Progress®

The Ultimate Guide to Multisite Management

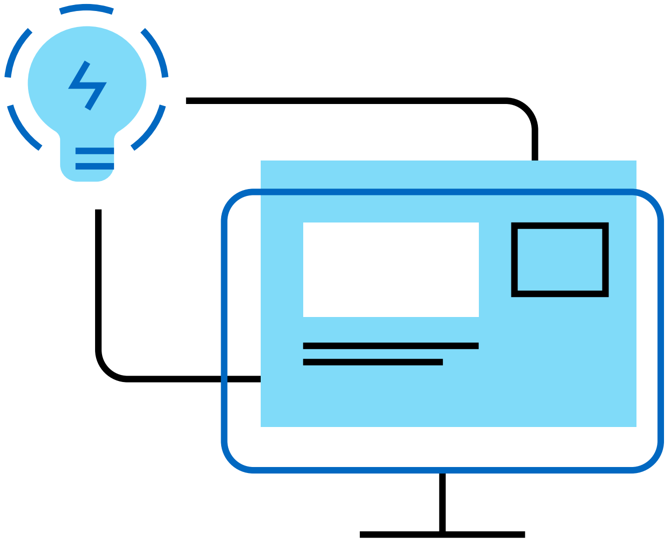
Benefits, use cases and guidance on setting up a web presence that spans brands, assets and websites

WHITEPAPER

Many organizations run into the challenge of scaling efficiently when they are in control of multiple websites. Taking a piece-by-piece approach—allocating teams to work on each site separately—drives higher cost of hosting and development, creates complex infrastructures and leads to inefficiencies in process. This guide examines the benefits of multisite management and the cases in which it makes the biggest impact. It also provides some direction for building optimal enterprise architectures based on Sitefinity Multisite Management.

Use Cases for Multisite Management

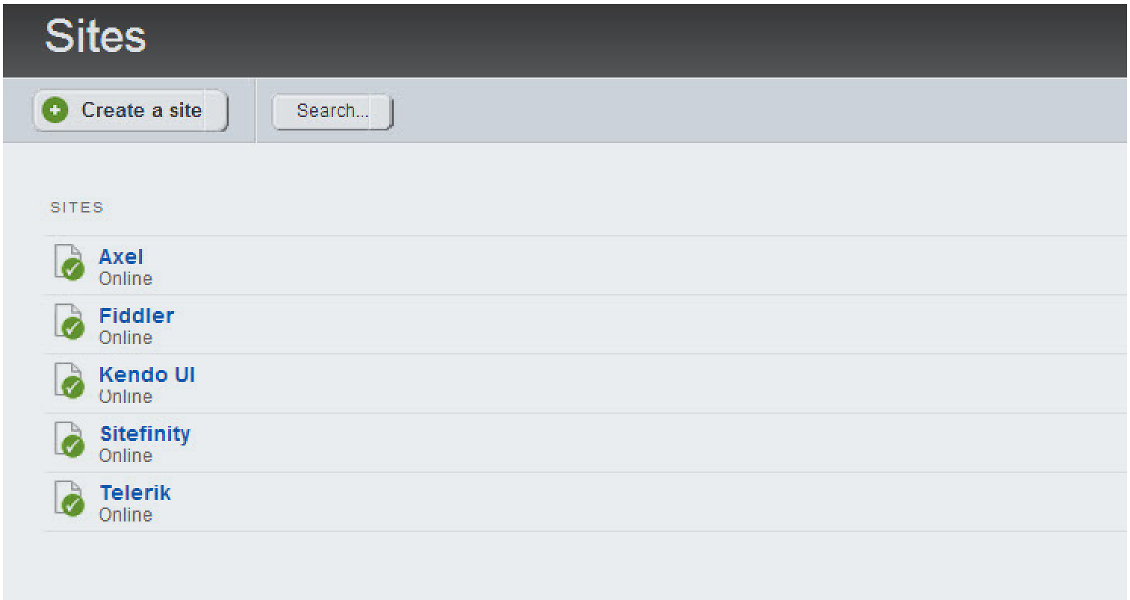
Multisite management is a solution for organizations tasked with maintaining more than one digital experience. At a certain point, the alternative—managing sites separately—will typically become too cumbersome and multisite becomes a natural next step. This section identifies the types of organizations or projects that benefit most from a multisite installation. In many cases, the move to multisite can provide millions of dollars in cost and infrastructure savings by introducing more efficient process.



