing.

Background and Literature Review

Despite ongoing challenges to the stability and sustainability of journalism, we live in something of a golden era for the reinvention of news business models. Rarely a week goes by that we don't hear about the way a given publication, news source or journalist is evolving, changing ownership, changing business models, opening or closing offices, joining forces with another entity or otherwise rethinking its approach to revenue generation and subscriber retention. Experimentation abounds with not-for-profit legal structures, paywall expansion and freemium models, changes in formats, reshuffling staffing and reporting structures, transitioning print subscribers to digital delivery, email newsletters, alternative channels like podcasts and events, micropayments, aggregators and more.

Beyond the tinkering happening within individual publications, the foundations of journalistic purpose are examined and upended weekly as myriad technologists, technology platforms, universities, industry associations, funders and individual scholars and critics share their assessments of what new thinking, strategies and tactics might just save local journalism.

We can see the fruits of all of this creativity and reflection in the successes and failures being tracked by organizations like The Nieman Lab, which maintains an archive of "Business Model" stories with headlines like "These competitors joined forces to allow readers to use a single login across their news sites," "How news publishers are turning casual, infrequent readers into paying subscribers, " and "The puzzle turned out to be more complicated than we thought" ("Business Models » Hubs » Nieman Journalism Lab » Pushing to the Future of Journalism," n.d.).

And yet even with all of these efforts, most local news organizations continue to shed subscribers, journalists or close altogether (Abernathy, 2020). The ones that remain struggle with

cost-cutting, layoffs, subscriber retention issues or other changes that leave the communities they serve wanting. More importantly, ongoing and fundamental challenges including reader trust, polarization (Jurkowitz et al., 2020) and having diverse representation (Bramlett-Solomon & Carstarphen, 2017) mean that the industry overall remains in a precarious position as a vehicle for sustaining a well-informed and engaged citizenry, and yet the outsized role of newspapers and news reporting in the health of a community's civic engagement remains (Shaker, 2014). No one-size-fits-all model has emerged to address this crisis.

Indeed when it comes to long-term solutions, we are in early days and the journalism community seems to be figuring it out “one community at a time” (“The Local News Crisis Will Be Solved One Community at a Time,” 2021). Failing to completely comprehend all of the factors that led to the current situation or a clear path to a universally sustainable future for news reporting, we have perhaps accepted that experimentation and exploring the unknown are our best bet for saving journalism. Clay Shirky anticipated this in 2008:

“For the next few decades, journalism will be made up of overlapping special cases. Many of these models will rely on amateurs as researchers and writers. Many of these models will rely on sponsorship or grants or endowments instead of revenues. Many of these models will rely on excitable 14 year olds distributing the results. Many of these models will fail. No one experiment is going to replace what we are now losing with the demise of news on paper, but over time, the collection of new experiments that do work might give us the journalism we need.” (Shirky, 2008)

At the core of this experimentation (and to this project) is the question, what gratifications and affordances in the reporting and distribution of local news and information lead people in a given community to seek it out, trust it, and stay subscribed or otherwise engaged

with it? What makes someone feel like a local news source helps them, represents their interests, and is thus valuable to them? And how can what we learn about those questions in one city or region be replicated elsewhere while still accounting for factors unique to any given place?

The temptation over the last 15 years has been to answer these questions with algorithms and automation. Social media platforms first positioned themselves as the arbiters of what news was important for people to see based on their profiles (Cetina Presuel & Martínez Sierra, 2019), and in the process decimated the control publishers had to shape the news narrative of a community. When platforms like Facebook tried to reduce the power they held over news distribution, that power didn't return to publishers, but instead shifted to the software algorithms that rewarded a user sharing salacious, sensational or outright incorrect information over almost everything else. The result is a population of news consumers who are distrustful of news itself, in addition to the platforms and publishers who gather and distribute it (Park et al., 2020), and who are unequipped to determine when the news they do consume underrepresents views and voices not like their own. And thus an outsized focus on software, automation and scale within the news media and technology platforms has contributed to a general unwillingness to pay for news reporting. The exception to this, as explored by Goyanes and others, is in a willingness to pay for or otherwise support local news outlets where one lives (Goyanes, 2015). It seems clear that algorithms that don't consider the interests and history of a local community or region will be insufficient at best, and likely harmful.

If population age, education levels, political trends, racial and cultural diversity, economic stability, historical news coverage and many other characteristics of a community might critically affect what a thriving local news ecosystem looks like there (Wadbring & Bergström, 2017), then much more local-level experimentation is needed to understand the

interrelationship between these variables. And though corporate news media and longtime family-owned newspapers alike may struggle to take risks and move quickly to test new ideas in specific local markets (Powers et al., 2014), entrepreneurs and non-traditional community journalists are taking up the charge. “If you’ve been thinking about launching a local news site, there’s never been a better time. Tools, resources and business opportunities for ground-up ventures are proliferating, even as need for community news and information becomes more acute” writes Andrew Sherry for the Knight Foundation (Sherry, 2021).

This creative project aims to contribute to one such opportunity. The Bloomfield Information Project was created in March 2020 by Simon Galperin as a community news service focused on providing the residents of Bloomfield and Essex County, New Jersey better access to “information, context, and connection” (*About*, n.d.) as a part of making the community “more informed, engaged, and resilient” (*About*, n.d.). The project is thriving in its own right and is also a pilot program of the Community Info Coop, a nonprofit which “uses journalism, media, and technology to strengthen democracy” (*Community Info Coop*, n.d.).

The Bloomfield Information Project is a perfect vehicle for experimentation and iteration, as there is no foundational commitment to a particular news gathering, production or distribution model; it changes all the time. The Project has historically used a mix of tools and technologies to review, curate and produce its news product, including email, RSS feed readers, Facebook and other social media platforms, public data sets, press releases, Google Docs and Spreadsheets, Zapier, WordPress, MailChimp, video transcription tools and various other tools and services. Their workflow has been described in articles such as “How automation helped this journalist quench a 'news desert'” (Martinez, 2021): “With automation, Simon can focus on program

development, community engagement, and other big picture projects for the Community Info Coop, his grander vision for news as a public utility.”

The Project is already practicing the human-centered design that Norman discusses: “an approach that puts human needs, capabilities, and behavior first, then designs to accommodate those needs, capabilities, and ways of behaving” (Norman, 2013). With their growing number of channels for reader-provided news tips and responses, it also makes inroads in formalizing the role of sharing and collaborative consumption as a key engagement factor and as a challenge to traditional journalism’s gatekeeping role, as explored by Belk (Belk, 2014). And so with a small team, a concern for increasing diversity and representation in local news, and a willingness to listen to and quickly act on feedback from their readers, they are well positioned to turn their particular “special case” into a framework and structure that could be replicated elsewhere.

In 2021 I made contact with Galperin and his team to learn more about their efforts, and in January of 2022 we agreed that my involvement through this capstone project could be beneficial to the Project and to making advances in this problem space more broadly. We saw a few key opportunities for collaboration: (1) improving foundational tools and processes that make the existing Bloomfield community news “harvest” more sustainable and scalable, (2) developing new software functionality that could allow other communities to repeat and apply Bloomfield’s methods and philosophy to their own local journalism efforts. The creative project set out to explore these key questions: (A) What does it look like to build inclusiveness and accessibility into a news gathering, production and distribution process and toolset? (B) What is an appropriate balance of automation and algorithm against human curation, to ensure comprehensiveness, utility and representation?

Methods

The project consisted of a variety of efforts including interviews with stakeholders, design thinking sessions, creation of web interface mockups, development of software tools and functionality, usability and experience testing with users, and publication of software for use by others.

Stakeholder Interviews: I conducted interviews and conversations with key stakeholders, including project founder Simon Galperin and other project staff.

Design Thinking Sessions: I worked with stakeholders to conduct several design thinking sessions where we discussed key challenges and problems, gathered insights and ideas about needs and possible solutions, displayed and reacted to mockups and prototypes, and made plans for next steps of prototyping and iteration.

Mockup Creation: Based on feedback gathered in interviews and design thinking sessions, I created mockups and wireframes of possible web interfaces and tools that could help address some of the technical and user-facing needs of the project. I gathered feedback on these and iterated on them as needed.

Development of Software Tools and Functionality: Using the PHP software programming language, the Laravel software application development framework and related software development tools, I designed, created, tested and launched software tools and functionality that solves some of the technical and user-facing needs of the project.

Usability and Experiencing Testing: through a combination of live demonstrations, recorded user sessions and feedback surveys, I've gathered information about the usability and user experience for the various software tools and user interfaces I've created.

Publication: for software applications and other tools created for the project that may be of use to other communities, I used an open source software license to publish those on the website GitHub so that the software may be downloaded, re-used and improved upon by others. I have documented my work and methods through a combination of notes, blog posts, image files, video recordings, software code and other related documentation.

Stakeholder Interviews

Throughout the capstone project I conducted interviews and conversations with key stakeholders, project founder Simon Galperin and two members of the project's staff. I used these questions as a framework for those interviews:

- 1) Tell me about your background, how you got involved with the Bloomfield Information Project and/or the Community Info Coop, and how you work with / experience it today?
- 2) What's something that most excites or inspires you about the project?
- 3) How would you describe the audience for the BIP/CIC? What do you think the BIP/CIC audience cares most about?
- 4) In your mind, what does success look like for the BIP/CIC in the year ahead?
- 5) What do you think are some of the biggest challenges or problems facing the project right now?
- 6) What are some of the ways you've seen other news/community information organizations not be fully representative of the people they serve, and what opportunities do you see with BIP to improve upon that to be more representative and inclusive?
- 7) If you had complete control over how the project works, what would you change or do differently?
- 8) What's something that has surprised you about the way the BIP/CIC project works?
- 9) Is there anything else you'd like to share about your hopes for this project?

I added these questions for the internal BIP team member conversations:

- 10) When you were first on-boarded to the project, what was the most confusing or mysterious part of how it worked?
- 11) What part of the news harvest and production workflow feels most ripe for being improved or optimized?
- 12) What's happening today that most helps or inhibits you in doing your work?

