

# ACKNOWLEDGEMENT

I owe a great many thanks to a great many people who helped and supported me during the completion of this Industry Project.

My deepest thanks to my external guide and head of department at Nirma University, Prof. Pravina Mehta and my external guide at Bitscape Infotech Private Limited Mr. Asjad Lakhani for guiding and correcting various actions and steps and documents of mine with attention and care. They have presented a good amount of attention throughout the project and make necessary correction as and when needed.

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I would also thank my Institution and my faculty members without whom this project would have been a distant reality. Last but not the least, I also extend my heartfelt thanks to my father, my lovely and supporting mother and my sister for a mental support during this project.

**Place:** Nirma University, Ahmedabad

Thanking You,

**Siddharth D. Ayer**  
(08DCE025)

# **Chapter 1**

## **Project Profile**

# **Chapter 2**

## **Company Profile**

## **2.1 Company Overview**

Bitscape is Microsoft technology focused solutions partner specializing in to Microsoft SharePoint technologies and more recently Windows Azure based development services. Bitscape is Microsoft Gold Competency partner at organizational level for Portals and Collaboration, Business Intelligence, Software Development and Volume Licensing. We are also recognized as Microsoft Cloud Accelerate Partner for Azure Development platform which includes Windows Azure, SQL Azure and AppFabric (Windows Azure Middleware Service) and additional silver level competencies in Microsoft Partner Network for Digital Marketing, Web Development, Content Management, and Midmarket Solution provider. Bitscape is Microsoft Certified SharePoint Deployment Planning Services provider as well as authorized Microsoft Business Value Planning Services provider. At Bitscape our focus is to deliver result driven solutions for customer business and helping them realize true value of their IT investments and to ensure we make technology work for them by ensuring great business outcome.

Our value add services include infrastructure planning, consulting, architectural planning, consulting, sizing and securing organizational information including business continuity (high availability) and disaster recovery solutions using high end IBM Blade servers and Microsoft Virtualization technology (Microsoft IO) i.e. Windows HyperV (Hypervisor), Microsoft System Center group of products along with Microsoft forefront products.

### **2.1.1 Core values**

#### **2.1.1.1 Customer and customization:**

Every solution provided by Bitscape is defined by the customers' problems. Our endeavor is to provide our clients with a solution that exceeds their expectations.

#### **2.1.1.2 Team work:**

We provide equal opportunities for all our team members and ensure harmony between organizational growth and an employee's individual growth. Creativity is appreciated and communication is encouraged. Quite naturally, the results show in the solutions we provide.

#### **2.1.1.3 Integrity and transparency:**

We are an organization that swears by ethics, honesty and openness in our functioning.

#### **2.1.1.4 Innovation:**

At the heart of every technology is human intelligence. Hence, we understand that there is always a different way of doing things. Even when it means that what we intend to do hasn't to do hasn't been done before.

### 2.1.2 Bitscape's Mission Statement:

“Excellence through partnership, solutions and technology. Unrelenting in our drive to offer the best solutions, linking our core competencies with our customer's business requirements in ways that ensures that we are the customers preferred technology partner.”

### 2.1.3 Why Bitscape

- Microsoft Certified Gold Partner
- As SEI CMMi Level 3 and an ISO 9001:2000 Company
- Loyalty of 300 plus clients worldwide
- Experienced, professional and certified staff complemented with regular technology training conducted by certified trainers.
- It implements standard system based on software development life cycle (SDLC).
- Customer centric with on time delivery.
- Quality and excellent post implementation support.
- Provide value for customer's investment.

### 2.1.4 Quality Process

Bitscape is SEI CMMi Level 3 and ISO 9001:200 Company. For Bitscape, quality comes first. Bitscape's processes begin with an in-depth knowledge of the client's problems and the other required stimuli. This insistence on a holistic understanding makes them well-placed to deliver the best. Their quality pyramid consists of the top management, project teams and quality assurance team to achieve a high standard of quality and deliverance without compromising in deadlines. Their focus also extends to prevent defects on the deliverables at an early stage of the project life cycle.

Bitscape have already become a certified Microsoft gold partner, a Dundas technology partner and an adobe solution partner.

### 2.1.5 Business models

Bitscape's pricing and business models combine the accepted models and innovative strategies. The most common approaches are the Fixed Price Model and T&M. In addition to them, Bitscape have also worked out two additional models, which combine the above two models in varying degrees. The choice of the business model is generally agreed upon after close consultation with the client. If the client doesn't have a preference of their own, it is generally worked out by their consultants after a careful scrutiny.

