Beginning
SharePoint® 2013
Building Business Solutions with SharePoint

Amanda Perran, Shane Perran, Jennifer Mason, Laura Rogers

CONTENTS

Chapter 1

Understanding SharePoint

WHAT YOU WILL LEARN IN THIS CHAPTER:

- The differences between SharePoint product versions
- Common usage scenarios for SharePoint
- An overview of important SharePoint concepts and features

The goal of this book is to provide you with experience using the tools and features of SharePoint in a way that enables you to craft and develop powerful, no-code business solutions within SharePoint. An important part of understanding how best to manage and use SharePoint from either an end user, information worker, developer, or IT pro perspective is first to understand the core capabilities of the product and how they can be extended to meet your organization's unique and specific business needs. Along those lines, this chapter introduces you to the exciting features and capabilities of Microsoft SharePoint Technologies. With it, you will learn how to put the platform to work for your organization to create scalable business solutions. In this chapter, you get an overview of how SharePoint is used and gain an understanding of the different combinations of licensing and configuration available within your environment.

UNDERSTANDING PORTALS

Before getting started on the technical tasks associated with managing and working with SharePoint content, it is important to understand the purpose of common usage scenarios for the technology. The power associated with SharePoint solutions is directly related to the ability for organizations to customize solutions to fit their needs. SharePoint offers many things, in many different formats. Although Microsoft provides a high level of direction, it is really up to the internal organization to build a solution structure that matches its specific requirements.

At a high level, SharePoint is a solution that provides features and capabilities to help organizations perform the following key business tasks:

- Share
- Organize
- Discover
- Build
- Manage

SharePoint enables organizations to build specific solutions that guide their users to desired behaviors. By creating solutions to provide alternate options for sharing and collaborating on data, organizations can enhance user satisfaction and increase productivity. In this age of the consumerization of IT, users expect to quickly, easily, and efficiently use technology in a self-serve fashion to solve needs as they arise. When deployed within an organization, SharePoint provides a platform that satisfies this need. But, like all good technology, without an understanding of what it can do and how to best use the features, things often are not used to their full potential. By reading this book, you will gain an understanding of the basic features available and will be prepared with many tools to get started building powerful, efficient business solutions.

Because SharePoint is one of the industry's leading portal technologies, we start with a review of portal technologies,

followed by some common reasons that organizations are driven to these types of solutions. With the framework laid, we continue with a discussion of the different versions of SharePoint and how they differ from each other. Then, we provide a high-level overview of some of the primary components of SharePoint. This overview will give you a sampling of what is to come in the remainder of this book.

What Is Portal Technology?

A corporate portal is a gateway through which members can access business information and, if set up properly, should be the first place an employee goes to access anything of importance. Portals differ from regular websites in that they are customized specifically for each organization. In many cases, a portal may actually consist of numerous websites, with information stored either directly on those sites or in other systems, such as file shares, business applications, or a regular Internet website. This allows the portal to be the central location users can visit to find information regardless of its actual storage location. Because making informed business decisions is key to becoming and remaining successful, it's important that the information placed on a portal be secure, up to date, and easily accessible. Because a business's marketplace may span the globe, an organization also needs to have the information that reflects the needs of employees from multiple specific regions.

 As an example, consider a new employee who has just joined an organization. In addition to learning her new job responsibilities, this employee must quickly get up to speed on the various company processes and policies. A good portal should provide all the company reference and policy information that the employee needs to review, as well as links to all the information systems and websites that employee needs to do her job. Information should be stored in easy-to-browse locations, based on subject or topic. In

situations where the location of a document or information is not obvious, the employee should be able to type words into a search box and receive suggestions. The employee should also be able to share information with others. In many ways, a good portal should act as a table of contents for all the information and websites related to an organization or topic.

In summary, portal technology provides ways for users to share and consume information from a central location. Though this may mean that all data lives within a single portal application, it is also very likely that the data is spread across many systems and solutions; the portal technologies are just a way to simplify access to the data.