The resulting conversations were instrumental in helping me understand the goals and priorities for the Bloomfield project and team as a whole, and shaped the resulting work on my capstone creative project. Several key themes emerged:

Focus on community need, reader engagement

The project prides itself on moving beyond traditional news reporting practices to have developed a methodology focused on helping a diverse community be more aware of and engaged with happenings and updates that are relevant to them. As one staff member put it, they convey “everyday implications [of the news] for everyday people” (*Confidential Interview*, personal communication, February 25, 2022). The project treats access to news, and the ability to understand and apply it, as a critical resource in itself, and so every step of their production process is tuned to extract what’s behind the headlines into helpful, useful information.

The organization is also launching additional programs and resources to ensure that its publications are driven and informed by the interests of community members, and in the case of their recently launched “Ambassador Program,” directly equipping residents to contribute to coverage (*Bloomfield Info Project Creates ‘Ambassador’ Program, Seeks Input*, 2022). This ongoing sense of connection and community engagement in turn inspires the team: “I’m very excited to be a part of the project...doing journalism in this very different way,” said one team member. “The engagement is very important; part of the reason I wanted to go into journalism is to help people stay informed...I want to help people know what’s going on, and they don’t have the time to do it themselves” (*Confidential Interview*, personal communication, February 25, 2022). Another team member noted that, “the type of people paying attention right now are the people you would expect, already civically minded. That’s a great start, but we’re trying to figure out how to capture people who don’t have access to digital platforms, or limited use of

technology...Being able to effect any kind of change this way is great” (*Confidential Interview*, personal communication, February 24, 2022).

Source scanning, editorial decisions are time intensive

Everyone interviewed for my project noted that the daily process of scanning sources to understand what might go in the Daily Bulletin and in what form is a very time intensive process, but an important one given the organization’s mission. “Deciding what is the most important thing is a challenge...at what point do you put it in the newsletter when we keep it to 15 headlines?” (*Confidential Interview*, personal communication, February 24, 2022). Because they actively resist defaulting to conventional narratives about what is “top news” and instead “look outside the normal scope [of headlines] that don’t always give people what they need,” (*Confidential Interview*, personal communication, February 24, 2022) each step of the production workflow involves constantly re-assessing and re-balancing what will best serve readers.

Even just the mechanics of the process, from copying and pasting links to moving things around inside a large spreadsheet to loading the tools and websites they employ for the news reading they do, were held up as some of the many steps they follow every day, where slight improvements or small efficiencies could make a big difference in the time involved. “To go through everything and put it together is a very significant chunk of time every day. It’s that battle between wanting to include the most useful information and not wanting to miss anything...we all wish we could streamline it a bit” (*Confidential Interview*, personal communication, February 25, 2022).

Balancing efficiency with flexibility to build for the future

There's a shared vision for this project and its tooling to expand significantly in the future. Not only is the hope to make the toolset and process available to other news organizations and communities, but to add significant new tools and features that further empower readers and community members. Those include direct user content submissions, a Documenters-like citizen reporting program, public databases of resources and services, text/SMS-based communications for those without regular Internet access, the use of machine learning to automate some kinds of information summarizing, Spanish language publications, community events and partnerships, additional bulletin newsletters in additional areas, and more.

There was recognition among interview participants that the organic stringing together of disparate information gathering and publishing tools and services so far has facilitated a degree of flexibility and innovation that wouldn't have been possible with a singular, purpose-built tool created early on. At the same time, there was also recognition of an opportunity to streamline the toolset and still leave room for future building and expansion, and that doing so might allow the organization to move faster. Indeed, there's excitement about getting to that point: "I wish we were at the point where we were producing more news products" (*Confidential Interview*, personal communication, February 25, 2022).

Challenges and Opportunities

There were a variety of other challenges that participants identified for the organization and its publishing, including:

- Getting more direct feedback from readers on individual publications
- Reaching community members who don't have consistent email or Internet access
- Having more people sign up for the Daily Bulletin newsletter

- Financial support and budget sustainability
- Other media organizations and power structures feeling threatened by the Bloomfield project's approach
- Finding and retaining staff committed to the project's work, scaling up in general

Opportunities identified included:

- Continuing to “go out of our way to share information about and for underrepresented groups” (*Confidential Interview*, personal communication, February 24, 2022)
- Building additional trust and credibility
- Documenting more of their processes and tools to share with other organizations
- More/different project management tools for internal efficiency
- Connecting people more directly with existing resources that they need

Design Thinking Sessions

Throughout the project I conducted several different “design thinking sessions,” primarily with Simon Galperin. These were conversations where we explored specific technical and design-related details about current or in-progress workflows and tools. Because of the small number of people involved and the presence of user experience goals and functionality needs already largely established by the time of conducting these sessions, they did not include some of the traditional design thinking components such as creating user personae or user stories. Instead we would take the various pieces of our planning conversations to that point and spend time translating them into additional functionality goals and understanding what a minimum viable product might look like.

Data Model Review

The first such session was with Galperin on January 11th, 2022 where we took a database data model document that I had delivered on January 7th, 2022 and talked through it together, discussing and reacting to each concept represented. A data model is a way of showing how all of the different data elements in the system will be organized, and how they will relate to each other. As I wrote in my February 17th, 2022 capstone blog post about it, “it’s a fun document to work on because you can focus on (and completely rearrange/rework) the core information that the system will manage without yet worrying about things like user interface, performance, features or other implementation details. Getting the data model ‘right’ helps ensure that as the software is built, we’re clear on the core concepts of what goes where” (*Data Model – Chris Hardie’s BSU Capstone Project*, 2022).

SOURCES				These are the top level entities in the community that news/info might come from, and also serve as directory nodes.					
Field	Type	Required	Description						
Name	String	Y	The name of the source, will be displayed publicly						
URL	String	Y	The top-level website used by the source, linked publicly						
Type	String		The kind of source (Schools, Government, Business, News)						
Active	Boolean		Whether or not the source should be actively included in workflows, reports, etc						
Public Address	Text		The thing's postal address						
Lat/Long Coordinates	String		Latitude / Longitude for the thing, for use on a map						
Public Phone	String		The thing's phone number						
Public Email	String		The thing's public email address						
Internal Phone	String		Internal use only phone number						
Internal Email	String		Internal use only email address						
Internal Contact Name	String		Internal use only contact person name						
Hours	Text		Hours						
Description	Text		Public facing description of the thing						
Facebook URL	String								
Twitter URL	String								
Instagram URL	String								
Exclude from Directory	Boolean		Indicate whether to exclude this source from the directory. Default to false.						
Internal Notes	Text		Internal notes for tracking interactions/context about the source						
FEEDS				These are RSS feeds, APIs or other programmatic sources of info that can be scanned for news.					
Field	Type	Required	Description						
Source	ID	Y	The source that this feed is a part of. A source can have multiple feeds. A feed can have one source.						
Name	String	Y	The name of the feed. Probably for internal use only.						
Type	String	Y	The type of feed, to determine how it is processed. e.g. RSS, Facebook Page, Facebook Group, Instagram						
Location/URL	String	Y	The main address/location/URL of the feed. Often links but could be Facebook page/group ID, Twitter Username, etc.						
Notes	Text		Anything special about this feed that producers or even users should know						
Section	String		Which section news items from this feed will be placed in to by default: Top News, Local News, Other News						
Check Frequency	Number	Y	How often to check this feed in minutes or hours (e.g. every hour, every 24 hours)						
Active	Boolean		Whether or not the feed should be actively checked						
Default Format	String		Whether items in this feed are expected to be images, videos, etc.						
NEWS ITEMS				These are the actual news items/headlines!					
Field	Type	Required	Description						
Feed	ID		If the news item came from a Feed, which Source						
Source	ID		If the news item came from a Source but not through a feed, which Source						
User	ID		If the news item came directly from a user, which User						
Unique External ID	String	Y	Some kind of unique identifier for the news item, probably derived from the feed or source it came from						
Found Time	Timestamp	Y	The date/time the news item was added to the system						
Status	String	Y	The status of the news item within the system, e.g. Unreviewed, Hold for Later, Staging/Pending Publication, Published, Archived/Ignored						
Original Title	String	Y	The title as it came from the original source/feed						
Machine Title	String		A title suggested by AI based on its reading of the article						
Title	String		Based on original and machine title, the rewritten title/headline to use in publishing						
URL	String	Y	The link to the thing						
Content	Text		Description of the thing, or maybe partial or full content						
Section	String	Y	Which section this news item belongs in: Top News, Local News, Other News						
Categories	List	Y	e.g. Schools, Video, Public Meetings, Business, Jobs, Local News, Public Notices. Must have at least 2.						
Tags	List		Tags that this news item can be associated with						