#### 2.1.5.1 The list of business models that Bitscape work on are as follows:

- Fixed Price Model
- Time and Material Model
- Fluxed Model
- Committed Resource based Model

#### **2.1.5.1.1 Fixed Price Model**

Typically, the Fixed Price Model is feasible for a project when the system requirements are close-ended and clearly stated. The cost of the project is calculated beforehand and is quoted to the client. The subsequent execution of the project is completed within the stated budget.

This is a low-risk option, wherein the deliverables, costs and timelines are pre-determined. In case of any change in scope, a consensus is sought with the client on a fixed hourly rate.

#### **2.1.5.1.2 Time and material Model**

This is ideal for clients who want a greater role in the project execution. Under this method, the pricing is based upon the man hours spent on a project. This model is recommended for projects where scope, specifications and implementation plans are not clearly defined.

The project execution method is determined after a mutual consensus between the client and Bitscape. Through our project management and reporting method, Bitscape ensures that the exact hours spent on the project are reported accurately and transparently.

#### **2.1.5.1.3 Fluxed Model**

For certain projects, the scope isn't clear at the outset but the client wishes to adopt the fixed price model. In such cases, we use the T&M model in the SRS phase, which the duration is taken to arrive at the fixed scope of the project. Once this phase is completed, Bitscape offers the client a fixed price model. This is the ideal method in cases where the client wants to optimize budgets without compromising any aspect of the project.

#### **2.1.5.1.4 Committed Resource-based Model**

This model is mainly suited to software product development, existing overseas software development houses, dynamically changing scope requirements projects, dedicated creative or other resource requirements for the long-term. It is also adopted for clients who look at a long term association with Bitscape.

For clients wishing to have their software product developed or scope changing project under Bitscape's dedicated and highly skilled resources, they do all starting from SRS to deployment of self-installable application or self-serving portal. Once it finishes the product (project) it then works out dedicated technical support to support the product's ongoing upgrades.

For companies and clients who wish to associate with Bitscape's long term or wanting their offshore development team/house, they partner with them to invest in replicating their IT environments, training teams, setting up communication and security systems, and integrating development processes with theirs to ensure that the offshore team is an efficient and seamless extension of the their development facilities. Bitscape also invest in establishing additional resources that can be used to adjust the team at any time in this scenario we identify and define the team along with client and maintain

transparency, access, and control of the team with client where the dedicated team works as extension of client's development team.

### **2.1.6 Development Methodology**

Bitscape follows structured development methodology based in SDLC methods. It has their proprietary development architecture designed for best results. The following information will give more insight on Bitscape process.

- Structured development methodology based on SDLC methods.
- Customized processes based upon the needs of the project and inputs from the customers.
- Approach:
  1. Business objectives review
  2. Need analysis
  3. Scope of work
  4. Project management
    - a. Project manager
    - b. Project coordinator
  5. Risk management
  6. Configuration management
  7. Quality checks
  8. Project tracking
  9. Requirement change management

# **Chapter 3**

## **Introduction to development Tools and hardware**



### **3.1 What is SharePoint 2010?**

SharePoint 2010 is the business collaboration platform for companies and the Internet. When people need to work with other people, with content and information, or with line-of-business data, they can use the rich, out-of-the-box set of integrated capabilities in the SharePoint 2010 platform. People can also customize these capabilities to address specific business needs and integrate them with other products and solutions. Using the same set of capabilities and tools, companies can deploy SharePoint 2010 both inside the enterprise (that is, intranets) and outside of the firewall (that is, extranets, the Internet) so employees, customers, and business partners can work with the platform.

### **3.2 Why use SharePoint as a platform?**

- Deliver the best productivity experience by letting people work together in ways that are most effective for them. Whether through the PC, browser, or mobile device, SharePoint 2010 offers an intuitive and familiar user experience. These capabilities are significantly enhanced by the way SharePoint 2010 and Microsoft Office® 2010 work together, letting people increase productivity while using familiar products and tools.
- Cut costs with a unified infrastructure that offers enterprise-scale manageability and availability. Whether companies deploy the platform on-premises or as hosted services, SharePoint 2010 lowers the total cost of ownership by offering an integrated set of features and by helping companies consolidate their business-productivity solutions on top of SharePoint Server. Companies can then reduce costs related to maintenance, training, and infrastructure management.
- Rapidly respond to business needs with dynamic and easily deployed solutions. SharePoint 2010 offers the tools and capabilities for end users, advanced users, and professional developers to design and create business solutions that can be integrated with existing company data, tools, and processes.

### **3.3 Capability areas of SharePoint 2010:**

SharePoint 2010 helps people work together in new and effective ways with a rich set of six integrated capabilities areas. Using SharePoint, people can set up Web sites to share information with others, manage documents from start to finish, and publish reports to help everyone make better decisions.