Why Do Organizations Invest in Portal Technologies?

The following list provides just a few of the reasons why many enterprise organizations opt to invest in portal technologies:

- Users have become used to working with technology and, in many cases, expect to have access to simple, easy-to-access and easy-to-use tools to find and do their jobs. Because their personal lives include many of these technologies, the expectation that their work will use the same technologies is very high.
- The adoption of the web and web-related technologies makes portal technologies an obvious choice. Because portal technologies are web-based, decision makers can access important information via the Internet regardless of where they are located.
- Portal technologies enable information workers to handle day-to-day tasks from a single starting point, whereas previously things were spread out across multiple places and applications.

- With important regulatory initiatives, such as the Sarbanes-Oxley Act, organizations are using portal technologies to ensure that an accurate audit trail is kept on important documents and that business processes remain compliant.
- The file-share–based approach previously used to store most information was highly dependent on the habits and practices of the person creating it. Portal technologies store and share information based on the organizational structure, making them intuitive to use for everyone in the organization. This structure translates into productivity boosts because workers can more easily locate and retrieve information.
- Portal technologies are designed to scale with an organization, offering a model that will grow as the company grows.
- Although a company may be tempted by the latest and greatest information management system, most organizations still have legacy systems and data sources such as file shares, databases, or business applications. You can massage portal technologies so that they integrate with these systems, allowing easier data mining or migration.

WHAT IS SHAREPOINT?

SharePoint is one of the leading portal technologies. Many organizations implement SharePoint to satisfy the needs that were stated in the preceding section. Part of the Microsoft Office family, SharePoint provides a scalable, extensible, and customizable portal solution for organizations of any size. SharePoint consists of tools and technologies that support the collaboration and sharing of information within teams, throughout the enterprise, and on the web. The total package is a platform on which you can

build business applications to help you better store, share, and manage digital information within your organization. Because you can build with or without code, the package empowers the average business user to create, deploy, and manage team websites, without depending on skilled resources, such as systems administrators or developers. Using lists, libraries, and Web Parts, you can transform team websites into business applications built specifically around making your organization's business processes more efficient.

SharePoint is available to organizations in two primary ways:

- **On-Premise SharePoint Deployment:** With an on-premise deployment your organization builds, configures, and manages its own SharePoint environment. You can do this using many different approaches, which include maintaining your own data center or dedicated hosting in an offsite data center, partnered with a hosting provider. The main component of this type of environment is that you have full control of the environment and can deploy custom solutions without restraint.
- **Office 365 SharePoint Subscription:** Office 365 is a shared multi-tenant hosting experience where you subscribe to SharePoint services that are hosted and maintained by Microsoft in its data centers. You are given a set of guidelines around storage space and development options and must follow those within your environment. The benefits of this arrangement enable you to quickly and easily take advantage of SharePoint features without having to take on the extra overhead of managing and supporting a fully dedicated environment.

Many different organizational needs drive the choice between the two preceding options. To best determine which option is best for your organization, you need to

determine the current as well as future planned needs of your organization. With those needs in mind, you will then be able to determine what type of environment you need to support and maintain. Once you know what you need, you can focus on how best to do it. Some questions to consider at this stage include the following:

- What level of control and segregation is required for the data within my environment?
- What types of service-level agreements (SLAs) are in place for the data within my organization?
- Do we have the internal resources needed to support our environment?
- What types of customizations and custom code will need to be supported within our environment?

These, along with other factors, will help you determine which approach is best for your organization. In many cases it is a clear distinction as to which path to take. In other cases, a hybrid approach is often a desirable option, allowing users to have the best of both configurations.

Once you determine the deployment type that is best for you, you have to determine what level of licensing you will need to have. Each of the different deployment options have different licensing options available, giving you a choice with the different features you will need to acquire for your organization. Although this book assumes you are using SharePoint Enterprise features within an on-premise deployment, the following section provides descriptions and details on the different options available to you.