A screenshot of the Data Model spreadsheet

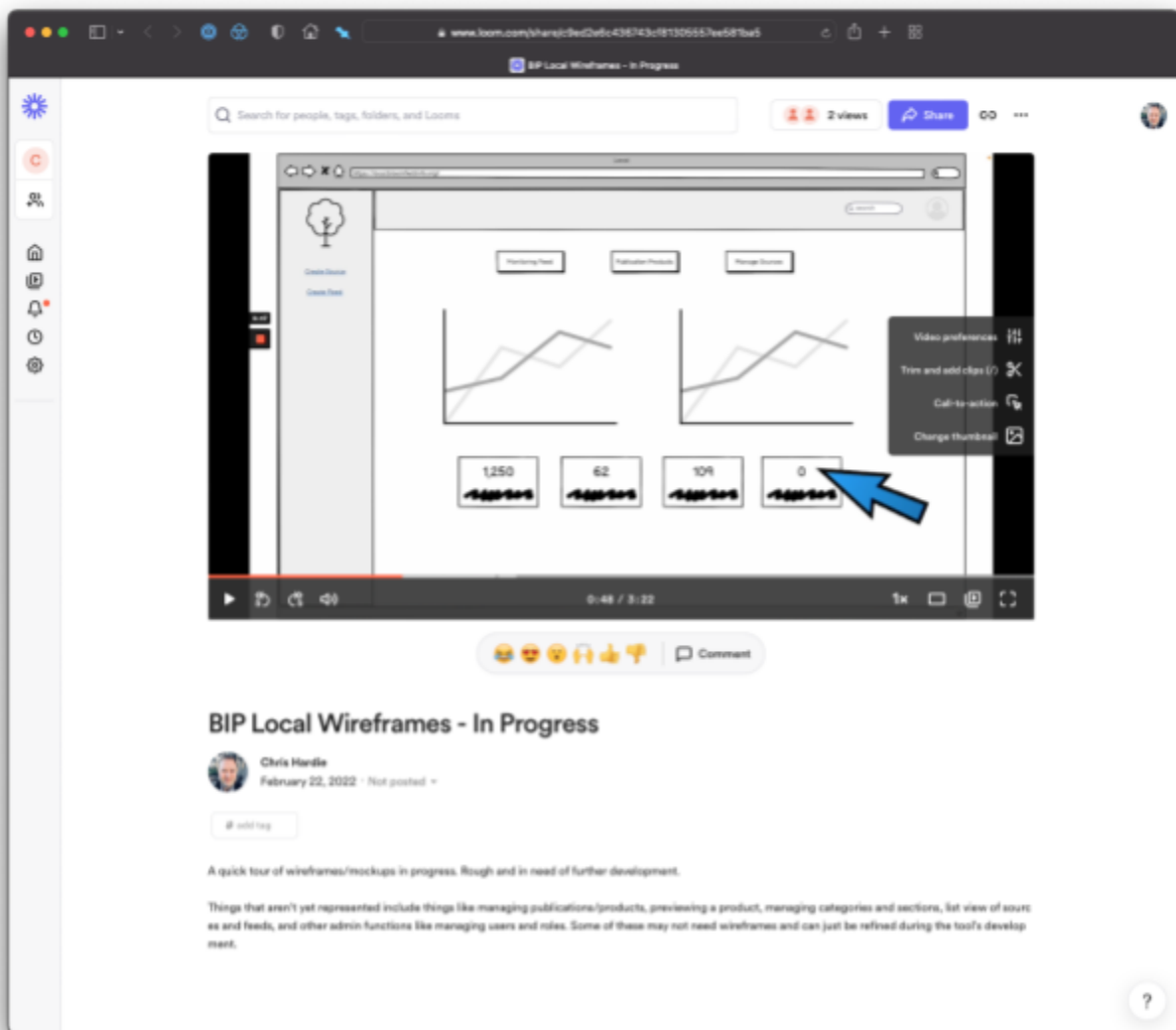
We made a variety of updates to the data model based on Galperin's reactions and feedback, including further clarifying the distinction between "Source" and "Feed" concepts, revising how the model would handle multiple news products and publications, simplifying user

data entry by setting better default values for some of the fields, and thinking about how the model would support future user-submitted content and news tips.

While I think this process was helpful and important, I could tell that it was also a challenging one for Galperin to participate in because of the constraints of thinking and reading about a data model on the page versus seeing it in action in a working tool.

Wireframe / Mockup Feedback

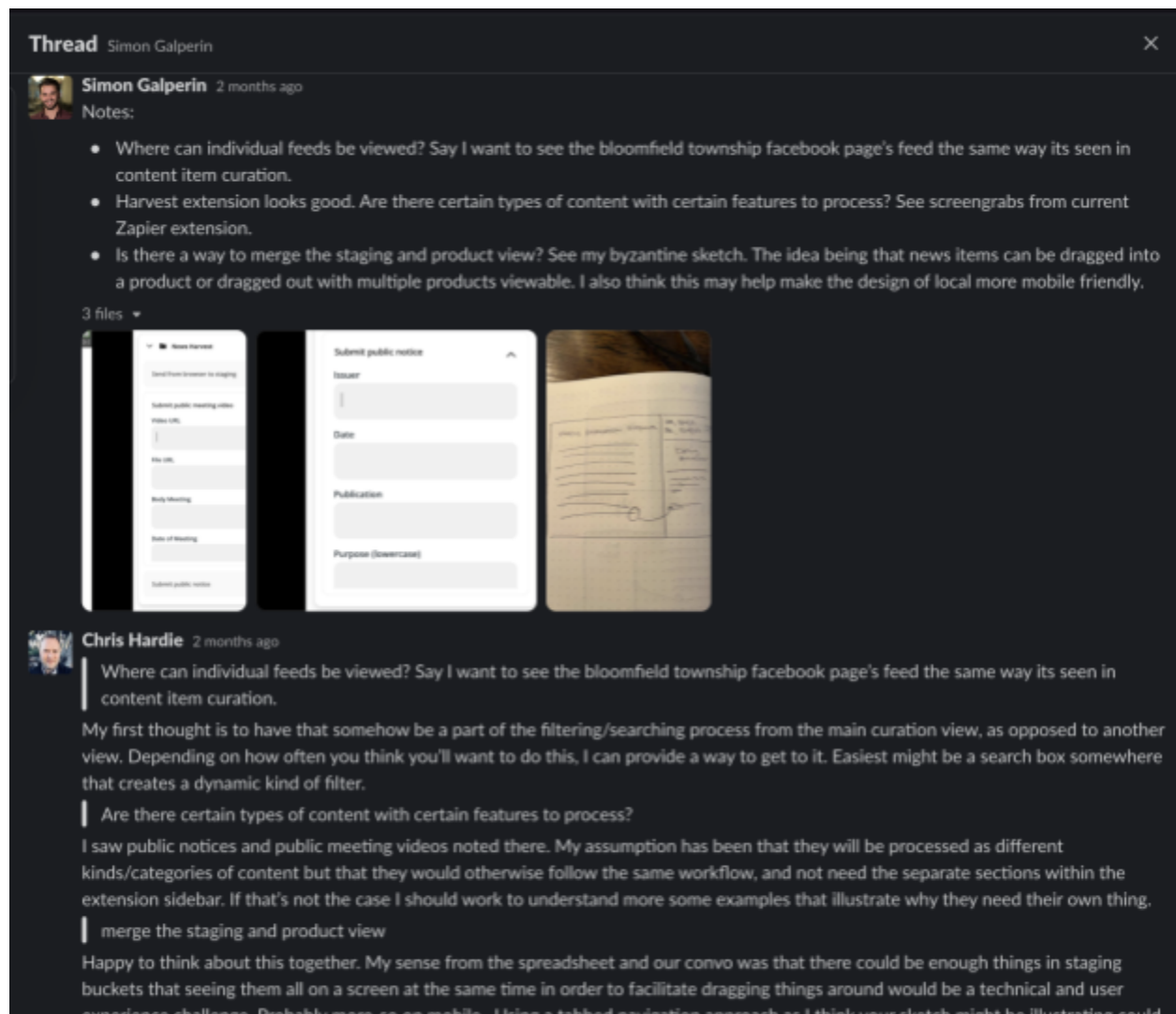
Once the data model was finalized, I began working on bringing the planned tool to life even more by creating a series of wireframes to illustrate how the interface would work. The design thinking and feedback conversations on these tended to happen asynchronously, which was helpful for keeping up momentum but also challenging for reaching full clarity. To help ensure success, we worked on over-communication. So although they were not yet complete, on February 22nd, 2022 I delivered a short video walkthrough of those images in progress to Galperin, to allow for soliciting feedback as early as possible in the process.



Screenshot of a Loom video walkthrough

Via Slack, Galperin provided a variety of feedback and questions that helped inform further work, and as is typical with the mockup process, it included removing some things, adding some things, and clarifying some things. I was able to incorporate that information into the wireframes before delivering them for more in-depth reviews. On March 1st and then again on March 8th, I delivered the updated mockups as a PDF and also included a video-based

walk-through of the changes since we discussed the previous versions, and the feedback and conversation continued from there.



Screenshot of a Slack thread about the March 8th delivery

On March 17th, 2022 we scheduled a phone call to go through the mockups together one more time and make any final adjustments before using them to begin building the actual software application. Galperin's feedback on the refined wireframes themselves was minimal, but we did take the opportunity to revisit the overall scope of work and timeline for the remainder of my capstone, and made some adjustments to what we would consider to be a useful

first minimum viable product. On March 18th, 2022 I was able to deliver a final set of wireframes to work from (see below).

Other Design Conversations

Throughout the project I collaborated with Galperin and his team on a variety of other smaller projects that involved understanding a problem space, thinking through its users' needs, discussing possible solutions, and creating a plan to move forward. These included creating custom RSS feeds that the team could use in their news harvest (*Side Projects so Far – Chris Hardie's BSU Capstone Project*, 2022), whether to structure the new tool as an internal one for their team or as both internal and user-facing for the public (*Consolidated or Distributed Site Structure?*, 2022) and evaluating what role a custom browser plugin might play in optimizing the content curation workflow (*Hard Parts of Thinking through the Content Curation Workflow – Chris Hardie's BSU Capstone Project*, 2022).

Wireframes and Mockups

The full set of wireframes and mockups finalized on March 18, 2022 are included below as Appendix A. See above for notes about how these were presented and received.

Software Packages and Libraries

As discussed, there were several software packages and libraries created throughout the course of this creative project, with over 3,500 lines of PHP, HTML, CSS and Javascript code. With each, the intent has been to create a foundation that both the Bloomfield organization and other communities can build on, through the ability to install and run these tools for themselves, and through being able to contribute changes and improvements to the source code.

Here is the software that's been developed and published:

Laravel News Harvester library

<https://github.com/CommunityInfoCoop/laravel-news-harvester>

This is the core software package that facilitates the key functionality of the news harvest tool. It can be included in a Laravel-based web application and once installed, facilitates creating and managing sources and feeds, importing and exporting sources and feeds, checking those feeds for news items, displaying the collected news items in a centralized content curation view that can be sorted and filtered, and various other related functionality. The package also includes automated tests that developers can use to make sure future changes do not affect existing functionality.

The software repository hosted at GitHub includes installation and usage instructions, as well as detailed documentation inline in the code itself. The software is free and open source under the MIT License.

CrowdTangle PHP API Library

<https://github.com/ChrisHardie/crowdtangle-api>

This software library allows software applications written in PHP to access the CrowdTangle API in a simple and clear way based on CrowdTangle's own official API methods and documentation. It's a necessary component of the News Harvester functionality, but has been separated out so others can use it in other projects.

The software repository hosted at GitHub includes installation and usage instructions, as well as detailed documentation inline in the code itself. The software is free and open source under the MIT License.

Laravel content scraper and RSS feed generator application

<https://github.com/CommunityInfoCoop/bloomfieldinfo-feeds>

This software application powers the "feeds.bloomfieldinfo.org" website and tooling, where several news sources that do not offer existing RSS feeds are periodically scraped and any updates are made available in a custom RSS feed for use by the Bloomfield project or others.