#### **3.3.1 Sites**

- SharePoint 2010 Sites provides a single infrastructure for all your business Web sites. Share documents with colleagues, manage projects with partners, and publish information to customers.

#### **3.3.2 Communities**

- SharePoint 2010 Communities delivers great collaboration tools—and a single platform to manage them. Make it easy for people to share ideas and work together the way they want.

### 3.3.3 Search

- SharePoint 2010 Search cuts through the clutter. A unique combination of relevance, refinement, and social cues helps people find the information and contacts they need to get their jobs done.

### 3.3.4 Content

- SharePoint 2010 Content makes content management easy. Set up compliance measures "behind the scenes"—with features like document types, retention policies, and automatic content sorting—and then let people work naturally in Microsoft Office.

### 3.3.5 Insights

- SharePoint 2010 Insights gives everyone access to the information in databases, reports, and business applications. Help people locate the information they need to make good decisions.

### 3.3.6 Composites

- SharePoint 2010 Composites offers tools and components for creating do-it-yourself business solutions. Build no-code solutions to rapidly respond to business needs.

## Sharepoint 2010 Capability Areas



## 3.4 List of tools and technologies used to build Knowledge Management System:

**3.4.1 Software resources (Server side):** Below mentioned are software components that must be installed before proceeding to deployment of project:

- Microsoft Office SharePoint Server 2010
- MS Server 2008 / MS Server 2008 R2 64 bit
- MS SQL Server 2008
- MS Office 2010
- Internet Information Server(IIS) 7.0 or later
- Visual Studio 2010
- .NET framework 3.5

**3.4.2 Software resources (Client side):** Below mentioned are the least software requirements for any client to be able to work with project.

- Windows 7 64 bit (Considering access to SharePoint foundation)
- Internet Explorer 7.0 or later

**3.4.3 Hardware resources (Server side):** Below mentioned are the minimum hardware requirements to deploy the project onto the server.

- Intel Xeon 2.4 GHz or Higher
- 16 GB RAM
- 2 TB Hard Disk
- 2\*1 GB LAN Card

**3.4.4 Hardware resources client side):** Below mentioned are the minimum hardware requirements for client to successfully operate the project.

- 4 GB RAM
- 320 GB or more HDD
- 2\*1 GB LAN Card

# **Chapter 4**

## **System analysis**

## **4.1 Proposed system**

In the proposed system our Knowledge Management System is totally computerized and fully centralized. It means all the data are stored at one place in the organization and interaction is done from that place via client systems having sufficient rights to access network and the server services.

All the employees of the organization can directly connect with our system by providing the configured URL link in their Web Browser and their username and password at the prompt. So there is no need to maintain the individual server at each location of an organization and also need not to load the software at all location of organization.

### **4.1.1 Core modules of the proposed system:**

- Develop and ASP.NET and SharePoint server based site that could be used by the employees of the organization.
- User Management – in this section admin can add/edit/delete users and profiles. He can also enable/disable users. Users can view profiles and edit their own profile.
- Quality Management System – This enables users to get information about the software standards used for maintaining quality in software development, testing and delivery to client. Our task in this section was to enable users to add/edit/delete processes and manage workflows/content/navigation/documents.
- Information Security Management system – this section provides information about the security policies used in the organization to maintain the secrecy of intellectual property of organization. Our task in this section was to enable users to add/edit/delete processes and manage workflows/content/navigation/documents.
- Software Process Database – This section provides information about the MBR and OGD. Our task was to enable Users of site to make them able to add/edit/delete processes and manage Workflows/content/navigation/documents links.
- Human Resource Management System – This section provides information about the policies and rules followed for the human resource management throughout the organization.
- Document Flow Management – the KMS contains a number of documents for different processes and policies and to maintain this it requires different document libraries. Our task was to enable user to add/delete/upload/download/search document and manage change flows /document categories.
- Task Management – In this section a person can assign task to its juniors with all details like due date, name of the task. In this section our task was to generate task that can be maintained and delivered to person – to person. This section manages task listing/Search.
- Version History Management – this section manages the major and minor versions of the documents according to Bitscape Versioning.
- Reports – User can view different reports such as user usage, top ten recently visited user of the site, time to complete the task and so on.

#### 4.1.1 Benefits of our system

- Since our System is developed in SharePoint 2010, it provide the facility of master page (A single page to maintain same UI across whole site), gallery, site theme, site features, web parts (A customized user solutions for custom problems), search, people and group and their permission and search of the same, Item level security, event receiver and many more.
- System provides features at each stage of a document's life cycle, from template creation to document authoring, reviewing, publishing, auditing, and ultimately destroying.
- It maintains the workflow and versioning of document as well.
- It maintains the authenticity of the document and also provides multiple permission levels for specified user. Hence it maintains secrecy of document and only authorized user is able to access the resources
- As system relies on the single SharePoint server to serve the clients, it benefits organization by providing freedom of having thin clients on client side without having much processing power.

