

Technical Plan

Urban Land Institute
District & National Council Site Redesign

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Overview

This document aims to set forth a preliminary plan for the further planning, build, and migration of the ULI District and National Council sites.

The plan doesn't end with this document — we hope that this will promote further discussion and exploration of the ULI digital ecosystem and how the changes to the Council sites may affect other projects and touch-points. This plan lays out the best way forward as determined by our current understanding of ULI's goals and our own audits of the existing technology. Some of these findings are laid out in our [Discovery Report](#).

Plans are nothing; planning is everything.

— Dwight D. Eisenhower

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Platform

The current Council sites exist as a single WordPress Multisite install, along with several other ULI web properties.

Viget has determined that remaining with this platform is the best course of action. WordPress Multisite is best suited to this project due to:

- Easy sharing of accounts across many sites for ULI admin users
- Easy user management and permissions across many web properties
- Easy repetition of similarly-branded sites
- Easy deviation from a core brand with child themes or theme settings
- Built-in language tools and settings
- Common industry usage and wide support community
- Familiarity of the platform within ULI

Challenges

While WordPress Multisite affords us a lot of tools, there are some pain-points to be aware of as we move forward with this platform:

Flexibility and Consistency

Several WordPress features allow for either full flexibility and user-control **OR** no user-control with items consistently locked in place.

For example: navigation items may either be hard-coded and uneditable or, with WordPress menus, content administrators are allowed drag-and-drop control of the navigation with no limits to the order of items, the number of items, or the level of nesting allowed.

This will likely require discussions with ULI stakeholders to determine where consistency may trump flexibility or vice-versa. In some cases, implementation limitations may require Viget to recommend one course or communicate where only one course is feasible.

Plugin Limitations

When a Plugin is used to fill in a piece of functionality in place of expensive custom development we are locked into the implementation and assumptions made by the Plugin and its developers. Additionally, the site will be reliant on the maintenance and continued development of these Plugins.

Viget will endeavor to include only Plugins which have a good history of support and wide adoption from the community. While we cannot guarantee that a Plugin will be maintained in perpetuity, we will use our best judgement when selecting Plugins and avoid the use of unnecessary add-ons where lower-risk and low-effort custom development would be more suitable.

Theme Features

WordPress is a very customizable platform that has many – often optional – capabilities.

Viget will build a Theme or Themes to best serve the core needs of ULI's Council sites. Further discussion may be necessary to determine which optional WordPress features should also be supported.

Viget will advise on the best features to include while considering our timeline, scope, and the KPI goals of the final sites.

WordPress and Plugin Versioning

Themes, Plugins, and WordPress itself are installed globally for all sites within WordPress Multisite. Thorough testing will need to take place as updates to these dependencies will affect all sites simultaneously.

A staging environment will be set up to test upgrades before they affect the live sites. Viget can advise on upgrade best-practices.

Implementation

Navigation

Assembly of the primary navigation of each site will be user-controlled utilizing the default WordPress drag-and-drop menu interface. Each site will start with our ideal navigation set-up. Council site owners will be instructed not to change some parts of the navigation, but no technology will be leveraged to force the existence or order of navigation items.

Consistent Page Structure

Our Theme, upon Activation, will create Pages and Menus to match a default site set-up. While we may not be able to enforce consistent Page hierarchy throughout the life of the site, each site will start with a consistent set-up. This assumes that the Theme is installed on an empty site instance before any migration efforts as these changes may be destructive to existing content.

Plugin Management

Our Theme will force the activation of several required Plugins, using [TGM Plugin Activation](#). This allows us to force consistent Plugin activation on the Council sites utilizing the same Theme instead of WordPress Multisite's Network Activation.

While the Regional ULI sites will not be in the same Multisite install for the time being, avoiding using Network Activation will prevent issues with these sites and their differing Plugin requirements.

Content Types

Any content types which exist on all Council sites will be generated by the Theme shared by all of the sites. Additional optional content types (i.e. Jobs, Press, and Resources) will be generated through Plugins so these data structures can be modularly added to some sites and not others.

Site Search

We'll continue to use Google's CSE (Custom Search Engine) to power search instead of WordPress's search engine. This provides the best results with the least amount of effort while also retaining the feature to search across ULI's sites.