COMPARING DIFFERENT SHAREPOINT VERSIONS

For SharePoint on-premise, you have two options for installation:

- SharePoint Foundation 2013
- SharePoint Server 2013

For Office 365, you also have several options, as discussed at the end of this section.

SharePoint Foundation

SharePoint Foundation provides you with the basic collaboration features that are included within SharePoint. These features are the foundation required to build standard collaboration and communication solutions within your organization. The primary features of SharePoint Foundation revolve around document management and collaboration. The following list outlines the major features of the platform that have been responsible for its wide adoption in businesses:

- **Effective document and task collaboration:** Team websites offer access to information in a central location as well as the following capabilities:
  - Sites for teams to share documents and information, coordinate schedules and tasks, and participate in forum-like discussions. Team members can use these sites to share information regardless of their physical proximity or boundaries. Because SharePoint uses many of the same features users are accustomed to in Office, such as the ribbon, it is easy for users to navigate through the sites.
  - Libraries provide a better document creation and management environment than standard file shares solutions. You can configure libraries to ensure that a document is checked out before editing, track a document's revision history, or allow users to collaborate on its review and approval.

- Role-based security settings ensure that sensitive information is secure and available only to select individuals.
- Advanced task-tracking lists and alert systems keep users updated on current and upcoming tasks.
- Templates for creating wikis and blogs enable you to share information across your organization quickly and easily.

- **Reduced implementation and deployment resources:** Because SharePoint Foundation is available to Windows Server customers as a free download, implementation time and cost are greatly reduced, resulting in the following benefits:
  - Deploying team collaboration sites is easy, so organizations can free up skilled resources and focus on more important and complex tasks.
  - Users can immediately create and apply professional-looking site themes directly from within their browser.
  - Because SharePoint Foundation offers seamless integration with the Microsoft Office system, employees can use common applications, such as Microsoft Word, to create and manage documents, without the need for expensive training or process changes.

- **Better control of your organization's important business data:** SharePoint Foundation offers the following features for data and information management and security:
  - Enhanced browser and command-line–based administrative controls enable you to perform site provisioning, content management, support, and backup. Subsequently, a business can become more efficient and reduce costs.
  - Using advanced administrative features, IT can set the parameters under which business units can provision

sites and allow access, ensuring that all units fall within an acceptable security policy.

- The Recycle Bin item retrieval and document versioning capabilities provide a safe storage environment.

- **Embrace the web for collaboration:** By extending and customizing SharePoint Foundation, you can:
  - Create collaborative websites complete with document libraries that act as central repositories for creating, managing, and sharing documents with your team.
  - Create, connect, and customize a set of business applications specific to scaling your organizational needs.

In short, SharePoint Foundation represents the core content storage and collaboration features of SharePoint. It is the ideal edition for teams and small organizations looking to improve on their ability to work with one another in a secure, easy-to-use, collaborative workspace.

SHAREPOINT FOUNDATION USAGE EXAMPLE

The fictional organization Rossco Tech Consulting offers professional services and technology mentoring to startup companies. The following scenario outlines Rossco's experience with SharePoint, beginning with SharePoint Foundation and later expanding to SharePoint Server.

Because so much of Rossco's business revolves around process documentation, having a central repository with which to manage information surrounding projects is imperative. Because Rossco was using Windows Server, SharePoint Foundation became the obvious and most cost-efficient foundation on which to build solutions to manage its projects.

Planning

To identify what improvements it needed to make to enhance efficiency, the company asked team leads about the problems they were encountering when collaborating within their respective teams. From these results, the company identified the common issues each team shared and created a site hierarchy that best represented the organization's corporate culture and business processes. Because the organization consisted of only three divisions (Finance, Marketing, and Operations), it opted for a single collection of sites: a main site for the organization as a whole and three subsites, one for each division.