Organizations Managing Multiple Brands

Many large organizations manage a wide variety of products, brands and services that operate in siloes. A natural side effect of rapid growth—following mergers and acquisitions or an expanding product portfolio—is website sprawl. Organizations tend to manage web assets on a case-by-case basis, building each website with unique processes. This creates incredible inefficiencies and negative effects for the organization. For example:

- Significant increase in cost of implementation, design, hosting, training and integration
- Negative influence on consistency across brands
- Scattered and incomplete customer data, which hinders the
- process of creating customer-centric experiences
- Siloed innovation that becomes very difficult to reproduce across the company



Not to mention, resources intended to be centralized—such as career listings, investment information, press releases and digital assets—tend to create additional redundancy and inefficiency.

Multisite management is a natural response to these scenarios. It significantly reduces cost, time to market and maintenance, provides a single point of integration and brings optimal consistency to the organization. It empowers companies to build standardized, scalable process throughout the organization, while providing individual departments with a level of independence and creativity as they create unique experiences for their customers.

Global Organizations

Organizations representing themselves both regionally and globally are faced with a similar challenge. Regional departments are typically tasked with management of a regional website, which incurs development, hosting, consulting, training and other costs separately from all other regions. In a situation where a business decentralizes those efforts, some of these web assets quickly deprecate, as some regional teams may be more mature and fast-paced than others. Global changes in the organization—new products, new campaigns, branding changes, etc.—result in a very slow, costly process of trickling down to various web assets and teams.

Globally distributed website architecture typically requires a combination of a multisite and multilingual presence. In other words, the organization will have many regional websites, each with region-specific information, a geo-specific domain, to enforce SEO, and support for a number of languages, which are also region-specific.

In this case, multisite management is an elegant solution because it facilitates a centralized approach for various aspects of the regional presence. Multisite management enables an organization to centralize implementation, integrations, hosting, code base, information architecture and user management, while regional departments maintain their independence in providing geo-specific information.

In reality, larger organizations are typically faced with a combination of both of the aforementioned challenges—they need a way to centralize both brand and regional infrastructure and manage the process of creating and maintaining all of these assets. Imagine you are a company with 30 brands and a presence in 75 countries. In a separated structure this would require a total of 2,250 teams (30 X 75) just to manage all the different digital assets. In cases like this, a framework and centralization of resources becomes imperative—and the cost savings, exponential.

Organizations with Reseller, Distributor or Franchise Networks

There's also the case of large partnership networks or franchises. A central unit is responsible for providing information, architecture and content, but distributors or franchises are given their own web presence to manage.

This requires that each distributor or franchise quickly gets access to a website, which they will manage independently. They are also given guidelines, process and various resources and assets to work with in order to comply with the framework set in place by the parent organization.

A similar thing happens in real estate, healthcare or service industries, when, for example, a parent organization acquires a new real-estate property or hospital. Building a digital presence for these properties or hospitals individually is a must. However, because these experiences will have the same structure and requirements as existing sites, centralization in a multisite scenario not only provides extremely fast time to market, it's a future-proof solution. Managers of property X get the latest and greatest functionality, features and integrations as soon as the mainframe is upgraded or enhanced, giving organizations a more agile strategy for delivering improvements and upgrades at scale.

Organizations Running Multiple Campaigns and Microsites

Microsites are delicately timed and targeted campaign sites that typically have a simpler infrastructure and very specific messaging content. They might be static sites with quick turnaround to support timely campaigns or they could also be dynamic, for example, a site with a blog on a very specific topic.
What is common is that organizations have a lot of microsites to manage and the top requirements include:

- The ability to bring the microsite to market in the fastest way possible—often within a single day
- Very low cost of production, especially at very high volume
- The ability to reuse resources—like templates or digital assets—within microsites
- Familiar framework across microsites, so that the team responsible for
- producing them can do so without training or initial setup time

This is why the multisite paradigm of instantaneous site creation and management makes it a perfect fit for microsite-heavy organizations. With practically no additional hosting or development costs, business users are able to model the message within a site and launch the campaign within very quick timeframes.