For Discussion

- What WordPress non-essential theme features are we supporting?
 - Branding customizations?
 - Widgets?
 - Post Formats?
 - Commenting?
 - File editing within the Admin?
- What is the break-down of roles at a ULI District or National Council and how should that influence User Permissions?
- Who will be in charge of WordPress and Plugin updates after site launch? And what is their level of technical expertise?
- Site search - does ULI have full ownership and control of the current Google CSE configuration?

Hosting

ULI is currently utilizing [WP Engine](#) for WordPress Multisite hosting. As WP Engine is an industry leader in specialized WordPress hosting and has an advanced toolset for working with WordPress, we see no reason to replace this service.

Viget will, however, start from a fresh WP Engine instance and Multisite install that will house only the District and National Council sites. This will:

- Eliminate unused Plugins and code
- Eliminate database cruft – like accumulated Pages, Posts, and Custom Post Types which may no longer be in use or have never left a Draft state
- Leave behind other forms of technical debt from years of site use
- Decouple the Council sites from other ULI properties
 - WordPress versions can be tested and updated for only the Council sites
 - Plugin versions can be tested and updated for only the Council sites
 - Network Settings may be better utilized
 - Related properties like [ULI.org](#) and the Regional sites could be cleanly migrated to this environment at a later date

Challenges

As ULI has been working with WP Engine for several years, the team is likely aware of some of the challenges associated with this service.

Database Size

Given that this Multisite install will house approximately 70 sites, the database will likely be very large. This may cause issues when utilizing WP Engine's data migration and back-up features.

While this can't be avoided entirely, moving to the new Multisite install as part of this redesign and migration process will eliminate some unused data and allow ULI to start fresh.

Sites Management

Managing a Multisite install on WP Engine can cause redundancy as you set up and configure new sites.

Viget can provide guidance on how to set up new sites efficiently, but this is ultimately a limitation of the service itself.

Implementation

ULI already has an account and plan set up with WP Engine, but we may need to discuss changes to that plan to accommodate our development needs

New WP Engine Instance

ULI currently has 17 of 25 possible instances in place on WP Engine. Two of those exist to serve the Council sites: one for the sites as they exist live and a Sandbox environment for testing. Viget would need a third (and maybe fourth) instance set up by ULI to facilitate our work.

We would require a fresh WordPress Multisite install with no Plugins, Themes, or other data. Viget will configure and add these items as needed.

Staging and Production Environments

WP Engine provides both a Staging and Production environment per instance, so no additional set-up would be required to create a Staging environment.

Test Environment

To safely test migrations and features outside of the sites that ULI will ultimately use, Viget will use a testing environment separate from Staging and Production.

A local environment that does not require hosting may be sufficient for this task, but a WP Engine hosted environment would be preferred. Using a WP Engine hosted test environment would be more likely to reveal any issues we could encounter on Staging and Production and would help us ensure a smoother migration process.

New Domain

As we will be leaving ULI.org in the existing WP Engine instance + WordPress Multisite install, we will need a different root domain name for the new WP Engine instance. This domain name will be used for the admin panel controlling all the Council sites and will only temporarily apply to the Council sites themselves.

Note: Council sites will still live at “council-name.uli.org” at the completion of this project.

Domain name possibilities:

- councils.uli.org (temp Council url: council-name.councils.uli.org)
- ulicouncils.org (temp Council url: council-name.ulicouncils.org)

Deploying to WP Engine

Viget will set up the new WP Engine instance with the service's Git Push feature so that WordPress, its Plugins, Themes and configuration files are versioned in a GitHub repository owned by ULI. WP Engine will then pull any new code from that repository.

This repository should primarily house the code for custom Themes and Plugins. The majority of WordPress core code will be git-ignored within the repository so WordPress versions can be updated and managed through WP Engine's tooling. Any third-party plugins required through [TGM Plugin Activation](#) should not be committed to the repository either. TGM configuration will be committed within the Theme(s) to enforce Plugin Activation and versioning.

For Discussion

- What are the costs associated with creating a new WP Engine instance on ULI's WP Engine plan? Are those costs prohibitive?
- Who will set up the new WP Engine instance?
- What should the new Councils administration domain name be?
- Is this plan to move the Council sites to their own Multisite instance, separate from other ULI properties, in line with other ULI initiatives?
- Does moving the Council sites to their own Multisite instance cause any organizational hurdles - like creating accounts and managing site permissions?