Because each division followed similar processes for most projects, the company could use SharePoint's template system to create a single "project" site template that all teams could use to create a

collaborative project location. The sites created from this template would then have the following features:

- A document library to create, store, and organize any documents related to the project
- A contact list to store and organize important contacts involved with the project
- A task list to coordinate important tasks for team members involved with the project
- An issue-tracking list to highlight any potential project concerns

The template was created and then saved in a central site template gallery, where each division could use it to generate a new site for each project.

Moving from Plan to Practice

After defining the organizational structure via team sites on the intranet, it was time for Rossco Tech Consulting to put its hard work and planning into real-world practice. As teams began to understand the tools that they now had available, the following practices started to drive more efficient operations within the organization:

- Projects were quickly defined via sites created using the project site template. This enabled teams to set up a central environment in which to create, store, and share information about a particular project with the entire organization in just seconds.
- Appointments and important deadlines were created and tracked from a single shared calendar on the project site that everyone on a team could easily view.
- Contact information was added to a central location so that team members could easily contact one another and other key partners or stakeholders for the project.

- Important project documents were moved to the document repository of their respective project sites where changes became easier to track and security became more manageable.
- Users began to create e-mail alerts on the task and issues lists, ensuring that tasks and issues were dealt with in a timely manner.
- As each division began defining its role in important projects, executives realized that they now had a bird's-eye view of operations within the organization, which was met with great enthusiasm.

SharePoint Server

SharePoint Server extends upon what is available in Foundation by including additional feature sets that provide a richer, more advanced collection of features that you can utilize in your organization's solutions. Some of these additional features are described in the following list:

- **Advanced Search:** Although it is true that search is included in the Foundation installation of SharePoint, the search features and functionality features available within the Server versions offer a great deal more flexibility. They allow for customized Search Results pages that you can configure with customized search Web Parts. You can also use these search Web Parts on other pages within the organization, enabling you to create customized search experiences for your users based on their business needs. These features are explored in more detail in Chapter 17, "Working with Search."
- **Web Content Management:** SharePoint Server supports web content creation and publishing for the Internet. Publishing features range from a content approval workflow to page layouts and content types,

which allow you to create and publish branded web content without writing any complex code. These features are often used very extensively for public-facing websites created in SharePoint or for internal intranet environments created within SharePoint. These features enable you to create a solution that utilizes some of the following features (which are explored in more detail in Chapter 15, "Getting Started with Web Content Management"):

- Easy Content Authoring
- Multi-Lingual Site Support
- Cross-Site Publishing
- Catalog-Enabled Lists & Libraries
- Managed Navigation
- Friendly URLs

- **Enterprise Services:** These services provide ways for you to quickly and easily build custom solutions using tools that are available to you within the Office product family, and include the following:

  - InfoPath Forms Services (see Chapter 12, "Managing Forms")
  - Excel Services, Visio Services, and PerformancePoint Services (see Chapter 10, "Working with Business Intelligence")
  - Access Services (see Chapter 13, "Working with Access Services")

- **Business Connectivity Services:** Although SharePoint may be your central application, your organization may have legacy business applications. Business Connectivity Services (BCS) enables you to connect to these external data sources and display business data via Web Parts, user profiles, or SharePoint lists. Although BCS does not contain the information from these systems, it acts as the virtual bridge between the alternate system and the user. Working with BCS usually requires some custom

code and because of that, this particular topic is not explored in detail within this book.