### 4.2 Feasibility study

A feasibility study is undertaken to determine the possibility or portability of either improving the existing system or developing a completely new system. It helps to determine an overview of the problem and to get rough assessment of whether feasible solution exists. This is essential to avoid committing large resources to a project and then repent on it later.

#### 4.2.1 Scopes of feasibility study

- Technical Feasibility
- Economic Feasibility
- Operational Feasibility

##### 4.2.1.1 Technical Feasibility

Bitscape has enough equipment, software and personnel to complete our system so that our system is technically feasible, Reliable and Time saving and finally working.

##### 4.2.1.2 Economical Feasibility

This phase is mainly concern with cost. As there is no existing system, our system will be regularly used. So it will be beneficial at financial point of view to organization.

#### 4.2.1.3 Economical Feasibility

- This last phase decides that whether new system is fully feasible or not.
- This system also contains resistance from user that will underline the application benefits.
- It also provides the security and is also user friendly so that any employee can understand and can contribute for well being of system.
- In this way our system is operationally feasible and worthy for its existence.

### 4.3 Objective of project

“Knowledge Management System (KMS) refers to a system for managing knowledge in organizations, supporting creation, capture, storage and spread the information.”

- Sharing of information.
- KMS is centralized repository of information.
- Authorized Employee can access.
- Integration with document library.
- Version controlling.
- A tri-state information publishing workflow.
- Search document, information, item.

### 4.4 Project Synopsis

**4.4.1 Sites:** Sites are actually subpart or abstracts of the whole KMS and each has different objective.

- Quality Management System(QMS)
- Information Security Management System(ISMS)
- Software Process Database(SPDB)
- HR Management System

#### 4.4.1.1 QMS Site: (Quality Management Site)

- Process
- Templates
- Guidelines
- Checklist
- Forms

#### 4.4.1.2 ISMS Site: (Information Security Management Site)

- Policy
- Templates

#### 4.4.1.3 SPDB Site: (Software Process Database Site)

- MBR (Metrics Baseline Report)
- OGD (Organization Goal Document)
- Training Database
- Proposal Documents
- Project Database

#### 4.4.1.4 HR Site: (Human Resource Site)

#### 4.4.2 Image library (To hold site specific image repositories)

#### 4.4.3 Library implementation requirement

- Upload, Download and displaying the Document in different formats
- Document Versioning and history maintenance
- Enforce document check-in/check-out for Integrity
- Review and approval workflow

#### 4.4.4 Workflows: (Automated mechanisms that governs the flow of data in site)

- Tri-state process document author-reviewer-approver workflow for QMS
- Tri-state policy document author-reviewer-approver workflow for ISMS, SPDB
- Content review-approval work flow for sites like QMS, ISMS, SPDB

#### 4.4.5 Workflow implementation requirement

- Can be configured to fire manually as well as automatically.
- Supported with email Integration so that concern parties will get updated by email notifications
- Non-approved content or document must not be visible to others

#### 4.4.6 Reports

Reports are abstraction of user and SharePoint activities stored in a highly managed and organized form.

- |   |  |
|---|--|
| • Audit Trails  | • Most downloaded Document                     |
| • Backup & Restore Log                                | • Pending approval by User                     |
| • Top 10 recently visited user with activity tracking | • Pending reviews by User                      |
| • Top 10 not active users                             | • List of non-active documents by library name |
| • Master list of Index from process documents         | • Document Detail report                       |
| • Change Request Log                                  |  |
| • Document Archival Log                               |  |
| • Most visited content or site                        |  |