Image and File Hosting

Viget recommends storing any user-uploaded images and files separate from the source code of any website, regardless of platform. Storing files in a separate storage service provides the following benefits:

- Optimized load time due to use of a Content Delivery Network (CDN)
- Infinite scalability and storage space
- Inexpensive storage - prices are based off of exact usage
- Reduced impact on the hosting server's memory, capabilities, or performance

Challenges

File Size

The biggest challenge with hosted files is the size of those files and enforcing upload standards. Offloading image and file hosting to a separate storage service resolves a number of issues, but preventing large file uploads would still be beneficial to keep file hosting costs down.

Implementation

WordPress

Viget will install and configure the [Microsoft Azure Storage for WordPress](#) Plugin in order to integrate with ULI's existing Azure storage. The plugin will be configured to remove files from the hosting server (WP Engine) after the files have been moved to Azure Storage.

For uploaded images and files, Viget will add file size limits per upload field. This will allow higher limits for large PDFs while keeping images capped to a smaller file size.

Azure Storage

ULI will need to create a new Azure Storage Container for use by the Council sites and send Viget the proper credentials, including:

- Store Account Name
- Store Account Key
- Name of the new Storage Container

For Discussion

- Can ULI confirm they are able to provide the required Azure Storage Container and credentials?
- Are there any budgetary concerns with using Azure Storage and offloading image and file hosting to another service?

Parts Kit and Documentation

Given the high number of possible customizations across District and National Council sites, it will be essential to establish a process for building and testing the parts that make up the sites rather than testing fully templated pages. A page on a Council site may be comprised of many combinations of these parts, making testing for every permutation tedious if not impossible. Instead, we'll focus on testing all variations of a part (a.k.a. a module or component) in isolation and in some common combinations.

For content entry documentation, Viget will focus on building documentation into the WordPress admin, so that instructions are provided alongside the relevant fields and templates.

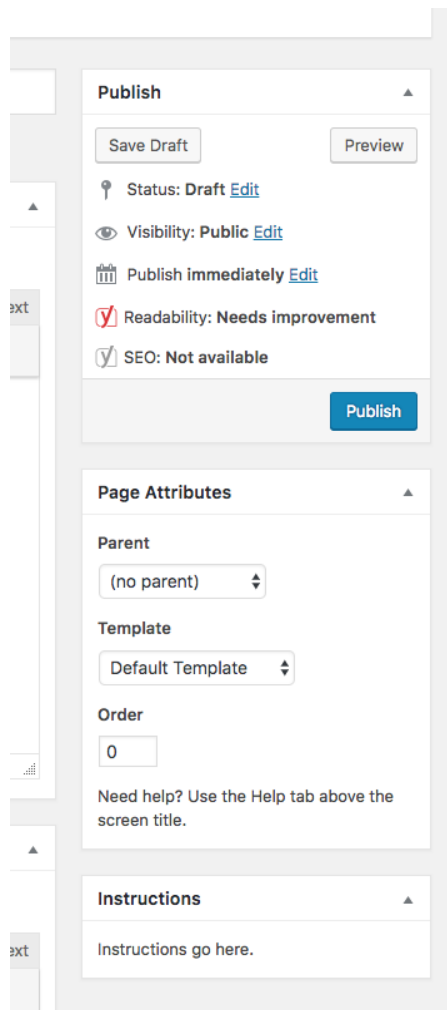
Implementation

Parts Kit

The "parts" will be displayed on a "Parts Kit" site that will live within the Multisite install. Much of our testing will occur on the Parts Kit site, where all parts are displayed along with some limited usage documentation.

Field Instructions

For in-WordPress content entry documentation, we'll start with improving the instructions provided for each data field. As we set up each field, Viget will try to provide relevant instructions and document items such as ideal image dimensions, where data will appear, and/or the possible repercussions of a selection.



The screenshot shows a WordPress sidebar with three metaboxes. The top metabox is titled 'Publish' and contains buttons for 'Save Draft' and 'Preview', along with status and visibility information. The middle metabox is titled 'Page Attributes' and contains dropdown menus for 'Parent' and 'Template', and a text input for 'Order'. The bottom metabox is titled 'Instructions' and contains a text area with the placeholder text 'Instructions go here.'.

Instruction Sidebars

If additional, longer-format instructions are required, then we can move some instructions into a metabox in the WordPress sidebar, underneath the publishing and page attribute meta boxes.

For Discussion

- Should we translate these instructions into multiple languages?
 - If so, what languages would we support?
 - See other questions in the [Language Support](#) section
- Does this level of content entry documentation seem sufficient?
- Is there any additional code documentation required?