The software repository hosted at GitHub includes everything needed to install the application in a hosting environment and start using it. Because it is currently customized specifically for use by the Bloomfield organization, it does not contain generic instructions for installation or re-use, but could if needed. The software is free and open source, though no license has been selected yet.

Future Plans and Final Tool Workflow

While the work conducted here represents a significant step forward for the Bloomfield project and organization, additional steps remain to realize their goals of streamlining and automating their process. These include:

- Bringing more of their publishing process into the new tool itself instead of relying on Google Sheets, Zapier and other third party tools.
- Creating a browser extension that will allow Bloomfield staff to write or update meta information about a news item while viewing the news item on the original source site.
- Rearranging and re-classifying news items in a kind of staging area, to prepare them for inclusion in the daily newsletter email.
- Creating and previewing publications within the tool instead of within Mailchimp.
- Editing the Daily Bulletin news item ordering and formatting.
- Publishing news items and Daily Bulletin summaries to social media accounts.

I'm hopeful that I will have an opportunity to continue collaborating on some of these future plans as time allows. The ideal final workflow once all of these functionality pieces and integrations are available would be:

1. A community publisher creates an account and sets up all of the news sources they want to scan, including RSS feeds, social media accounts and possible custom sources. They would also connect the tool to their various external accounts such as email delivery, website hosting and social media publishing.
2. Each day, a staff member reviews all of the news items collected by the news harvest tool, looking for items that might be appropriate to include in a daily newsletter.
3. They open the links in a new browser tab/window and use a dedicated browser extension

to write new titles and other metadata about the news item.

4. Once all sources are reviewed, the selected news items are organized, prioritized and sorted.
5. Once all news items are organized, a final draft of the daily newsletter is previewed and updated as needed.
6. With the click of a button, the newsletter is sent out by email, published on a website, and shared out to social media (either as a summary mentioning multiple news items, or as scheduled individual posts linking to each).

Project Review from Simon Galperin

In 2019, the Bloomfield Info Project, the Community Info Coop's public service journalism lab, held a listening session in Bloomfield, New Jersey, an area formally considered a news desert. The most significant challenges residents faced? Too much news and information to follow.

The term "news desert" has risen to prominence in recent years to describe regions where little to no local news is produced for the area's residents.

But as we found in Bloomfield, the term obscured the reality on the ground – that residents were in a news jungle, a tangle of information they couldn't make sense of in their day-to-day lives. Just because no one was producing 600-word news articles does not mean there is no local news and information being created.

In Bloomfield, that includes more than 200 information originators we observe every day – everything from individuals posting in social media groups to community leaders, businesses, and other organizations sharing content on their social media profiles, websites, newsletters, and press releases.

Through a process we call a "news harvest," the Bloomfield Info Project uses human curation and automation-supported publishing to organize our fractured news ecosystem and create a clearinghouse for local news and information that serves the public interest.

The news harvest allows us to produce a daily news product in an area traditionally considered a news desert, amplifying and strengthening existing assets to build a movement for local news in our community.

It's a vital part of our news ecosystem restoration strategy, allowing us to deliver a low-effort, high-impact product that builds trust and on-ramps to our other programs. It's also a regionally

scalable service if we were to transform our minimally viable process into a purpose-built platform.

So beginning in September 2021, we were honored to collaborate with Chris Hardie to begin building a platform to streamline and expand the service we provide.

Chris's experience in web development and designing civic information feeds has supercharged the evolution of the news harvest and placed us on a track to secure philanthropic support for further development and grow our service area.

Our early goals were to improve the Bloomfield Info Project's access to existing resources by building close to a dozen feeds connecting public notices, public access TV video, and other sources to the news harvest.

Designing these feeds underlined the need for a centralized platform. Between hosting, coding, collecting, reviewing, summarizing, arranging, moving through countless Zapier automations, drafting, reviewing, and publishing – we understood that there was too much complexity and deficiency in the existing workflow to continue prioritizing it over the development of a purpose-built platform.

With Chris's formal background, we were able to take the first steps we didn't know were there – including developing a data model and creating wireframes. And we identified and prioritized the stages of what we needed to build: centralize feed review and management, develop a new audience-facing web structure for regional growth, and replace third-party services like Zapier with our own automations and connections to the platforms and tools we need.

By focusing on this initial stage with Chris, we've made significant improvements to our organization's daily workflow. In fact, when Meta's Crowdtangle web interface was unavailable

for a day, our access to community social media content wasn't impeded because we now rely on the centralized feed review and management platform Chris built with a direct connection to the Crowdtangle API.

The momentum from Chris's work will undoubtedly bring us to the next stage in the platform's development by helping us secure philanthropic funding, with it already a feature of our fundraising conversations. In addition, this collaboration has pushed us to advance our thinking on how we organize and redistribute information in fractured news ecosystems.

The Bloomfield Info Project is setting a new standard for public service local news and information. And the platform we've begun building with Chris is allowing us to begin streamlining our process and aiming for an expansion that will bring more communities into the fold, making it easier for more people to get informed, engaged, and connected to the places they live.

Ethics, Diversity and Inclusion

While not directly incorporated into the software development aspects of this project, it's worth highlighting a few related considerations related to ethics, diversity and inclusion.

The Bloomfield Information Project recognizes the potential dangers and biases involved in journalists serving as gatekeepers for deciding what news is important and what sources are worth consideration, knowing this may perpetuate systems of racism, patriarchy and other forms of discrimination and oppression. They actively work to reduce those dangers in a few ways: (a) by seeking out community input and news tips through the use of community-owned and operated Facebook groups and pages; (b) through establishing trainings and programs for paying contributors similar to *City Bureau's* "Documenters" program, with an emphasis on encouraging

applicants from traditionally under-represented and underserved populations; (b) considering as many community news sources as they can find across all types of organizations, businesses, neighborhood groups and individuals, with no one person being in charge of controlling what sources are or aren't considered; (c) taking significant time to deconstruct and analyze the way news stories and other information are presented to filter out problematic premises and to seek out and emphasize the true relevant, actionable information for the diverse populations they serve.

It could be argued that the process of rewriting headlines and adjusting the framing of a given news item's introduction or excerpt is itself a form of injecting bias or agenda into the news. Unlike some news aggregation or re-packaging services, the Bloomfield Information Project makes a point of always including links directly back to the original source so that readers are able to revisit and reinterpret that information as they see fit. They've also developed, and continue to expand, internal guidelines and training documents to help standardize the approach and process for handling their rewrites, with an emphasis on high journalistic standards balanced with delivering practical, useful, accessible information.

While the news harvesting tool created in this project could, in theory, be used to perform news aggregation and analysis that increases bias and gatekeeping as much as the Bloomfield Information Project's use of it is aimed at decreasing the same, the risk/benefit ratio is likely similar to other kinds of aggregation and publishing platforms where there is always potential for misuse or abuse. I expect that with additional context-setting and orientation materials made available to organizations interested in using these tools, we can further mitigate that risk.

Project Summary and Discussion

In proposing and pursuing this project, I set out to explore the intersections of journalism, technology and civic engagement as manifested in a very specific location, community, workflow and journalistic need. I was initially unsure about the viability or utility of a software-focused creative capstone project, concerned that the discussion and management of technical details would overtake the examination of underlying journalistic principles and considerations. At the same time I was confident that understanding how simple but powerful process and tool improvements to a news production workflow might increase a news service's ability to serve its community would be a worthwhile and important study.

Over the course of the last six months, I have achieved the original goal of exploring the above-mentioned intersections while producing a series of tools and templates that will have a real and lasting impact on the Bloomfield Information Project's ability to meet its goals, and that will potentially help other communities as well. I have had the opportunity to dive deeply into the mechanics of producing a daily news bulletin that is relevant, helpful and most of all inclusive, representing diverse voices that have traditionally been under-represented in the news media. I've studied the ways in which existing innovations have created advantages for the Bloomfield team, and then contributed additional innovations that reduce complexity and streamline day to day news production tasks. I've had the opportunity to interview stakeholders and translate their observations and perspectives into a design, building, refinement and launch cycle that resulted in a useful new tool. And I've helped set up a foundation for future expansion and innovation.

There were of course challenges along the way that required adapting plans. The Bloomfield team was in the midst of launching several other initiatives, shifting staffing structure

and attending industry events, on top of their daily news production work, and so some of the interviews, design thinking and usability/testing sessions had to be held asynchronously or combined and narrowed in scope. The original hopes for the functionality I would be building in the new tool had to be scaled back to accommodate the time the Bloomfield team had available to actually test and begin using the tool on a day-to-day basis. And as with any software project, the discovery and planning phase yielded new information that required us to fine-tune the specific implementation along the way. But the intentionally experimental nature of both the Bloomfield Information Project and my capstone project meant that we could adjust and evolve our strategy accordingly, while continuing to practice the human-centered design and scale discussed above.

To the question “*What does it look like to build inclusiveness and accessibility into a news gathering, production and distribution process and toolset?*” this project answers that by taking the time and building the technical tools to gather news and information from all parts of a community (and not just those equipped with the structural resources, power and wealth to get traditional media attention), a newsroom can increase inclusiveness of the populations it covers and accessibility of the information it distributes. The Bloomfield Information Project was doing this well before this capstone project, but by improving their tooling even in incremental ways, it will hopefully give them more time to focus on that core work, and to do it even more effectively.

To the question, “*What is an appropriate balance of automation and algorithm against human curation, to ensure comprehensiveness, utility and representation?*” this project concludes that at least in the context of Bloomfield, the human curation process must remain at the center of the news production process in order to ensure representation, but that technical tooling and

automation can make that curation more efficient and effective along the way. As those processes settle in over time there will be more room for automation and even the introduction of machine learning to save additional time, but almost certainly never a full abdication to algorithms when it comes to selecting what news and information is important to the community, and how best to present it.

It is important to note in conclusion that what I've done and built through the course of this creative capstone project remains in the spirit of community-driven projects that can and should reflect the evolving needs of its members. It may be that the software I've created and launched will be expanded upon by other contributors who see its promise and want to add on to it, or it may remain largely unchanged and used only in one community as the Bloomfield team turns their attention to other priorities. This tentative, still-unfolding milestone I've reached as I conclude my project is as it should be, hopefully reflecting one new contribution to Shirky's (2008) vision: "No one experiment is going to replace what we are now losing with the demise of news on paper, but over time, the collection of new experiments that do work might give us the journalism we need."