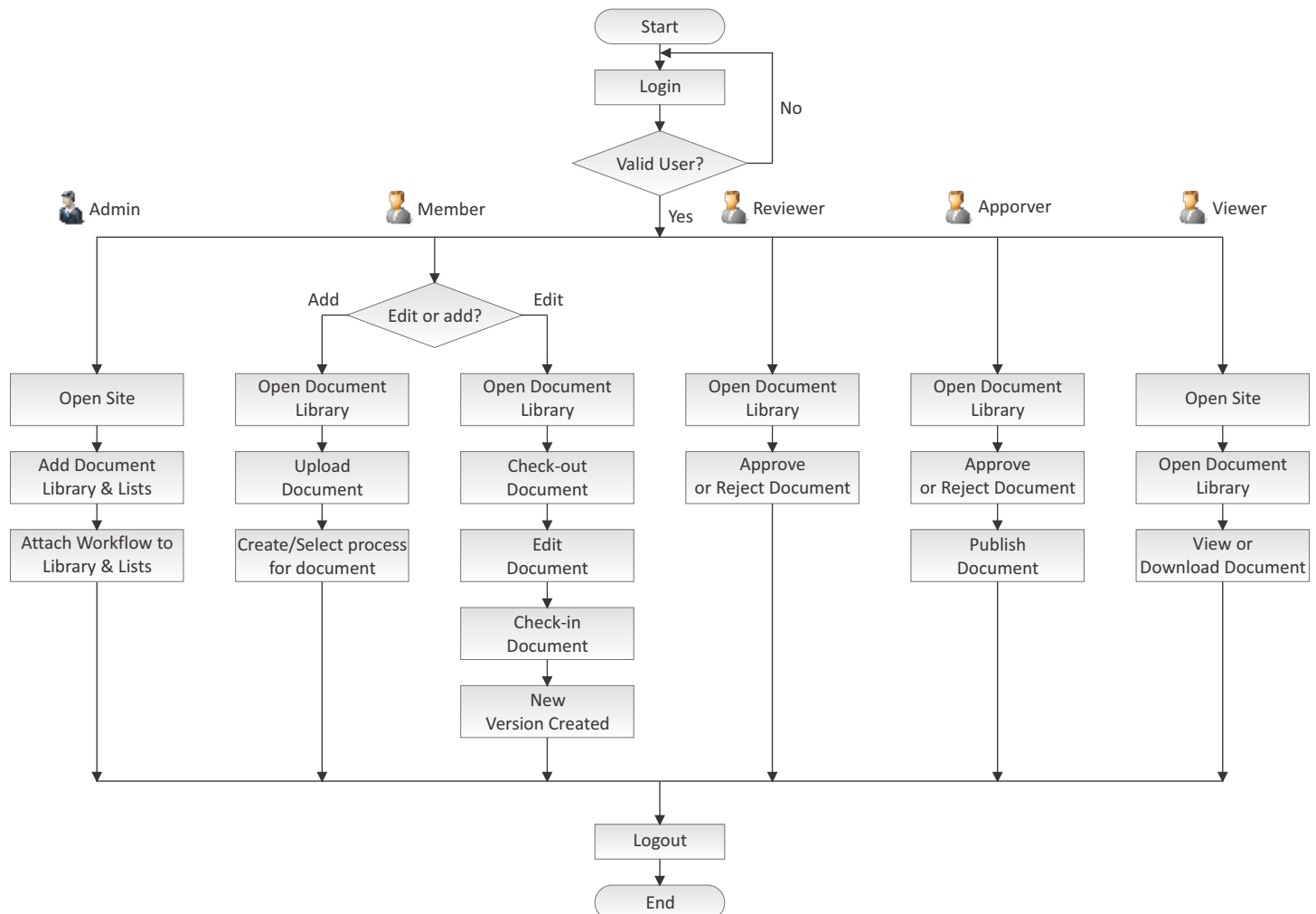


# **Chapter 5**

## **System Design**

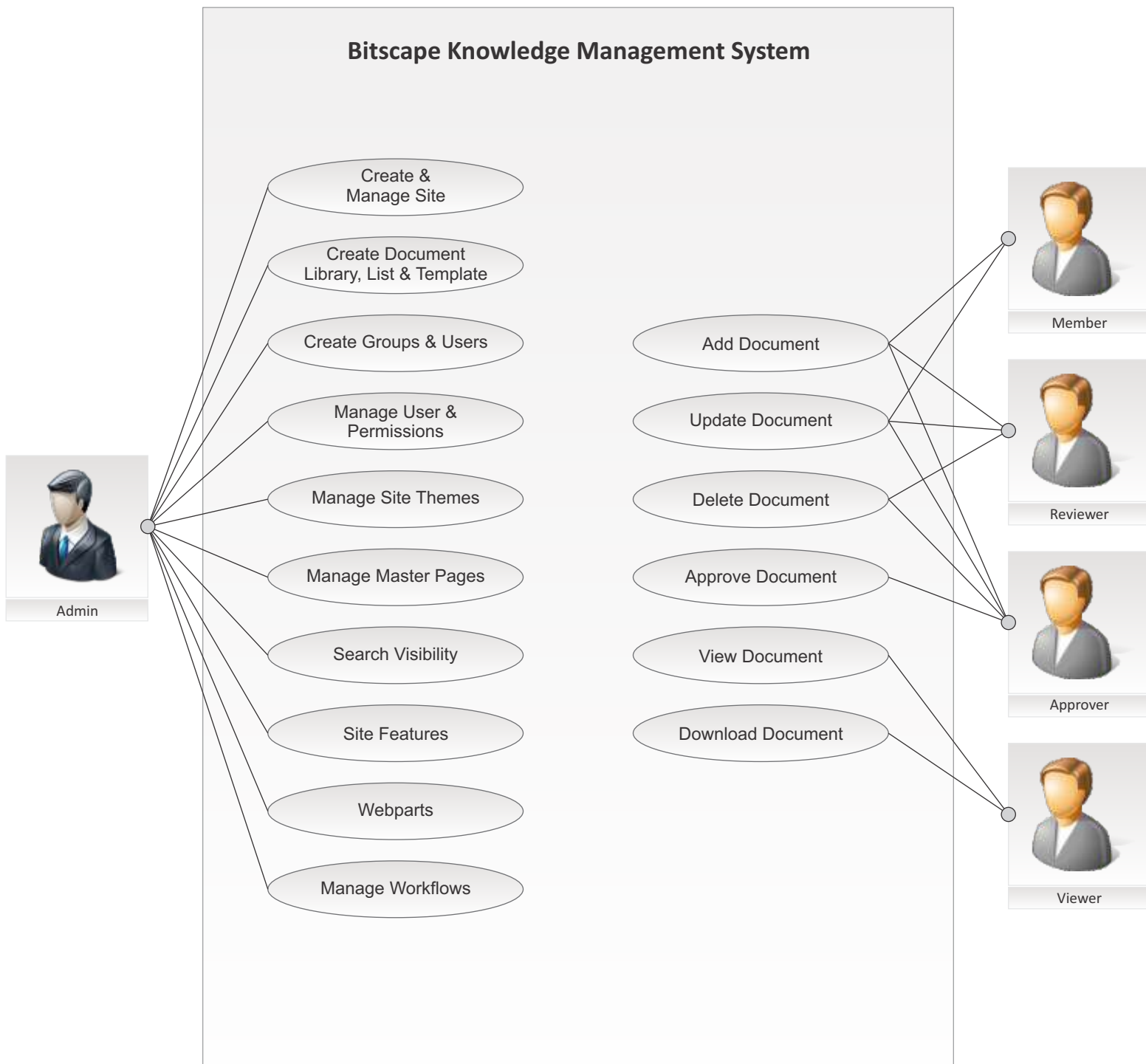
## 5.1 SYSTEM FLOWCHART :

A graphical representation of a system in which data provided by a source document are converted into final documents.