Because cost per site decreases at scale, this easily becomes a part of a centralize enterprise infrastructure. Teams already have access to all the structural components they need. If, in contrast, these sites were managed separately, organization would have to compromise on functionality, given the fact that each microsite handled individually carries a cost implication.

Intranets

Intranets are a great example of eclectic organizational needs. In an intranet scenario, each department or group needs to manage a separate set of information and this information needs to be presented in a consistent fashion in a number of portals where information from various departments can be combined.

With very sophisticated needs around document management, ownership of information and integrations with third party systems such as SharePoint, taking a department-by-department approach can exponentially increase costs, decrease adoption and impede collaboration.

A multisite architecture enables multiple departments to work from a shared pool of resources such as organizationally approved brand assets, information management, consistent taxonomy and shared user management.

Benefits of Multisite Management

Optimized for Maintenance

Single point of deployment

Pros: With Sitefinity Multisite (MSM) you can have multiple sites hosted within the same application and have them share the same codebase. This speeds up deployment tasks as it decreases the deployment destinations with a factor of the number of sites hosted within a single MSM instance.

In other words, with 30 sites, for which you have a new feature requested, developers can deploy in the one MSM instance once or do it 30 times in a scenario with 30 separate installations.

MSM provides single point of deployment.

Also, in case of network, server issues, the administrators will have one application to investigate and one area to address rather than multiple interaction points, which can be prone to errors and time intensive.

Challenges: With single point of development, comes single point of impact. This means that when the app restarts during deployment, all the sites will be down as they are powered by the same app. This can be addressed with rolling deployment processes in which the deployment is done on a server—which is isolated from public access while the upgrade is executed—while the rest are serving requests. Then the traffic is redirected to the upgraded server until the others are being upgraded and the process completes successfully.

Single point of upgrade

Pros: Organizations enjoy rapid upgrades in MSM setups with many sites. Whenever there is a new Sitefinity version, you can significantly reduce the number of hours invested in upgrading and testing. A single MSM instance that powers multiple sites will enable you to keep all projects on the same version across your organization and keep the sites updated with the latest security, performance and feature improvements. The same principle applies to QA—a process that is normally time intensive. Quality assurance after an upgrade is cut down by a factor of the number of websites with MSM.

Single point of development

Pros: Working with the same codebase not only improves delivery time, it can actually improve the quality of the code. Developers are able to reuse as much as they can from existing customizations. Additionally, having a single point of development improves the quality of the code. With single codebase, developers can focus on less scattered and more well organized code, which is easier to test with higher test coverage and better code quality control. Not to mention, it's less time consuming than having to test multiple sites individually. There is really no drawback to this.

More efficient hosting

Pros: The Sitefinity Multisite setup provides additional benefits for various hosting requirements.

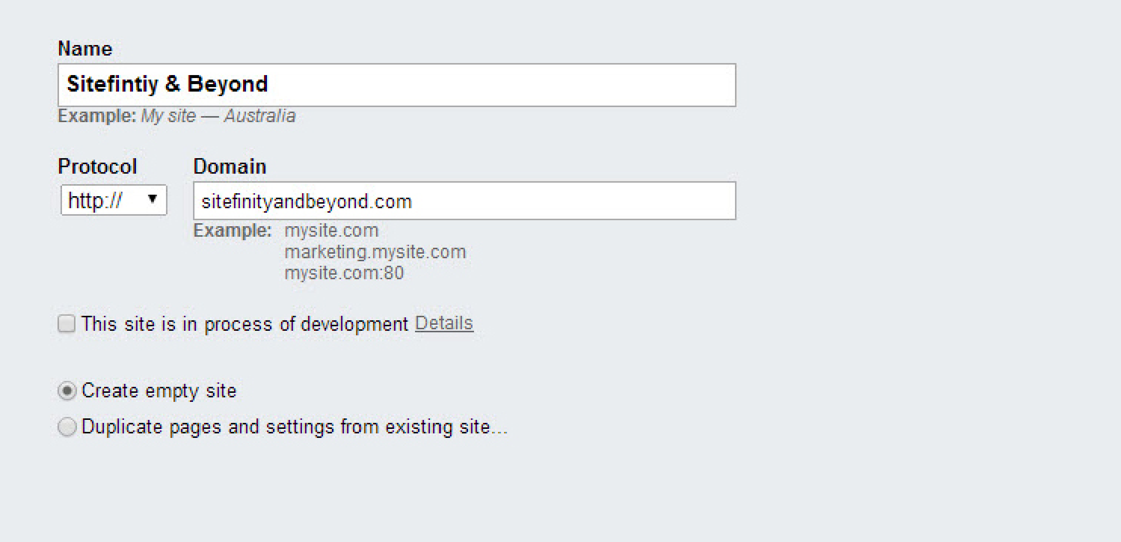
Because its architecture is on top of a single application, it cuts down the hardware resources needed for hosting the sites. The more sites you add, the more you will benefit from optimization. Memory and CPU consumption perform best in a single-site application. For example, performance testing on an enterprise project with 85 sites in 34 languages with 10,800 pages and complex permission infrastructure indicated that an architecture like this can not only function normally on a 4GB single server and scale efficiently, but it can also perform very well providing 2.5 seconds and lower average time for common operations such as page editing, widget editing and publishing. In contrast, hosting the 85 websites separately would require a minimum of 25-30GB RAM and about 170GB on average.