Language Support

ULI's Council sites are managed and visited by persons of varying backgrounds and locations. We will need to consider how to support these users by configuring language features both inside the WordPress admin panel and on the public-facing sites.

Challenges

Process and Responsibility

Supporting many languages often becomes an ordeal of organization more than the translation work itself. We recommend identifying who is responsible for translations and establishing a system for requesting and providing translations early in the process.

Language Maintenance and Team Resources

While it is easy to configure and enable multi-language support, it can be tedious and time-consuming for site administrators to translate and maintain multilingual content. Viget, along with ULI, will need to identify which sites need multilingual content *and* have the resources to maintain that content.

Implementation

WordPress Admin Panel

Setting the default language of each Council site to the native language of its administrator will greatly increase the usability of the WordPress admin panel.

For ULI employees who may jump between sites, a language preference can be set as a personal setting. This personal setting will override all other language settings while within the WordPress admin panel.

Content

For content that appears on the site, Council administrators may choose to keep all content in one language or to translate their site into multiple languages.

Single-language sites: Viget will build the Council Theme or Themes to support single-language (English or non-English) sites. Each site's language will be determined by the default language set in the site settings (mentioned in the preceding section).

Multilingual sites: a Council site can be converted to a multilingual site with the Activation of a Plugin. The [WPML Plugin](#) is a paid plugin which has very robust features for translating content and menus and should work well for the ULI Council sites.

Hard-Coded Content

Throughout the development process, Viget may find some pieces of text that need to be hard-coded into the Council Theme or Themes, but still require translation into multiple languages.

For these pieces of text, Viget will rely on ULI to provide translations to be added to the codebase. These translations will need to be provided for the full list of languages which are supported throughout all of the sites.

The languages and localizations we need to support could include:

- English (USA)
- English (~~Canada~~)
- English (~~UK~~)
- English (~~Australia~~)
- Spanish (Spain)
- Spanish (Mexico)
- Portuguese
- French
- Swedish
- Dutch
- German (Germany)
- German (Austria)
- Italian
- Greek
- Polish
- Russian
- Turkish
- Japanese
- Korean
- Chinese (dialect TBD)
- Asia Pacific - English (UK)

For Discussion

The list above assumes that each European National Council will have its own site where one did not exist before – and that site will be in the nation's most common language.

- Does the list of supported languages seem complete? Which may not apply?

- Which languages may require localization?
 - English?
 - Spanish?
 - German?
 - Others?
- Which sites will require multilingual support?
 - China
 - Japan
 - Others?
- What should the default language be for each site?
 - Example: mexico.uli.org should be in Spanish (Mexico) by default, both in WordPress and on the public site
- Who will be responsible for translating content?
 - Who may Viget ask to translate hard-coded text?
 - Who might be the best resource for translating to **x** language?
 - Will any translation assistance be needed for Council administrators in the migration process?
 - Should we consider pulling in a third-party translator or translation service?

Privacy and Legal Requirements

With the passing of GDPR and other international privacy regulations and legal requirements, we want to keep ULI in compliance worldwide.

Challenges

International Privacy Law Compliance

We must be aware of and ensure compliance with all legal requirements wherever ULI Councils may operate and could operate in the near future.

As the EU is the international leader on Privacy Law, complying with their standards will likely ensure compliance world-wide. However, it would still be beneficial to consult with ULI legal counsel for approval of international compliance.

Crafting a Privacy Policy

We will also require a Privacy Policy that reflects the capabilities and data practices of the sites. Viget can consult on the site's capabilities and build compliant features, but ULI and its legal team are ultimately responsible for this legal copy.

Implementation

EU Cookie Law

Per the European Commission's guidelines, users must be notified [if a website uses cookies](#). We will be using cookies while implementing site analytics. The SSO functionality with NetForum requires a cookie as well.

Given our cookie usage, Viget will provide a dismissable notification to site visitors to opt-out. On opt-out, we will [disable Google Analytics tracking](#).

We will not store personally identifying information (names, titles, addresses, etc.) in a cookie.

EU General Data Protection Regulation (GDPR)

The [GDPR](#) specifies that users should be in control of their personal data, where it's stored, and who has access to it. Users should be given the power to request a copy of their data and have their data deleted at any time.

As the ULI websites are largely public content, we will not be storing users' personally identifying information that would fall under the GDPR. However, we must comply for ULI employees who may use WordPress and provide personal information as part of their user account.