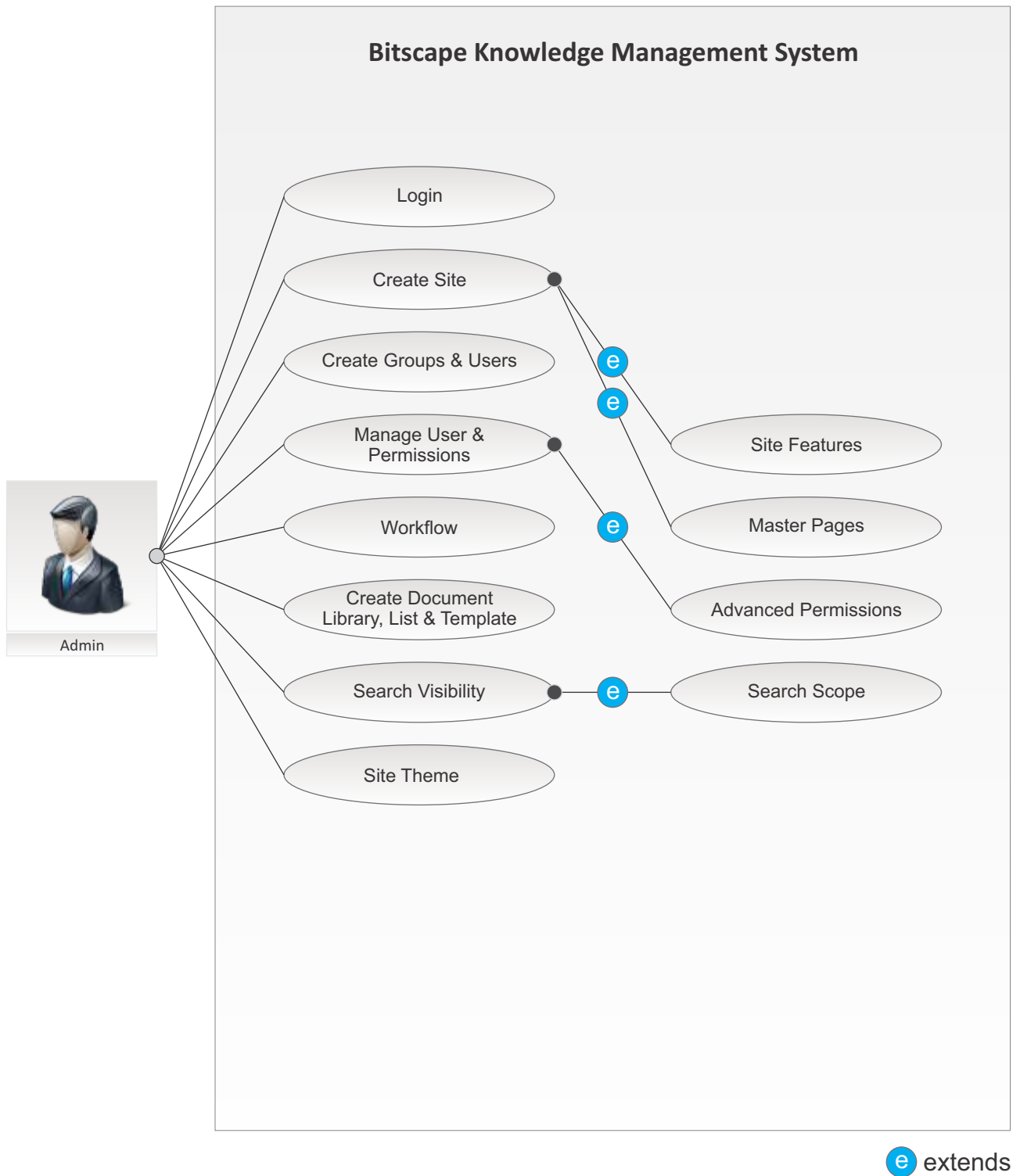


## 5.2 SYSTEM USECASE

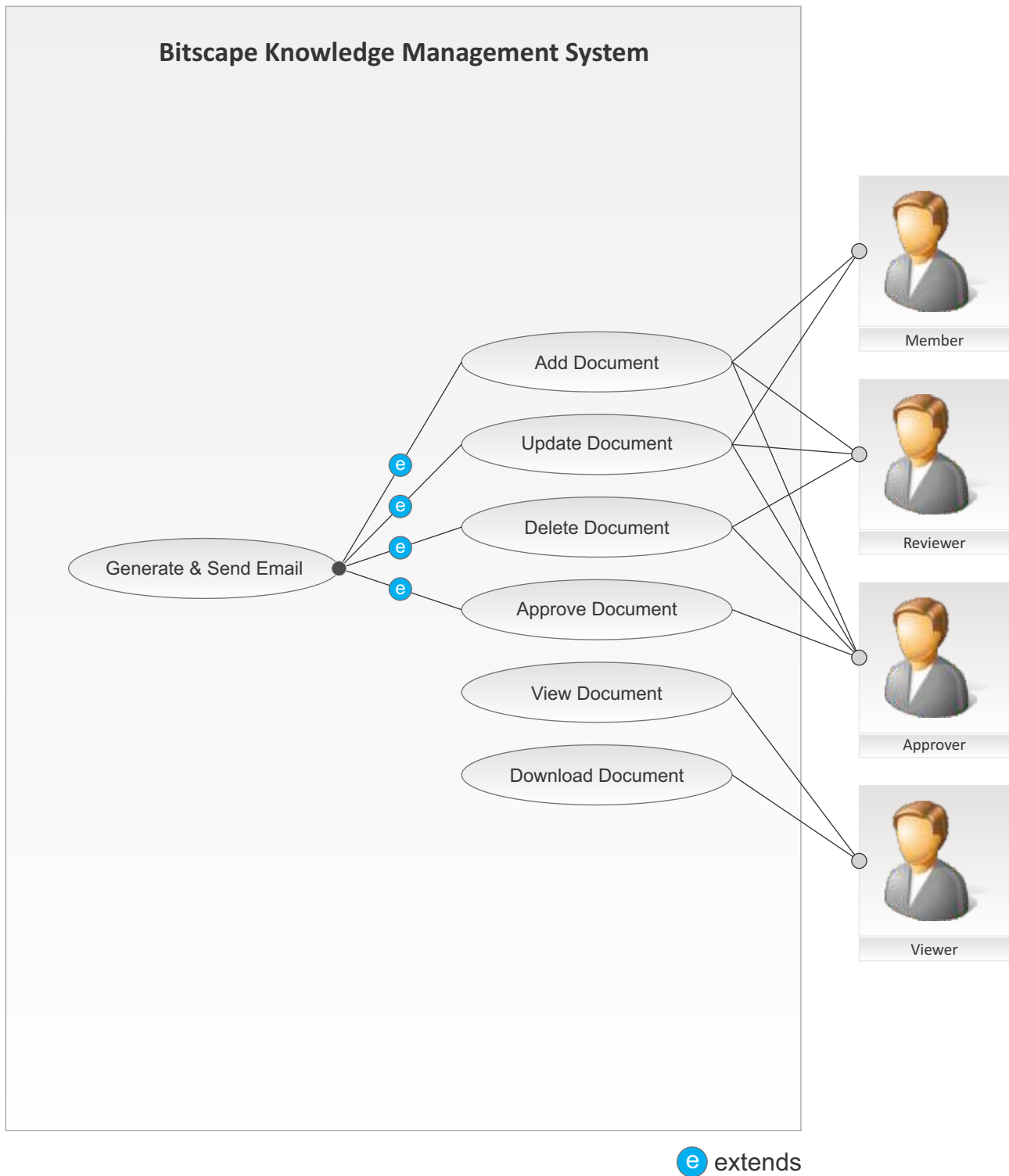
An analysis model that identifies the actors who can interact with a system to accomplish valuable goals and the various use cases that each actor will perform.