References

- Abernathy, P. (2020). The News Landscape in 2020: Transformed and Diminished -. *The Expanding News Desert*.
<https://www.usnewsdeserts.com/reports/news-deserts-and-ghost-newspapers-will-local-news-survive/the-news-landscape-in-2020-transformed-and-diminished/>
- About. (n.d.). Bloomfield Information Project. Retrieved November 8, 2021, from <https://bloomfieldinfo.org/about/>
- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595–1600.
<https://doi.org/10.1016/j.jbusres.2013.10.001>
- Bloomfield Info Project Creates ‘Ambassador’ Program, Seeks Input*. (2022, March 1). Bloomfield, NJ Patch.
<https://patch.com/new-jersey/bloomfield/bloomfield-info-project-creates-ambassador-program-seeks-input>
- Bramlett-Solomon, S., & Carstarphen, M. G. (2017). *Race, Gender, Class, and Media: Studying Mass Communication and Multiculturalism* (3rd edition). Kendall Hunt Publishing.
- Business Models » Hubs » Nieman Journalism Lab » Pushing to the Future of Journalism. (n.d.). *Nieman Lab*. Retrieved December 16, 2021, from <https://www.niemanlab.org>
- Cetina Presuel, R., & Martínez Sierra, J. M. (2019). Algorithms and the News: Social Media Platforms as News Publishers and Distributors: Algoritmos y noticias: Redes sociales como editores y distribuidores de noticias. *Revista de Comunicación*, 18(2), 261–285.
<https://doi.org/10.26441/rc18.2-2019-a13>
- Community Info Coop*. (n.d.). Community Info Coop. Retrieved November 8, 2021, from

<https://www.infodistricts.org>

Confidential interview. (2022, February 24). [Zoom].

Confidential interview. (2022, February 25). [Zoom].

Consolidated or Distributed Site Structure? – Chris Hardie’s BSU Capstone Project. (2022, February 21).

<https://bsucapstone.chrishardie.com/2022/02/21/consolidated-or-distributed-site-structure/>

Data Model – Chris Hardie’s BSU Capstone Project. (2022, February 17).

<https://bsucapstone.chrishardie.com/2022/02/17/data-model/>

Goyanes, M. (2015). The Value of Proximity: Examining the Willingness to Pay for Online Local News. *International Journal of Communication (19328036)*, 9, 1505–1522.

Hard parts of thinking through the content curation workflow – Chris Hardie’s BSU Capstone Project. (2022, March 13).

<https://bsucapstone.chrishardie.com/2022/03/13/hard-parts-of-thinking-through-the-content-curation-workflow/>

Jurkowitz, M., Mitchell, A., Shearer, E., & Walker, M. (2020, January 24). U.S. Media Polarization and the 2020 Election: A Nation Divided. *Pew Research Center’s Journalism Project.*

<https://www.pewresearch.org/journalism/2020/01/24/u-s-media-polarization-and-the-2020-election-a-nation-divided/>

Martinez, K. (2021, January 6). *How automation helped this journalist quench a “news desert.”*

<https://zapier.com/blog/how-a-journalist-uses-automation/>

Norman, D. A. (2013). The design of everyday things. In *The design of everyday things* (Revised

- and expanded edition.). Basic Books, a member of the Perseus Books Group.
- Park, S., Fisher, C., Flew, T., & Dulleck, U. (2020). Global Mistrust in News: The Impact of Social Media on Trust. *JMM: The International Journal on Media Management*, 22(2), 83–96. <https://doi.org/10.1080/14241277.2020.1799794>
- Powers, A., Sohn, A. B., & Briggs-Bunting, J. (2014). Family-Owned Newspapers: Filling Niches in Local U.s. Communities. *Journal of Media Business Studies*, 11(2), 79–91. <https://doi.org/10.1080/16522354.2014.11073581>
- Shaker, L. (2014). Dead Newspapers and Citizens' Civic Engagement. *Political Communication*, 31(1), 131–148. <https://doi.org/10.1080/10584609.2012.762817>
- Sherry, A. (2021, April 29). *Opportunities for local news entrepreneurs are proliferating*. Knight Foundation. <https://knightfoundation.org/articles/opportunities-for-local-news-entrepreneurs-are-proliferating/>
- Shirky, C. (2008, March 16). *Newspapers and Thinking the Unthinkable*. Edge.Org. https://www.edge.org/conversation/clay_shirky-newspapers-and-thinking-the-unthinkable
- Side projects so far – Chris Hardie's BSU Capstone Project*. (2022, February 2). <https://bsucapstone.chrishardie.com/2022/02/02/side-projects-so-far/>
- The local news crisis will be solved one community at a time. (2021, May 26). *Nieman Lab*. <https://www.niemanlab.org/2021/05/the-local-news-crisis-will-be-solved-one-community-at-a-time/>
- Wadbring, I., & Bergström, A. (2017). A Print Crisis or a Local Crisis? *Journalism Studies*, 18(2), 175–190. <https://doi.org/10.1080/1461670X.2015.1042988>