WordPress

As of WordPress version 4.9.6, [the WordPress platform is considered to be GDPR compliant](#). Tools have been added to send a WordPress user an export of their personal data and to delete their data upon request.

Contact Forms and Newsletter Sign-ups

Forms and sections of the Council sites which may require users to input their personal information must also follow GDPR compliance.

For contact forms: information is sent to a personal email account and is not stored in the WordPress database. Users should also be notified in some way that their information is not stored.

For newsletter sign-ups: users can unsubscribe and have an avenue to request that their data be retrieved or deleted by some method, either automatic (through a web interface) or manual (they are able to contact a person with these abilities). These features should be provided by the CRM service facilitating the newsletters and further customer relations.

Privacy Policy

Viget can provide a location for this page to exist within the ULI sites and make sure it is universally available to users. The contents of that page (or pages) are the responsibility of ULI and its legal team.

Accessibility

See the [Accessibility](#) section of this document.

For Discussion

- Are there any other requirements from ULI Council nations which may not have been included in this list?
- Will one blanket Privacy Policy suffice or will each Council site require a different Policy?
- Who will translate the Privacy Policy into alternate languages?
- We plan to adhere to EU laws and regulations regardless of the user's location. Are there any foreseeable problems with this approach?
- Can users opt-out of the NetForum cookie that works with the SSO feature?
- EU Cookie Law and EU GDPR - We suggest ULI legal representatives review these policies and consult on Privacy Policy content and terms.

Browser Support

Site analytics provide this break-down of your site visitors' current browser usage:

Browser	Version	Usage
Chrome		37.67%
iOS Safari		18.67%
Internet Explorer	All	14.09%
	11	13.18%
	9	0.57%
	8	0.20%
Android Webview		12.11%
Android Chrome		4.24%
Safari		3.68%
Firefox		3.56%
Edge		2.99%
Samsung Internet		0.61%
Opera		0.17%
Mozilla Compatible Agent		0.12%

Implementation

Browsers with less than 1% support will be deprioritized and will not be included in our list of "supported" browsers to test. While the sites will likely still function in these unsupported browsers, we will not prioritize time and resources to testing these platforms.

Viget defines "test and support" as a combination of quality assurance and

development practices, ensuring that every major screen and interaction will function and look attractive in our “supported” browsers.

Given the high statistics for mobile usage (35.02% between iOS Safari, Android Webview, and Android Chrome), Viget will endeavor to improve and thoroughly consider the user experience of the sites on smaller device sizes.

Supported Browsers (in no specific order):

- Chrome (newest version)
- Safari (newest version)
- Firefox (newest version)
- Edge (newest version)
- Internet Explorer 11
- iOS Safari (newest version)
- Android Webview (newest version)
- Android Chrome (newest version)

For Discussion

- Can you confirm that this list of supported browser is reasonable?
- Are there any stakeholders or influential ULI members who may use a browser not on our “supported” list?

Accessibility

The [United States](#), the [European Union](#), and [many other foreign nations](#) have adopted [WCAG 2.0](#), level AA as their standard for website accessibility. This standard ensures that all persons can access your content regardless of their physical ability or use of assistive technologies. Viget has also adopted WCAG standards in our basic build practices for all of our web projects.

Implementation

Viget will build the Theme or Themes for all of the Council sites to be compliant with WCAG 2.0, level AA.

Design

To pass the specification, Viget will design the site to meet the guideline's text contrast specifications, display required content, and include the necessary user controls on interactive content.

Development

The engineering team will ensure that the site is sufficiently machine-readable and all content is accessible with a screen-reader and for users using varying input methods.

Content and Media

As the content and media on the sites will be input by ULI and its Council administrators, the accessibility of these elements will be the responsibility of ULI.

Viget can provide guidance on what steps may be necessary to make your content and media accessible. ULI staff can start with some of our blog posts on the subject:

- <https://www.viget.com/articles/how-to-create-more-accessible-content-part-1/>
- <https://www.viget.com/articles/how-to-create-more-accessible-content-part-2/>

For Discussion

- How can we best interface with your Council site administrators to teach them about accessibility and their role in keeping the site accessible?
- There may be some WordPress features Viget may restrict to prevent changes that could compromise accessibility.
 - No user-selected colors - this could cause text contrast non-compliance
 - Restricted use of heading elements and styles - misuse of headings greatly impact the readability of a web page with a screen reader
 - Restricted or no ability to edit forms - forms require very specific HTML standards to meet accessibility specifications
 - Viget may recommend some Plugins over others due to accessibility compliance
 - Viget discourages the use of embeds when avoidable due to unknown accessibility compliance of embedded content
 - WCAG 2.0 stipulates that any non-compliant embeds on your site make your website non-compliant as well. You are responsible for what you embed.