- **Social networking and computing:** Social networking is everywhere and has become an expected feature set of many solutions. Features such as ratings and tagging provide a less structured approach to classification of content, but truly help drive user adoption and relevance of content within the system. Many business users have become accustomed to these features in many of the online portals they use outside of the business world. For example, you may have purchased this book by visiting an online book retailer. From this retailer's site, you may have reviewed ratings that other readers left to describe the content of the book. Subsequently, you may also choose to rate your own personal experience in an effort to provide feedback for other potential buyers. This concept also works extremely well in the business world. As users rate content and provide comments or notes related to specific topics, it helps other users understand the content's relevance and subsequently reduces much of the time required to find the right content. You can learn more about these specific features in Chapter 11, "Working with Social Features."
- **Records management:** SharePoint Server provides excellent support for the management of content throughout its entire life cycle. This includes features such as auditing of content access, review and disposal of expired content, and the creation of multistage retention policies and file plans. Depending on the type of organization you work within, records management may be something that has existed for years or it may be a new concept. Whatever your situation, Chapter 16, "Managing Records," takes you through the effective usage and configuration of SharePoint Server as a records management system.

SharePoint Server typically comes with several different licensing options, each one allowing different features to be used in different ways. Because licensing and feature sets can be updated often, it is important to review the current options available to you by accessing the Microsoft product website. SharePoint has an additive client access license (CAL) structure that enables you to continually and easily add additional features as needed to your environment.

ANOTHER SHAREPOINT SERVER USAGE EXAMPLE

This section again presents the fictional company, Rossco Tech Consulting, to show how Microsoft SharePoint Server can be used effectively by an organization that has outgrown the capabilities of SharePoint Foundation and requires more advanced features and functionality. Rossco Tech Consulting has expanded operations to support a major software manufacturer.

This means providing English-, French-, and German-speaking customers with an Internet support portal where they can access up-to-the-minute information on the manufacturer's various software offerings.

Planning

While performing a needs analysis, the following factors were major contributors in Rossco's decision to use Microsoft SharePoint Server as the platform on which to build its customer support portal:

- The portal must accommodate multiple products from a central Internet-facing location. Each product has its own unique support materials.
- The portal must serve up content in multiple languages, although the original content will be created in English and then translated.
- For legal reasons, support documentation must be published via a strict approval process, involving several individuals in the organization.
- The portal must accommodate speedy publishing of up-to-date information on emerging products.
- Additional documentation exists beyond what is stored in the SharePoint sites. This content must be

indexed and accessible via the SharePoint search interface.

- Specific reporting requirements exist for dashboard scorecards on progress related to specific requirements, as well as the aggregation of information from multiple sources on a single page.

Moving from Plan to Practice

With the planning needs in mind, Rossco set out to plan and implement a Microsoft SharePoint Server solution. The following list outlines the company's experience.

- **Internet-facing sites in SharePoint Server:** Because users will access a major part of the portal via the Internet, Rossco created the initial site collection with a special publishing feature available only in SharePoint Server. This makes it possible to publish content through an automated and scheduled process from an internal and secured location to an external anonymous Internet-facing site. No technical skills are required for publishing this content, so Rossco can empower business users directly with the creation and publishing of web content, which cuts down considerably on the duration of updates to the website.
- **Multilingual design:** Because the portal needed to service three languages, the company used variations, a feature that helps create a site hierarchy for each language. This feature simplifies the management of content in multiple languages by creating a source site and a site for each language.
- **Content creation:** After creating the main subsites, the product teams created intuitively named lists and libraries (introduced later in this chapter) and added important documents and information. Making use of

built-in features such as content types, site columns, and views, they created and presented the data more efficiently. To ensure that the portal was in line with the corporate brand, the portal was customized. Using the master pages feature, they created custom style sheets, page layouts, and content types to remodel the look and feel of the portal. This transformed the original site with its generic SharePoint look into an easy-to-use support interface. Using page layouts, they were able to empower key business users with no programming knowledge to create and publish branded web content such as newsletters and product updates.

- **Automating operations:** Taking advantage of SharePoint's workflow features, Rossco created a strict content approval process that routed documents from approver to approver before finally publishing them to the Internet-facing portal.
- **Content aggregation:** Using built-in Web Parts, such as the Content Query web part, Rossco could gather the most sought-after and important information in its subsites and funnel this information to the Internet-facing portal where users had quick and easy access to support information for multiple products at a glance.