You can review the test results here.

Optimized for Rapid Delivery of Sites

Ability to quickly roll out sites

Pros: Sitefinity Multisite gives organizations a shared ecosystem that facilitates a very rapid process of rolling out new sites. With the click of a button, you can create new sites that are based on existing sites. During this process, you can turn specific modules on and off and configure which aspects of the sites will be based on shared or site-specific content. This reduces the hours needed to roll out a site by removing a lot redundant infrastructure and configurations or recreating content and setup, which already exists within the company domain.



Name

Sitefintiy & Beyond

Example: *My site — Australia*

Protocol: http:// ▾

Domain: sitefinityandbeyond.com

Example: mysite.com
marketing.mysite.com
mysite.com:80

□ This site is in process of development Details

● Create empty site

○ Duplicate pages and settings from existing site...

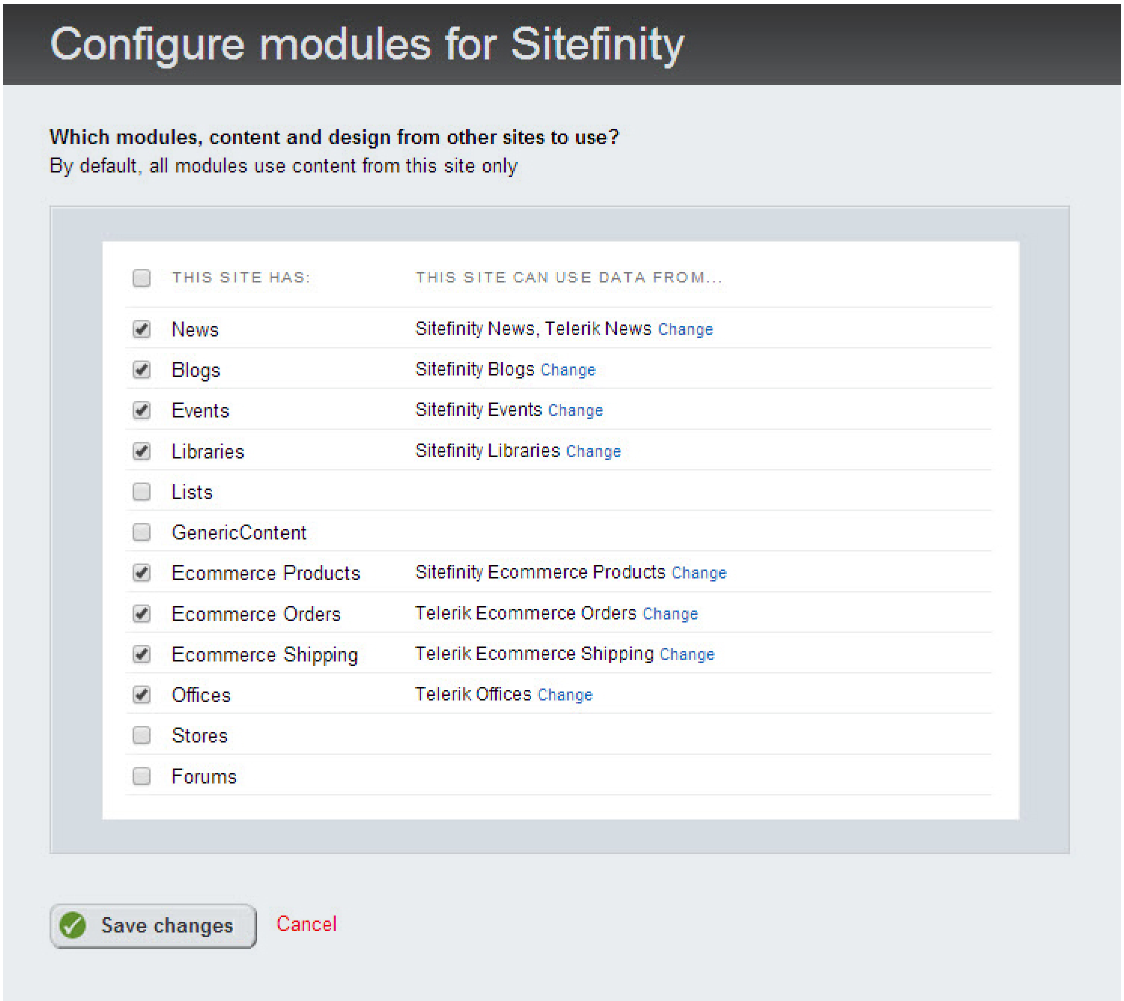
Challenges: If sites on a separate installation already exist, you will need to merge the new site into the exiting instance. Sitefinity offers a solution for this challenge—commonly faced by global organizations—by giving them the ability to merge existing sites into existing Multisite installations. This really gives them the flexibility they need to merge/export sites whenever there is a need for that. You can find the complete documentation here.