Plugins

In order to build the Council sites efficiently, we'll be utilizing a number of WordPress Plugins. Assembled below is a list of likely Plugins we will be using and any associated costs. If cost is not addressed, then the plugin should be free for use.

Definite Use

Advanced Custom Fields

<https://wordpress.org/plugins/advanced-custom-fields/>

Advanced Custom Fields Pro

<https://www.advancedcustomfields.com/pro/>

Advanced Custom Fields and Advanced Custom Fields Pro will be used to set up the fields and data structure of the new sites. The field settings from these plugins will be built into the Theme(s).

Cost: ACF Pro is a paid plugin. \$25 Personal License or \$100 Developer License.

As we'll be Network-installing ACF and ACF Pro, we only require the \$25 personal license. However, ULI may prefer to purchase the \$100 Developer License so the same license can be used across an unlimited number of ULI sites. Both are one-time fees.

Google Tag Manager for WordPress

<https://wordpress.org/plugins/duracelltomi-google-tag-manager/>

Easy configuration of GTM for WordPress.

Yoast SEO

<https://wordpress.org/plugins/wordpress-seo/>

Allows incredible control over SEO and social meta-data. Viget will set this up with smart defaults, which can be overridden with more curated content.

Cost: \$89 per year (optional)

The free version of Yoast should fully support our SEO needs, but the Premium plugin may be desired to remove some ads, increase SEO optimization suggestions, or [add a number of other features](#).

Microsoft Azure Storage for WordPress

<https://wordpress.org/plugins/windows-azure-storage/>

As defined in the [Image and File Hosting](#) section, user-uploaded files will be stored in an Azure Storage Container. This plugin will allow that integration.

Network Shared Media

<https://wordpress.org/plugins/network-shared-media/>

Sites will gain access to images uploaded to other sites. This plugin does allow access to images from *all* sites, but the intent is to give Council administrators access to a collection of ULI-approved images stored with the Parts Kit site.

We will have to confirm compatibility with the Azure Storage plugin.

WordPress Multilingual (WPML)

<https://wpml.org/>

For the purposes of creating multilingual sites, WPML has the most robust features and the best interface for managing languages. This Plugin will be activated only on sites which will be multilingual.

Cost: WPML Agency - \$159, plus \$119/year after the first year for continued updates and support. The Agency plan is necessary given that ULI will have more than 3 sites which are multilingual.

Additional WPML add-on Plugins may be necessary to enable compatibility with ACF Pro. These should incur no additional cost.

Redirection

<https://wordpress.org/plugins/redirection/>

The Redirection plugin will handle 301 redirects, which can be input by Council or ULI site administrators.

Possible Use

ULI SSO

LION Associates built the ULI SSO (single-sign-on) plugin to recognize site visitors who have already logged into ULI's NetForum installation. We see no reason to replace this plugin, but may vet the code for any necessary maintenance.

Multisite Shared Menu

<https://wordpress.org/plugins/multisite-shared-menu/>

Should we have a shared global navigation which is consistent for all sites, then this plugin will prove useful. ULI administrators could change this global navigation and have those changes take effect on all sites.

Better Search Replace

<https://wordpress.org/plugins/better-search-replace/>

This plugin is merely a tool for developers to more easily replace and update text strings stored in the database. Most commonly this is used to update site URLs.

Contact Form 7

<https://wordpress.org/plugins/contact-form-7/>

Gravity Forms

<https://www.gravityforms.com/>

Cost: \$59+

For contact forms and newsletter sign-ups, it may be best to pull in a plugin to configure those forms and take advantage of their existing features and integration options. For simple forms, the free Contact Form 7 plugin may be sufficient, however Gravity Forms comes with a long list of [add-on integrations](#) with CRM services.

Broadcast

<https://wordpress.org/plugins/threewp-broadcast/>

Allows the “broadcast” of content from one site to other sites in a WordPress Multisite. At this time, I don’t see an appropriate content type for this treatment, but this could be helpful for maintaining consistent cross-site content.

Other Sites and Web Properties

Outside of the District and National Council sites, ULI has a number of other web properties and applications which may be related to the Council sites or use the Councils' Events data.