Choosing between Foundation and Server

Many organizations struggle with understanding which of the SharePoint products is most appropriate for their needs. The following sections identify some differences between the editions and usage scenarios for each. Although this book has been written specifically to review features and functionality from the perspective of SharePoint Server, the

following list shows some comparisons between SharePoint Foundation and SharePoint Server:

- **SharePoint Foundation contains the core document management and collaboration platform features**. With Foundation, the average information user can build web-based business applications without the need for technical resources or code. Because Foundation is available free with the Windows Server system, it has become a very popular collaborative tool for teams. This is largely because of the templates and existing site modules, which enable users to add documents, images, and information via a simple form rather than by using code. Users can create a new site based on an existing template in just a few seconds. SharePoint Foundation is tightly integrated with Microsoft Office applications, such as Word, Excel, PowerPoint, Access, and Outlook, so users can create and share content using a familiar, comfortable environment.

- **SharePoint Server includes the more advanced features that can be implemented within the environment**. It can accelerate the adoption of business process management, content management, and business intelligence across the intranet, extranet, and Internet. SharePoint Server delivers the tools to create, publish, and manage web-based content from a cohesive environment. SharePoint Server also offers the tools to automatically aggregate content from the SharePoint team sites, rolling up content from multiple sources to a central location, making information management even easier.

It is common for many organizations to have both a short-term and long-term plan for their SharePoint environment. In many cases, it is beneficial to start with a SharePoint Foundation environment and focus mostly on the

collaboration effort. Once your needs have matured, you can upgrade to one of the SharePoint Server options. The main thing you want to try to avoid, though, is trying to fit a square peg in a round hole by attempting to build solutions that require Server features on the Foundation environment.

Options for Office 365

The options for licensing SharePoint Online through Office 365 are based on factors such as the number of users you want to add, the amount of data you need to store, and the features you need to be available. In addition to the features described previously for SharePoint Foundation and SharePoint Server, Office 365 includes options for hosting your e-mail in Exchange and for making Office Professional available to your users.

Different pricing options are available for desk-less kiosk workers, education organizations, and government agencies.

> **NOTE** *The best advice we can give about the licensing available is to refer you to the Office 365 website (*www.microsoft.com/en-us/office365/compare-plans.aspx*) to compare plans. Plans are designed to be flexible and are known to change over time. The main premise, though, is that you can supply a SharePoint solution for a small or large organization at varying costs, depending on required needs*.

SHAREPOINT COMPONENTS OVERVIEW

Regardless of an on-premise SharePoint Server environment, on-premise SharePoint Foundation environment, or an Office 365 implementation, several components serve as a foundation for all things within SharePoint and are key to the effective use of the system. These will be very important concepts to master as you progress through this book. Although each of these items is addressed in detail in later chapters, the following sections offer a brief overview. This overview serves as a way for you to become familiar with several key concepts before you begin to work through the remaining chapters.

The Ribbon

The *ribbon* is a tool within SharePoint aimed at making management and navigation activities much easier than the traditional menu-based system that was available in previous versions of the tool. The goal of the ribbon is to provide a simpler user experience when interacting with the site. Small icons are used rather than text to give a quicker visual indication of the setting you may be seeking. In addition, as you select various objects on a page, the ribbon adjusts itself to display tabs that may be of interest to you based on your selection. Figure 1-1 shows an example of the ribbon. In the image, because a Media web part is selected on the page, the ribbon is displaying options that relate to managing the Media web part.