Optimized for Content Authoring and Delivery

Ability to reuse content between sites

Pros: Organizations will give their entire team a single interface to manage multiple sites, offering a convenient way to pivot between them and manage the content from one location. Organizations can share assets across all sites and use them as a basis to quickly launch new sites and pages without the hassle of establishing new projects and copying resources.

Challenges: With global sites, organizations have the need to control who is able to do what within the domain of their responsibilities. Sitefinity addresses that challenge with granular permissions so that organizations can authorize who can access what, giving them complete control of that aspect.



Configure modules for Sitefinity

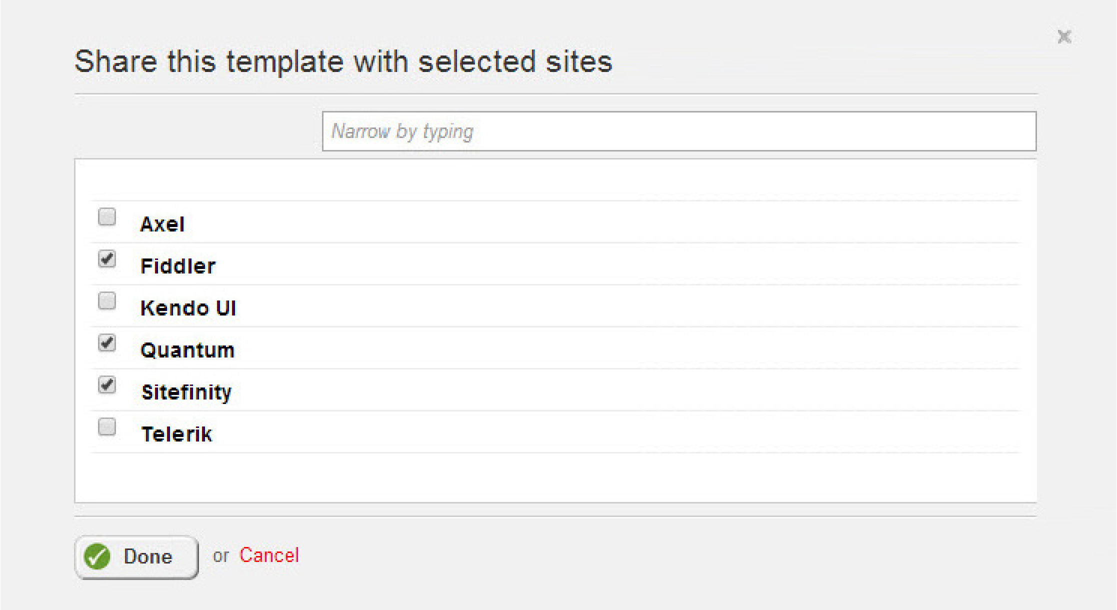
Which modules, content and design from other sites to use?
By default, all modules use content from this site only