Here is a compiled list of possibly related or integrated web properties which either currently exist alongside the Councils in the same Multisite **OR** have been mentioned as related in previous conversations.

Name	URL (if applicable)	Integrate	Migrate
NetForum*	netforum.uli.org	Y	N/A
Spot Me**	N/A	?	N/A
ULI.org (flagship)	uli.org	?	?
ULI Americas	americas.uli.org	?	?
ULI Asia Pacific	asia.uli.org	?	?
ULI Europe	europe.uli.org	?	?
Urban Plan UK	urbanplanuk.uli.org		?
Communications Toolbox	communicate.uli.org		?
Urban Land	urbanland.uli.org		
Emergency ULI	emergency.uli.org		
Executive Calendar	executivecalendar.uli.org		
Executive Calendar 2	executivecalendar2.uli.org		
Knowledge Finder	knowledge.uli.org		
Navigator	navigator.uli.org		
Women in Real Estate	womeninrealestate.uli.org		
Tenant Energy Optimization Program	tenantenergy.uli.org		
Foundation	foundation.uli.org		
Charitable Trust	charitabletrust.uli.org		

Case Studies	casestudies.uli.org		
40 Under 40	40under40.uli.org		
ULI Fall Meeting	fall.uli.org		
ULI Spring Meeting	spring.uli.org		
ULI Asia Pacific Summit	apacsummit.uli.org		
ULI European Conference	europeconference.uli.org		
ULI Europe Real Estate Forum	europeforum.uli.org		
ULI Caribbean Hospitality Forum	chf.uli.org		
Hong Kong Urban Innovation Ideas Competition	hkurbaninnovations.uli.org		
Hotel and Resort Development: Next Wave of Innovation	hotelandresortconference.uli.org		
Housing Opportunity 2017	housingconference.uli.org		
Housing Opportunity 2017	housingopportunity.uli.org		
ULI Japan Fall Conference 2018 (English)	japanconference.uli.org		
ULI Japan Fall Conference 2018 (Japanese)	japanconference-jp.uli.org		
ULI Latin America & The Caribbean Conference	latinamericaconference.uli.org		
ULI Singapore Annual Conference	singaporeconference.uli.org		
Colorado Conference: TOD Marketplace	todmarketplace.uli.org		
Conference: UM/ULI Real Estate Forum	umuliforum.uli.org		
Conference: ULI Washington Real Estate Trends	washingtontrends.uli.org		

Note: for this list, any Multisite Archived sites or those with “temp,” “sandbox,” or “test” in the name have been excluded.

***NetForum**

As previously discussed, Viget will be integrating Events from NetForum into the new Council sites in some way. Our current options are:

1. All Events are created and edited in NetForum only. WordPress will pull the data for all Events for display.
2. Hybrid approach: Users may have to create an “Event” in WordPress and associate an Event in NetForum with the WordPress Event. This would provide presentational controls for the page in WordPress while the core Event data is in NetForum.

The first is Viget’s preferred approach as it reduces complexity and preserves data integrity with only one true data source. However, using NetForum as our one source of data may require additional fields and taxonomies which do not currently exist on NetForum Events. We would also be dependent on the robustness of the NetForum API and the data it provides.

Should the first approach prove impossible or overly compromise the user experience, then Viget will fall back to the hybrid approach. In the hybrid approach, more controls would live in WordPress, but with the added challenge of maintaining the relationship between the two data sources. The two events would need to remain in-sync throughout the lifecycle of an event: creation, revision, and deletion.

****Spot Me**

The Spot Me application also uses Events data in some way. Viget will require confirmation of where Spot Me pulls its data from. Does it currently touch the WordPress site(s) at all, possibly through the ULI API? Or does it only pull Events data from NetForum?

Should Spot Me pull data from WordPress, then Viget and ULI should discuss this in detail to affirm that we will not be limiting the capabilities of the Spot Me app as we rebuild.

For Discussion

- Are there any sites on this list that we should plan to migrate along with the Council sites?
- Should we plan for the Regional sites or the ULI flagship site to move to the new Councils Multisite install in the future?
- What sites on this list could be reliant on the Council sites, particularly their Events data? (Which sites would need to be integrated with the Councils sites?)
 - Will ULI need to display Council Events in the future?
 - Will Regional sites need to display the Events of their Councils in the future?
- How shall we plan to move Events without affecting the functionality of the Spot Me iOS app?