Appendix A

Wireframes and Mockups

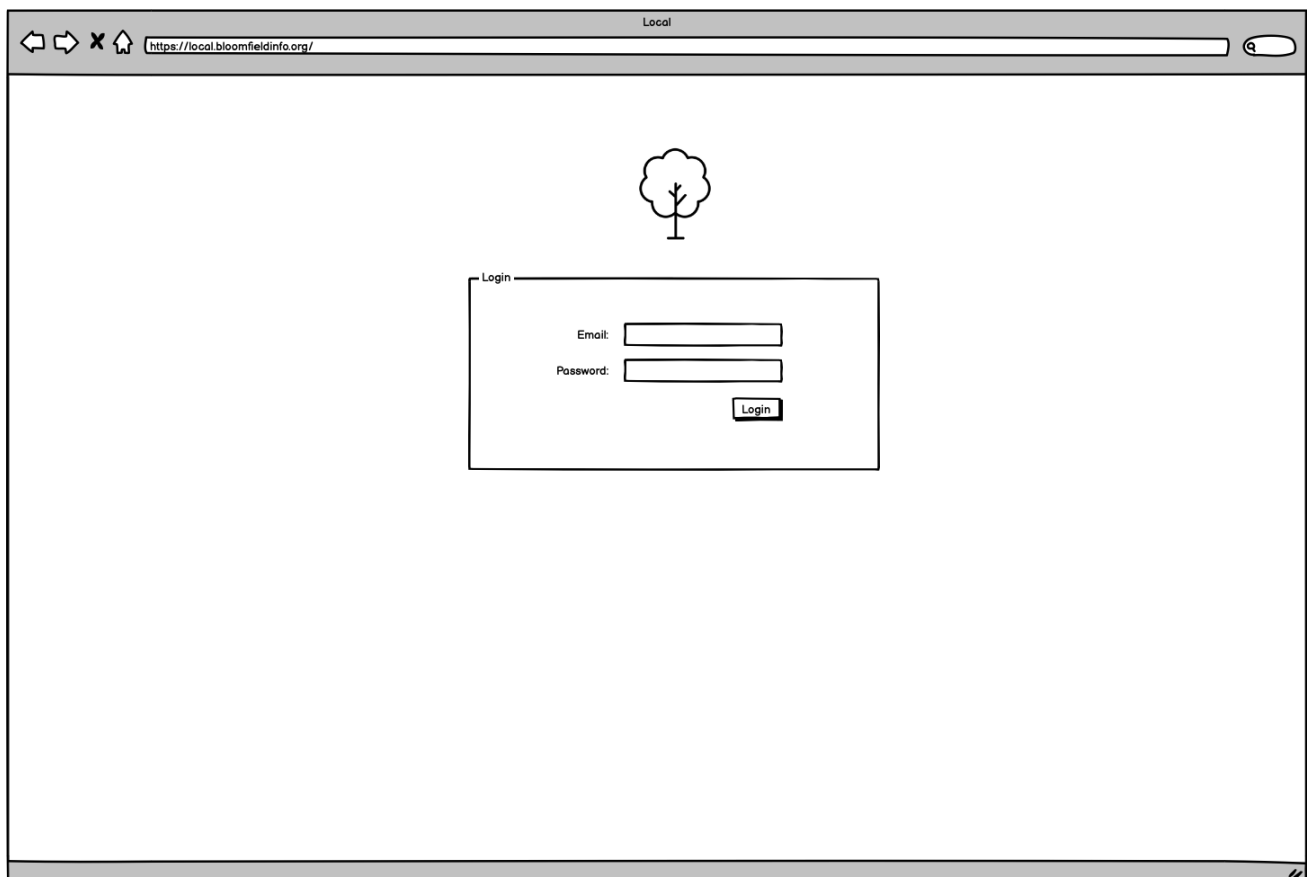
Chris Hardie's BSU Capstone Project

Improving civic engagement through a software-assisted community news harvest

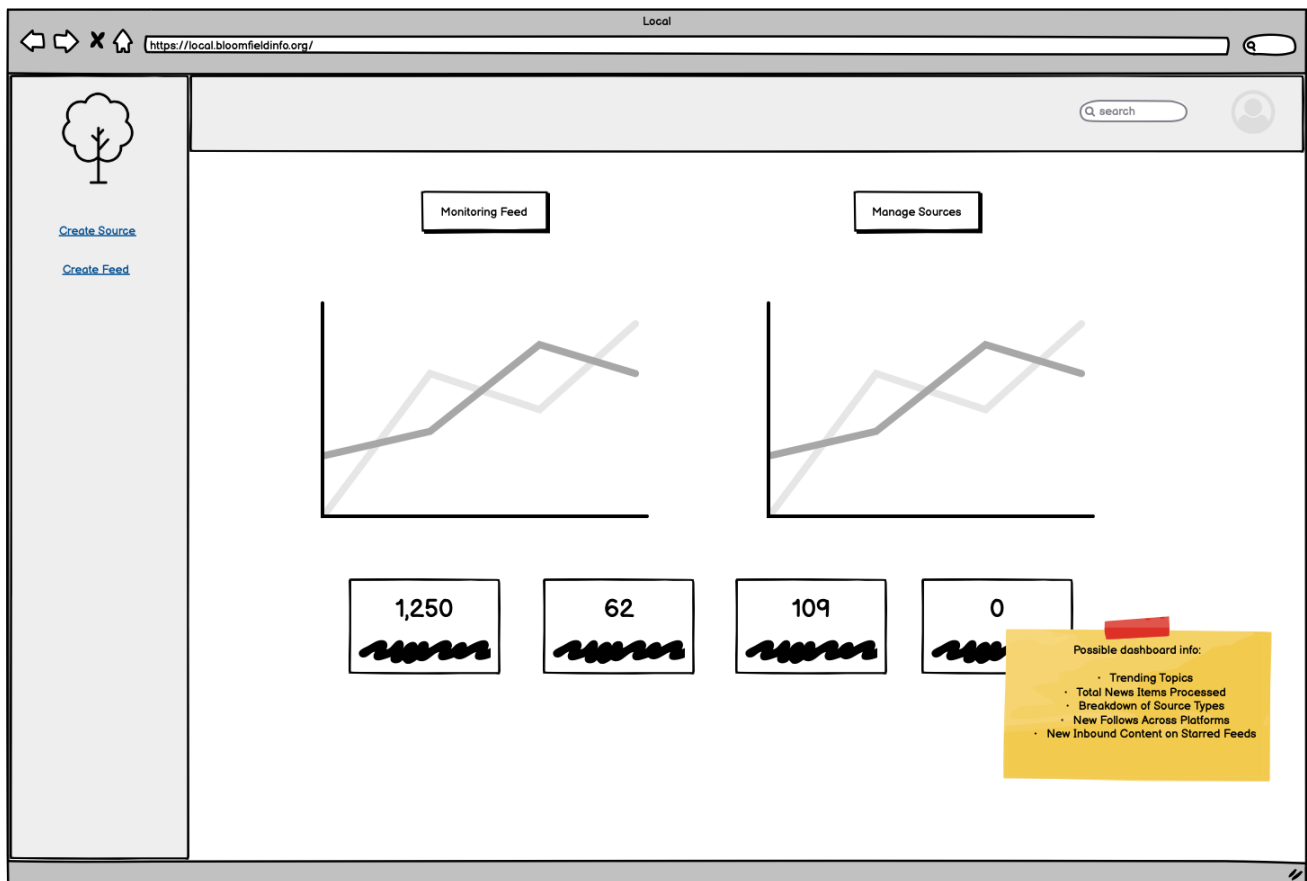
Wireframes for initial and future project scopes

In this post I'll share the finalized wireframes that I've developed for my initial capstone project work and that also illustrate the possibilities for future phases of development and software tooling. As expected, these wireframes reflect several rounds of wireframe creation, delivery, design discussions, decision-making, wireframe refinement, and then repeating that process.

Here are the wireframes for the capstone project scope:



Allow users to login



Present the user with a dashboard

The 'Create a New Source' form is titled 'Create a New Source' and is divided into two main sections: 'Basics' and 'Internal Notes'. The 'Basics' section contains the following fields:

- Name ***: A text input field.
- Type ***: A dropdown menu with 'News Publisher' selected.
- Website URL**: A text input field.
- Active**: A checkbox that is currently checked.

The 'Internal Notes' section contains a large text area for notes. At the bottom of the form are two buttons: 'Create' and 'Create & Create Another'.

Allow the user to create a new Source

Local

https://local.bloomfieldinfo.org/

Create a New Feed

Basics

Name *

Source *

TAPinto Bloomfield

Type *

RSS Feed

Location *

☒ Active?
 ☐ Starred?

Advanced

Check Frequency

60

minutes

Internal Notes

Create

Create & Create Another

Allow the user to create a new Feed for a given Source

Local

https://local.bloomfieldinfo.org/

Content Item Curation

search

8:07 PM / Montclair Local RSS Feed

[MONTCLAIR STATE UNIVERSITY MOVES TOWARD ACKNOWLEDGING IT OCCUPIES LENAPE LAND](#)

Open

Star

8:07 PM / Bloomfield Recreation RSS Feed

[We want to hear from you!](#)

8:07 PM / Bloomfield Recreation RSS Feed

[We want to hear from you!](#)

8:07 PM / Bloomfield Recreation RSS Feed

[We want to hear from you!](#)

8:07 PM / Bloomfield Recreation RSS Feed

[We want to hear from you!](#)

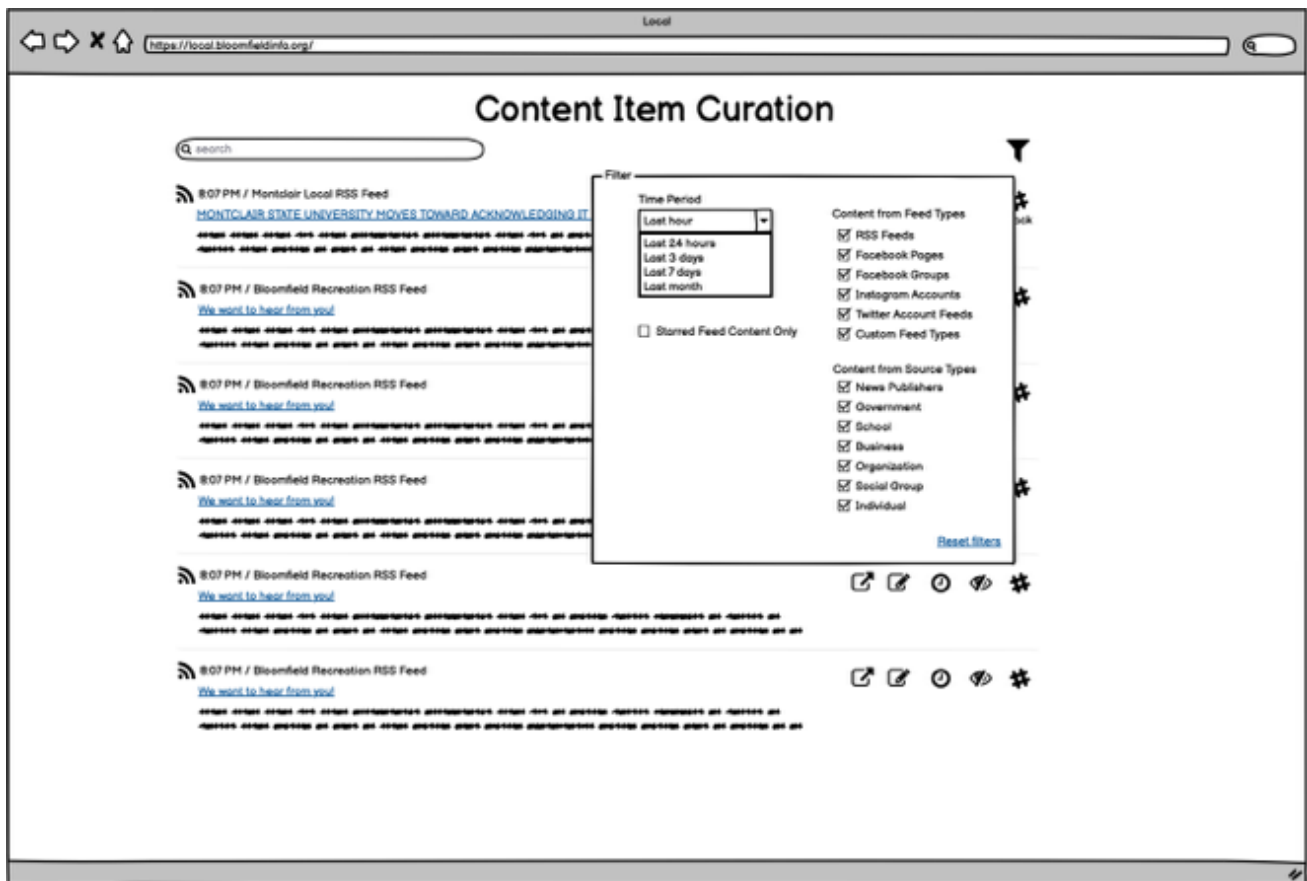
8:07 PM / Bloomfield Recreation RSS Feed

[We want to hear from you!](#)

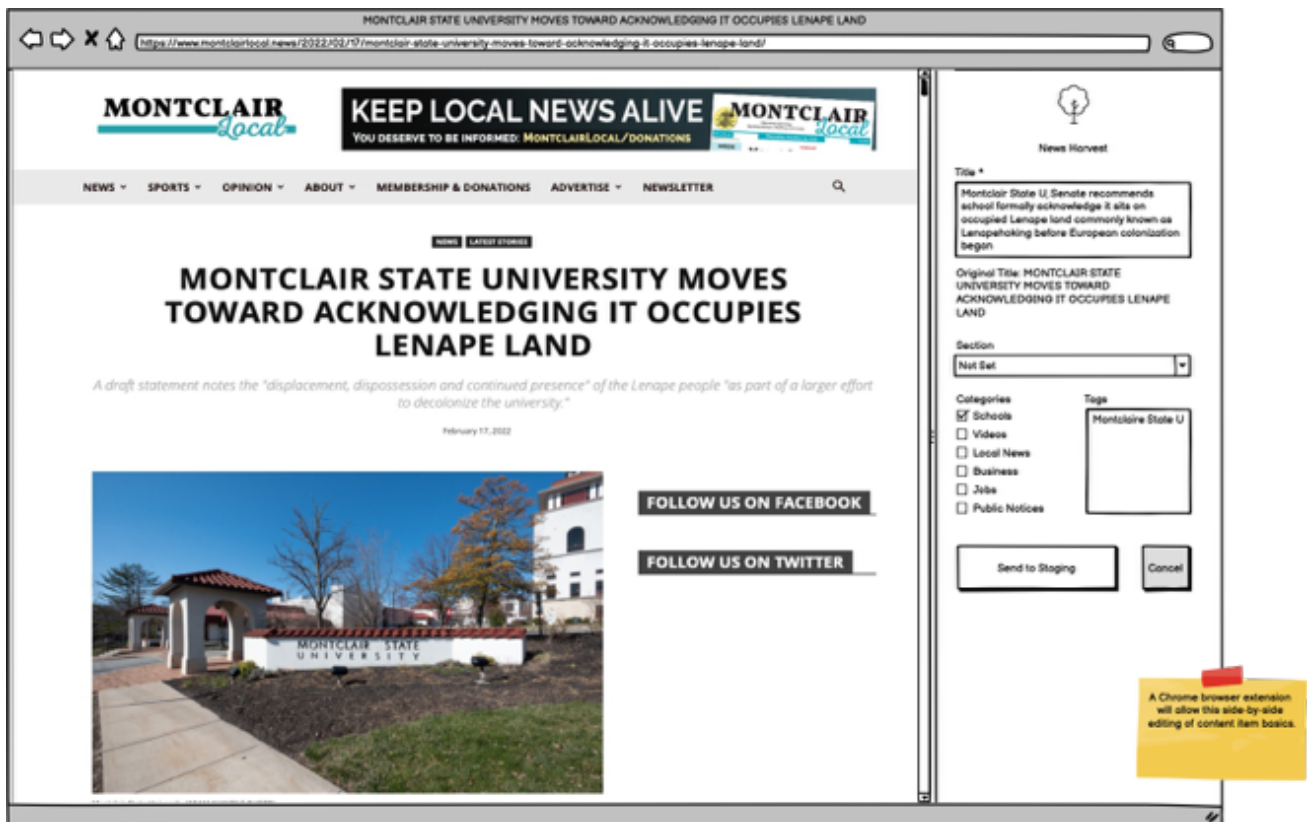
8:07 PM / Bloomfield Recreation RSS Feed