FIGURE 1-1
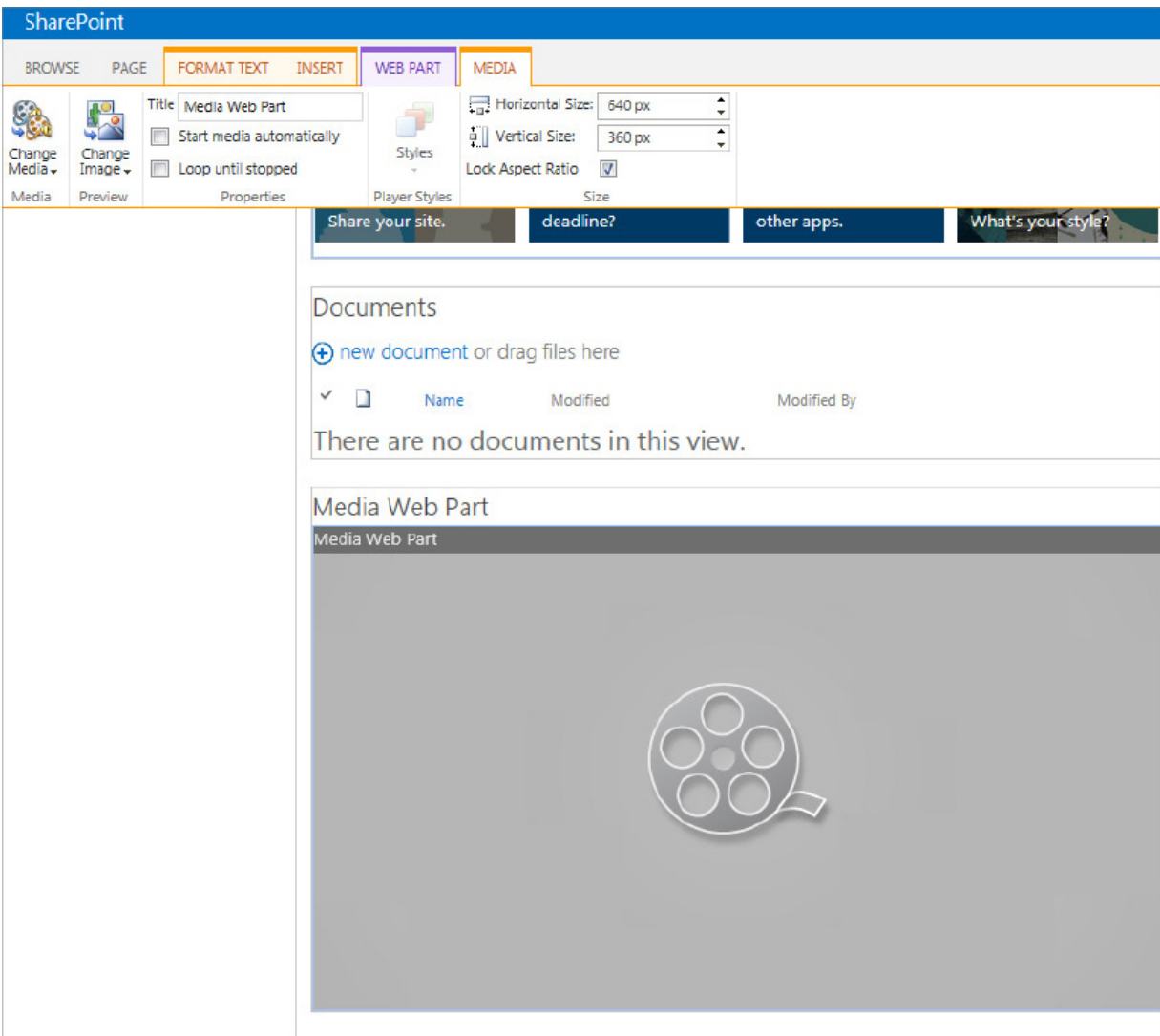
List Applications

The *list* is a fundamental application used in SharePoint Products and Technologies. A list is a storage location for a group of items. Items can be defined as any object that you are tracking information about. To create an item, you must fill out a form that describes the item, and the data from this form is then stored in a list. For example, you may have a list in SharePoint to track customer orders. Each customer order would be added to the list through the completion of the form. The form provides a controlled environment in which to collect information in a structured manner to