Testing Plan

As part of our process, Viget conducts thorough quality assurance testing on everything we build. This quality assurance testing occurs during the initial build process as components are developed, and at once towards the end of build across multiple browsers and devices. For ULI, this testing would be conducted on the custom Theme or Themes that would be built for the Council sites as well as any custom Plugins and their functionality.

Any core WordPress bugs can be [reported to WordPress directly](#). We recommend you read their [bug reporting guidelines](#) before submitting.

Any bugs or feature requests for third-party plugins should likewise be reported to the Plugin developer.

Quality Assurance Testing

Legal Requirements

Viget will confer with ULI's team, before site hand-off, to ensure that all legal copy outside of CMS control is correct and that all site features are compliant as defined in the [Privacy and Legal Requirements](#) section.

Browser Testing

Viget will test every major component and interactive element for functionality and compliance with design and brand guidelines. We will do this testing in supported browsers as defined in the [Browser Support](#) section.

Browser testing will primarily be conducted on the Parts Kit as each of the Council sites could be assembled using many combinations of these parts and components. Testing screens/pages alone could miss rare

permutations of a component while the Parts Kit should display each variation for reliable testing.

Accessibility

While conducting browser testing, Viget will also test for key accessibility features. As specified in the [Accessibility](#) section, Viget will test for WCAG 2.0 AA compliance. We'll use both manual testing methods and automated auditing tools like the [WAVE Accessibility Tool](#) and [Google's Lighthouse](#).

Screen-readers: While there are a number of screen-readers available, the Viget team is most familiar with VoiceOver on Macintosh and will conduct most of our screen-reader testing with VoiceOver and Safari on desktop and VoiceOver and iOS Safari on iOS devices.

Performance

Per our own build standards, Viget will take many steps throughout the build process to ensure the fast load time and performance of the sites.

Time allowing, we'll run performance audits to cap off this process. We can use tools like [Google's Lighthouse](#) and [Google's Page Speed Insights](#) to see where any additional optimizations may be made.

Analytics

Viget will verify that the Google Analytics and Google Tag Manager tracking scripts have been configured correctly. Using the Staging environment, we'll preview the tracking setup and confirm:

- Pageview and custom event tracking is functional
- Event tracking is functional in all supported browsers
- Any tags identified in previous conversations with ULI and ParsonsTKO are preserved

To close out this part of the work and transition GA ownership to ULI, Viget will also present an account transition plan with details about the account, filters used, and any goal updates.

For Discussion

- How would the ULI team like to be a part of the QA process?
- What rounds of review can we expect from ULI and its stakeholders that might result in bug reports and QA requests?
- How should we handle QA issues and support requests after the completion of this project?

Site Migration Steps

Provided here is a rough order of operations for migrating a Council site from the current Multisite install to the new Multisite install. While this process reflects a single site, we expect several sites to go through this process at once in “batches” and will coordinate with ULI as such.

- [Viget + ULI] Create a new site on the new Multisite install
 - Create a temporary URL for the site in Network Settings
 - Ex: council-name.councils.uli.org
 - Add a DNS record for this temporary URL/subdomain
- [Viget] Activate Theme
 - The Theme will automatically activate required Plugins
 - The Theme will generate content into a default site set-up
 - Create required Pages
 - Fill created Pages with default content
 - Generate a Menu with the recommended site navigation

- [Viget + ULI] Configure Site
 - Set the site's default language
 - If multilingual, configure the site's additional languages
 - Configure Date and Time display settings
 - Configure Analytics
 - Create user accounts and configure their permissions
 - Enable optional content types
 - Enable Job Postings?
 - Enable Press Releases?
 - Enable Resources?
 - Configure other settings consistent with all other sites
- [Viget] Automated Migration
 - Migrate Posts
 - Migrate Sponsors?
 - Migrate Users?
- [Viget + Council Admins] Manual Migration
 - Change/translate content in the default Page set-up
 - Create/recreate other Pages
 - Optional - create Job Listings/Press Releases/Resources
 - Optional - clean up migrated Posts as desired
- [Viget + Council Admins + ULI] Site Approval
- [Viget + ULI] Switch the new site Live
 - Update the site's temporary URL to the live URL in Network Settings
 - Replace the site's temporary URL in the database with the live URL
 - Switch the DNS record for the live URL from the old Multisite install to the new Multisite install
 - Minor testing to ensure launch was successful