[We want to hear from you!](#)

Present the user with a feed/content curation view



Allow the user to filter and search through the feed/content view



Allow the user to open an individual article / content item in a new window to continue the news harvest workflow

All of the above images reflect the core functionality of what I will be creating and publishing for my capstone project. Note that some other related functionality such as “create an account” or “reset my password” will be handled through standard Laravel application framework tools and did not feel significant enough to wireframe.

In conversations with Simon and team, we decided that this is the scope of software tool that will be most helpful to their workflow for the time being, and that is manageable enough in terms of functionality and complexity that they can transition their current workflow to it fairly seamlessly, start taking advantage of it, allow for some refinements and polishing, and then package it up into a tool that other communities might be able to use as well.

Even beyond this scope, we did go ahead and create the data model and wireframes for what future phases of the project and tool might look like. I’ll share some highlights of those here for reference and discussion. (Note that the “hard parts” recent post about creating a browser extension is no longer relevant, as we decided that it wouldn’t be useful or prudent to tackle that phase of the project in the scope of my capstone work.)

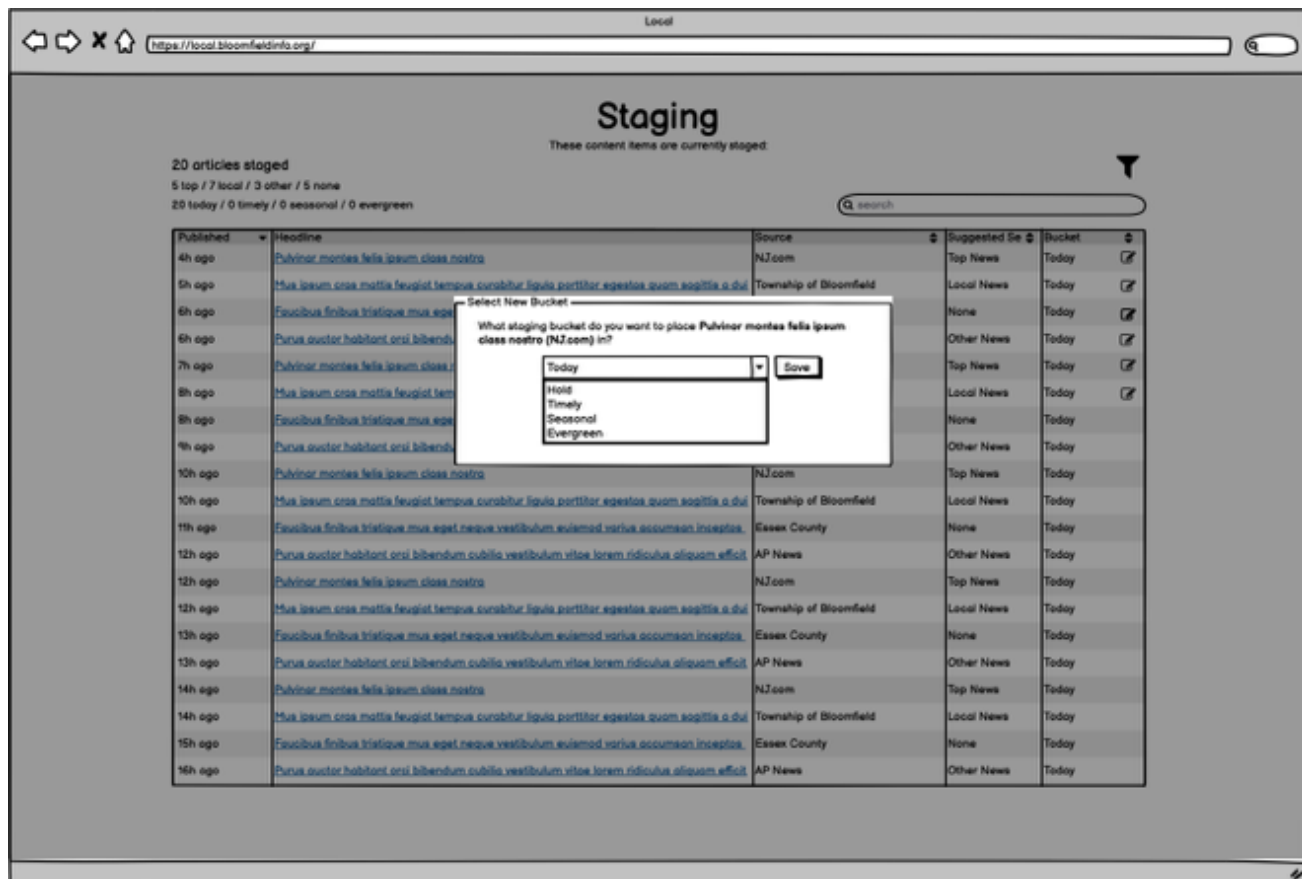
Instead of using the browser extension to send content to their current Google Sheet-driven workflow, they would instead send updates back into the main tool for staging (working toward the creation of a Daily Bulletin publication or other kind of publication):

Local				
https://local.bloomfieldinfo.org/				
Staging				
These content items are currently staged:				
20 articles staged				
5 top / 7 local / 3 other / 5 none				
20 today / 0 timely / 0 seasonal / 0 evergreen				
search				
Published	Headline	Source	Suggested Section	Bucket
4h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
5h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
6h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
6h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
7h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
8h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
8h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
9h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
10h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
10h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
11h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
12h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
12h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
12h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
13h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
13h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
14h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
14h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
15h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
16h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today

Staging review dashboard

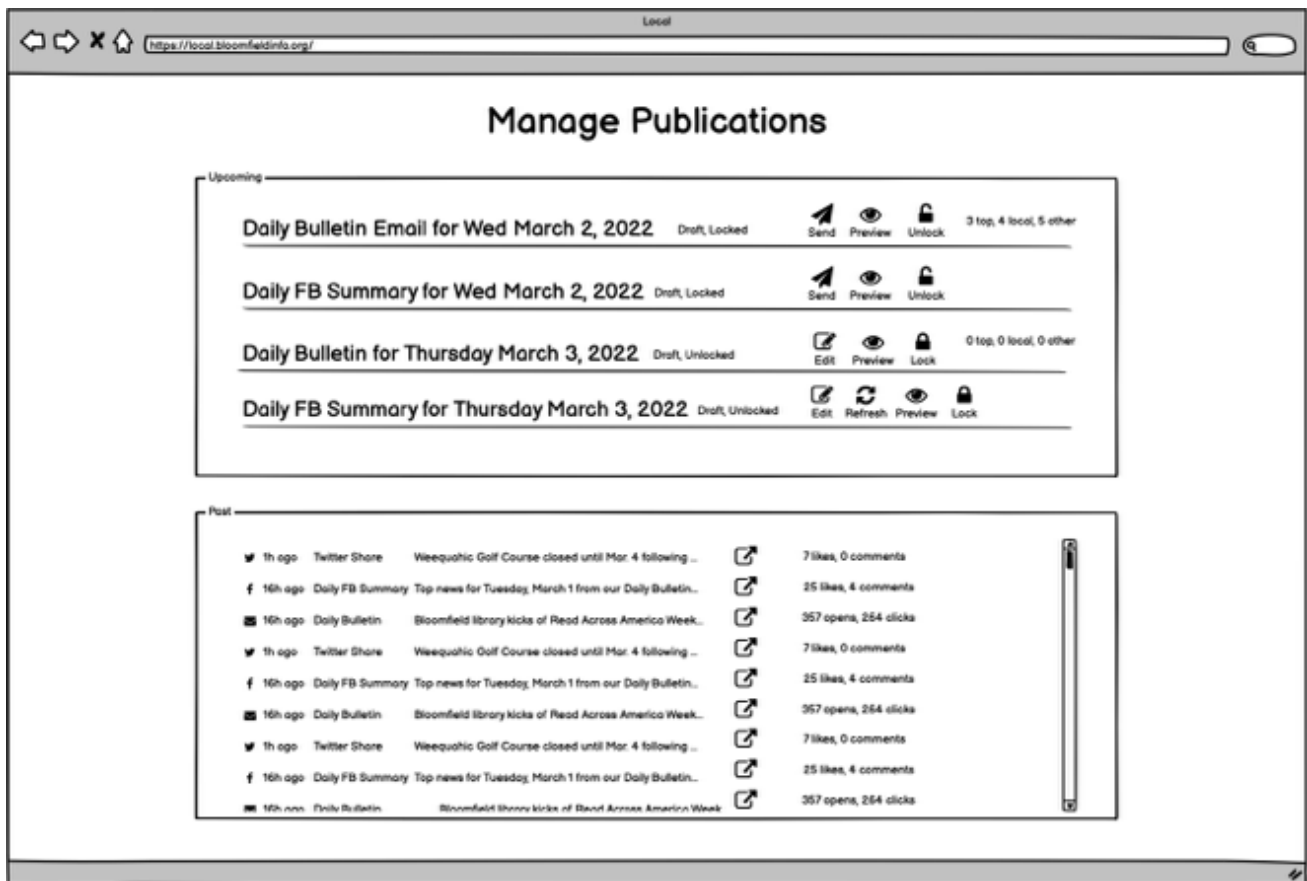
Local				
https://local.bloomfieldinfo.org/				
Staging				
These content items are currently staged:				
20 articles staged				
5 top / 7 local / 3 other / 5 none				
20 today / 0 timely / 0 seasonal / 0 evergreen				
Filter				
Suggested Section				
All Suggested Sections				
Top News (5)				
Local News (7)				
Other News (3)				
None (5)				
Bucket				
All Buckets				
Today (20)				
Hold (0)				
Timely (0)				
Seasonal (0)				
Evergreen (0)				
Published	Headline	Source	Suggested Section	Bucket
4h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
5h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
6h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
6h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
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8h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
9h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
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11h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
12h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
12h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
12h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
13h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
13h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today
14h ago	Pulvinar montes fella ipsum class nostra	NJ.com	Top News	Today
14h ago	Mus ipsum cras matta feugiat tempus curabitur ligula porttitor egestas quam sagittis a du	Township of Bloomfield	Local News	Today
15h ago	Faucibus finibus tristique mus eget neque vestibulum euismod varius accumsan inceptos	Essex County	None	Today
16h ago	Purus auctor habitant orsi bibendum cubilia vestibulum vitae lorem ridiculus aliquam efficit	AP News	Other News	Today