☐	THIS SITE HAS:	THIS SITE CAN USE DATA FROM...
☑	News	Sitefinity News, Telerik News Change
☑	Blogs	Sitefinity Blogs Change
☑	Events	Sitefinity Events Change
☑	Libraries	Sitefinity Libraries Change
☐	Lists	
☐	GenericContent	
☑	Ecommerce Products	Sitefinity Ecommerce Products Change
☑	Ecommerce Orders	Telerik Ecommerce Orders Change
☑	Ecommerce Shipping	Telerik Ecommerce Shipping Change
☑	Offices	Telerik Offices Change
☐	Stores	
☐	Forums	

Ability to reuse look and feel

With Sitefinity Multisite Management you can share content across sites with a single click to publish corporate news, events and product listings on any satellite website. Reusing content, templates, themes and settings will significantly improve both employee productivity and the consistency of your messages across website properties.
Ability to centralize user management.

Multisite Management centralizes another very important resource: content authoring. As an administrator, you need to define access control on three different levels.



Share this template with selected sites

Narrow by typing

- □ Axel
- ☑ Fiddler
- □ Kendo UI
- ☑ Quantum
- ☑ Sitefinity
- □ Telerik

The action level: This level defines who gets to create, to approve, to delete and to change permissions for a certain type of asset such as a blog post or a page. This is typically described by roles such as Editors, Authors, Designers and Administrators and you get to set a policy in the scope of responsibility for each of those types.

The resource level: This level defines specialized groups able to manage a certain subset of the content such as a specific set of microsites, a regional website, an Investor Relations section and so on. These are often roles mapped to Active Directory groups that indicate geographic location or membership to a particular group in the organization.

The user level: This level gives each user their own dedicated permissions and privileges in the system and those can be expanded on demand as a part of the dayto-day work.

Within a multisite management architecture, you remove any management redundancies and it ensures a process of creating once, and delivering everywhere.

Essential Tips On Creating A Multisite architecture

1. Create a roadmap of integration

When you are building a multisite project, it is important to outline the milestones you want to achieve. A typical formula for the effort would look something like this:

Effort for building all sites = Effort for building the first website + (effort for building next site * number of sites)

Essentially, the bulk of the effort is involved in building the first website and setting up the infrastructure so that it can be reused by the other site. As a result, the effort to build each subsequent site is very small—on the technical side it might only consist of setting up a URL, some permissions and a template, duplicating some structures and then allowing the end users to build on top of that.

Keep this in mind when laying out a roadmap with milestones and account for the point where content starts to get created. You should aim for giving your content authors hands-on access as soon as possible and providing an agile way of shipping updates to the infrastructure as well as delivering various sites, but this should run parallel to the content-creation process in order to decrease time to market.

Additionally, set aside more time for the first project and account for training, mentoring or consulting in your roadmap. Setting up the framework right on the first project can drastically increase development time on the entire solution.

2. Map and carefully design the shared resources

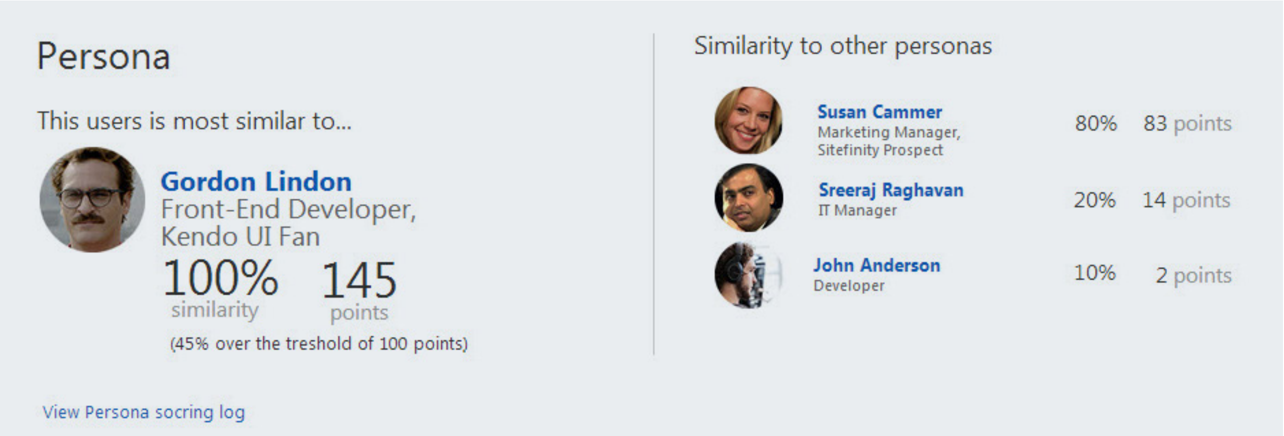
Qualify the different types of websites that you need to launch and create a map of what type of resources they would require. Some considerations that apply here are:

a. Building a list of required customizations from each stakeholder
b. Building a list of required integrations
c. Building a map of shared and unique templates and widget templates to be reused across site
d. Building a map of the permissions model

This will help you get a unified view of all needed functionality and it will help stakeholders collaborate on their requirements as functionality designed for one department can impact and benefit another.

3. Keep personalization in mind

Personalization is one of the things that we always need to keep in mind when building major infrastructures. Multiple website configurations strongly benefit organizations with a need to personalize different experiences as customer data becomes centrally stored. Before starting the project, educate stakeholders on personalization capability and enquire about future personalization needs. Make sure to account for future needs when designing user management, content management and information architecture.



Persona

This users is most similar to...

Gordon Lindon
Front-End Developer,
Kendo UI Fan

100% similarity

145 points

(45% over the treshold of 100 points)

Similarity to other personas

Susan Cammer Marketing Manager, Sitefinity Prospect	80%	83 points
Sreeraj Raghavan IT Manager	20%	14 points
John Anderson Developer	10%	2 points

View Persona socring log

4. Build the information architecture

It’s very important to build a structure of relationships and classifications that work consistently in the designated structure of sites. Lay out a list of categorizations and classifications that are currently used by the various websites and perform an audit to consolidate most of that infrastructure. This will provide good guidance for content authors and lead to consistency as you build out specialized experiences.

Create a spreadsheet of all content types, taxonomies and metadata that you need to support and map them to centralized structures if they are to be reused.

5. Create a faceted approach towards user access

In order to seamlessly manage users and permissions, it is recommended that you take at least a two-dimensional approach in multisite scenarios. With Sitefinity, users can be assigned to multiple roles and you can make good use of that infrastructure.

Keep one set of roles for functional access and another set of roles for website access. This way, you can centrally define users such as Authors, Editors, Designers and administrators and very clearly scope out how they deal with workflow and with various content operations, but, at the same time, have a separate role mapping for who gets access to a separate website.

This saves you from creating and managing a permutation of all roles. Instead of having roles for “Site A Authors”, “Site B Authors”, “ Site A Editors” and so on, you can assign someone to be a “Site A Backend User” and “Editor” at the same time. Editor consolidates all privileges towards different types of content, while the user’s Site A role ensures that he or she will have access to this website and will restrict the same type of editor assigned to Site B from editing content on Site A.

6. Consider staging and deployment architectures

In certain scenarios, geo-distribution or environment architecture also plays a role in how the entire solution is architected. Map out the processes that you need to support and include Staging and Syncing in your architectural diagrams. Sitefinity can support scenarios where the same content gets centrally managed in a staging environment and then synchronized across multiple production environments.

Map not only the authoring infrastructure but also the deployment infrastructure and see if questions and processes arise from there.

About Progress

Progress (NASDAQ: PRGS) offers the leading platform for developing and deploying mission-critical business applications. Progress empowers enterprises and ISVs to build and deliver cognitive-first applications that harness big data to derive business insights and competitive advantage. Progress offers leading technologies for easily building powerful user interfaces across any type of device, a reliable, scalable and secure backend platform to deploy modern applications, leading data connectivity to all sources, and award-winning predictive analytics that brings the power of machine learning to any organization. Over 1,700 independent software vendors, 80,000 enterprise customers, and 2 million developers rely on Progress to power their applications. Learn about Progress at **www.progress.com** or +1-800-477-6473.

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