Staging filtering

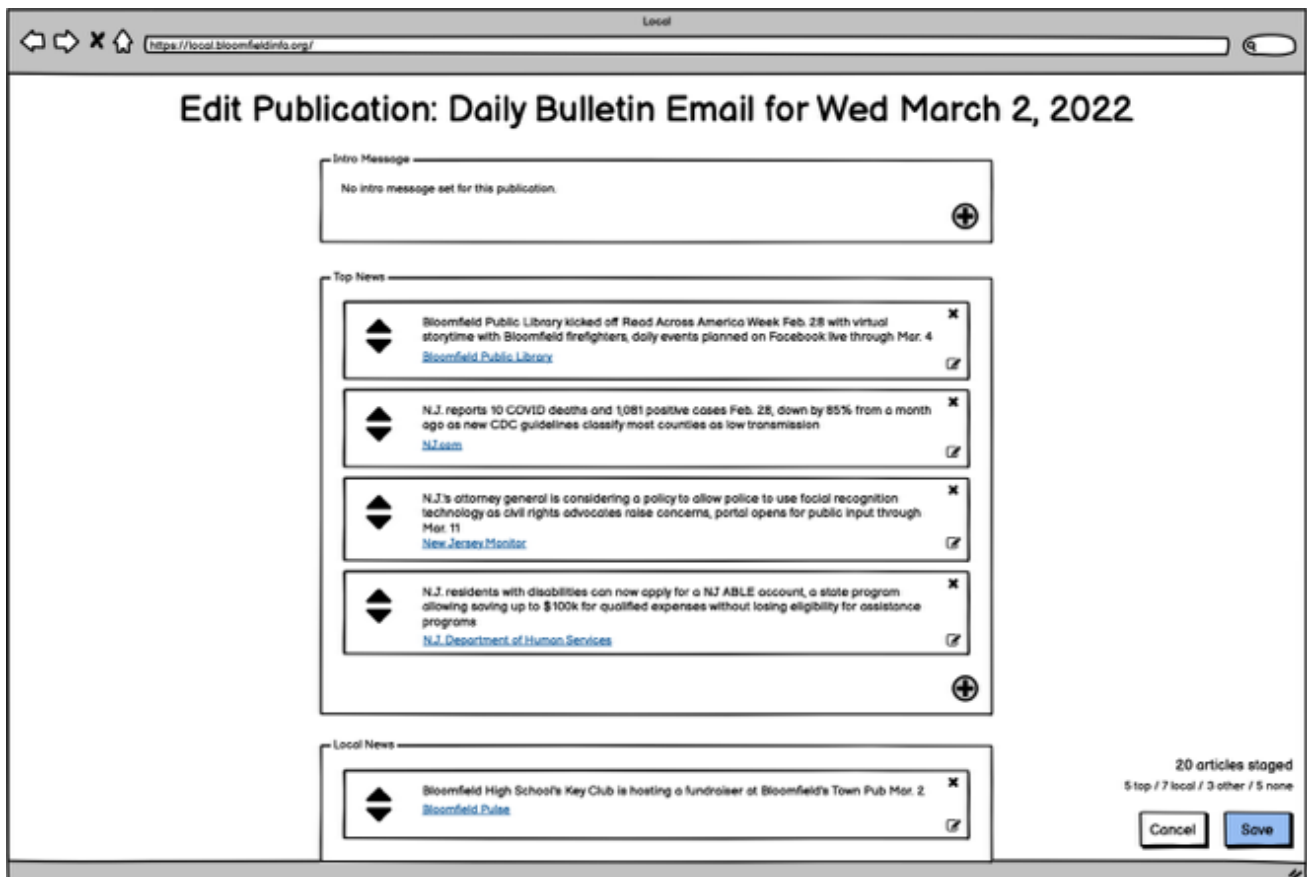


Putting an individual content item into a different staging “bucket”

Then, once the staging items had all been organized, the team could create a Publication, which is most often the Daily Bulletin email, but could also be sharing to social media or other kinds of sharing/messages/publications.

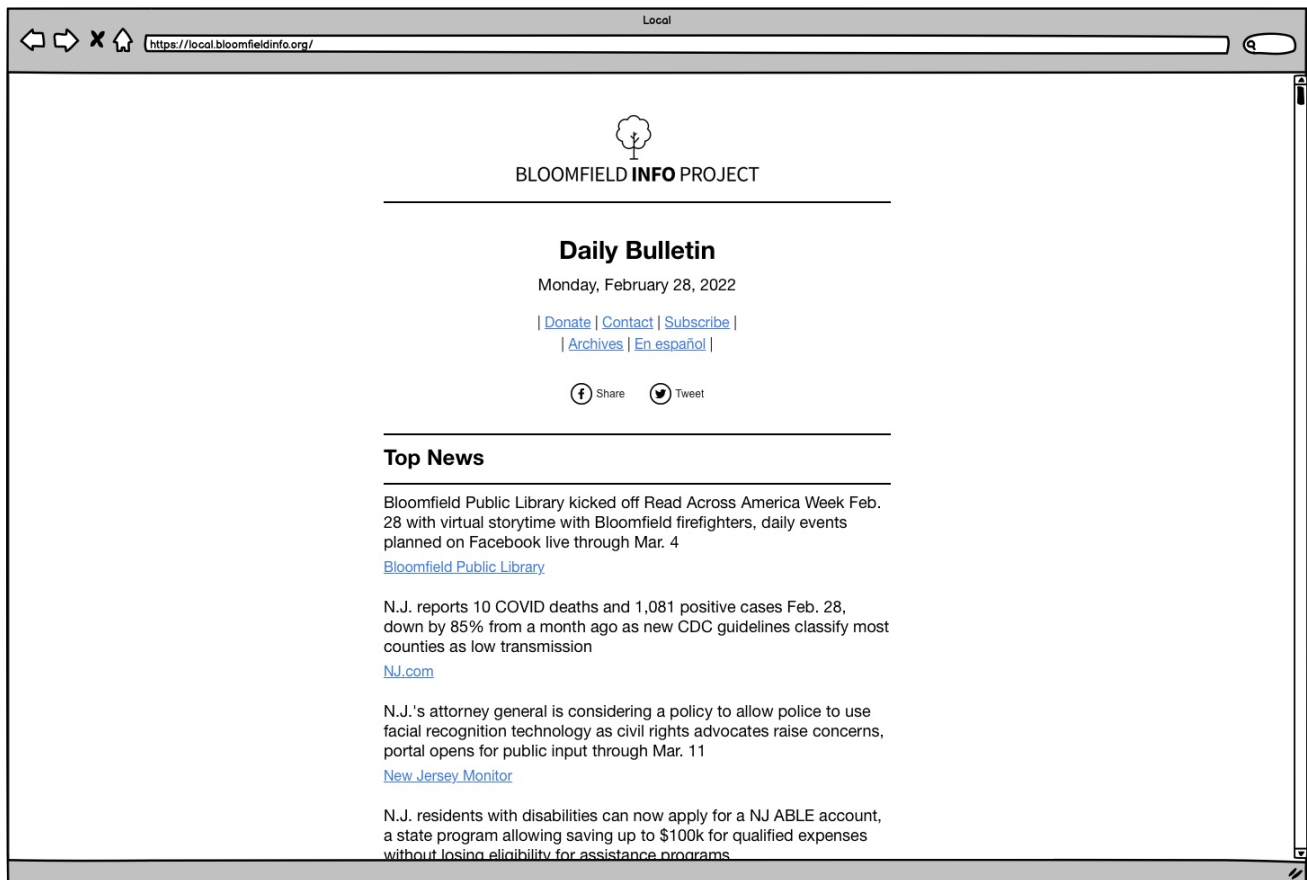


Publication management overview



Managing and re-ordering what appears in a Daily Bulletin publication

Once a publication was edited and finalized, it could be locked and scheduled for sending. The result would be the same kind of Daily Bulletin email that is currently produced, but all previewed and managed directly within the tool:



An in-tool preview of the Daily Bulletin email to be sent out

This expanded workflow would also have some implications for other parts of the interface that will be built initially. For example, Source and Feed creation will have some additional fields to aid in categorizing and managing the content that come from those.

Local

https://local.bloomfieldinfo.org/

Create a New Source

Basics

Name *

Categories (at least 2) *

Type *

☒ Active ☒ Publicly Listed

Internal Notes

Contact

Website URL

Latitude Longitude

Postal Address

Phone (Public) Phone (Internal Use)

Email (Public) Email (Internal)

Hours

Facebook URL Twitter URL

Contact Person (Internal Use)

Instagram URL

Create Create & Create Another

An expanded Create Source form

Local

https://local.bloomfieldinfo.org/

Create a New Feed

Basics

Name *

Source *

Type *

Location *

Default Section *

☒ Active? ☐ Starred?

Advanced

Check Frequency minutes

Format

Image Video Social Media

Internal Notes

Create Create & Create Another

An expanded Create Feed form

You can view and download the entire final set of wireframes, for both the current project scope and suggested future project expansion, in this PDF: [20220317-wireframes.pdf](#)

 March 17, 2022  Chris Hardie  Capstone Updates  wireframes

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