## 5.3 ADMINISTRATOR USECASE

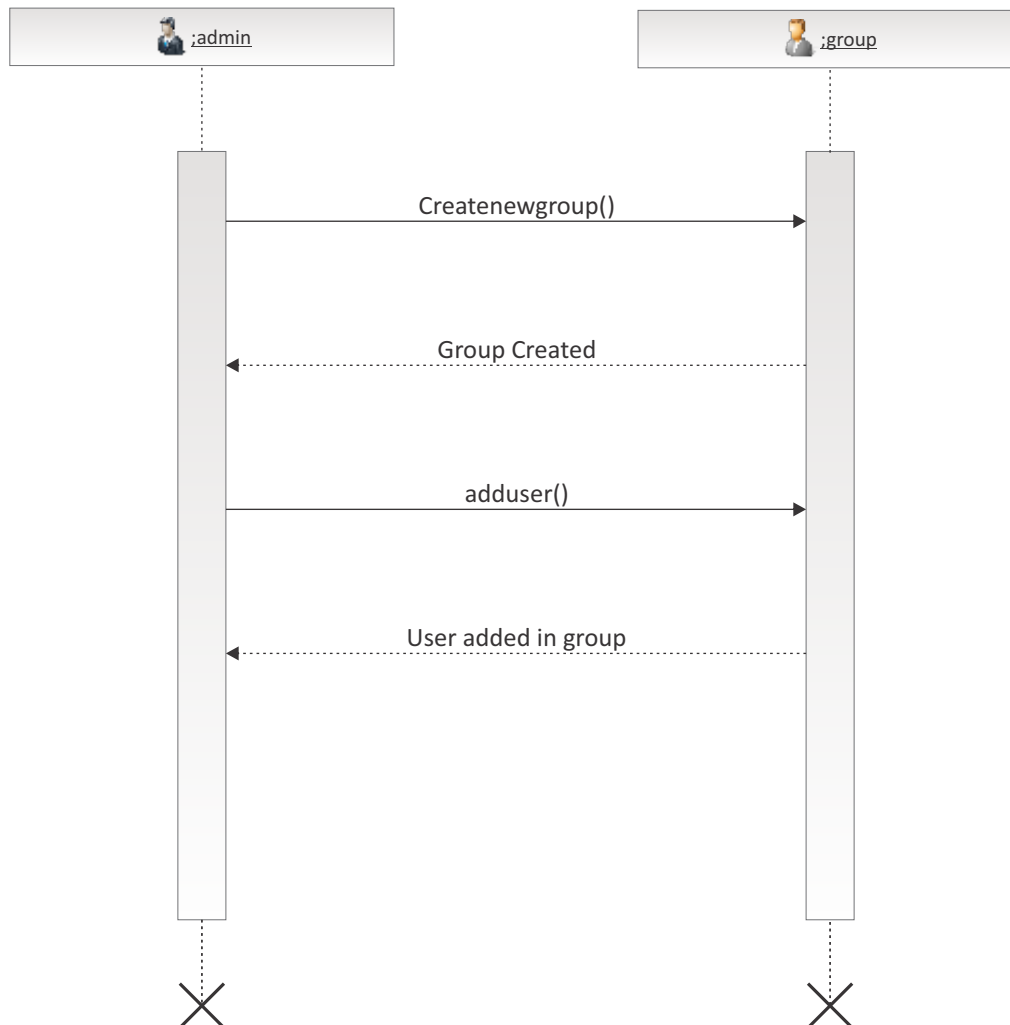


## 5.4 MEMBER USECASE

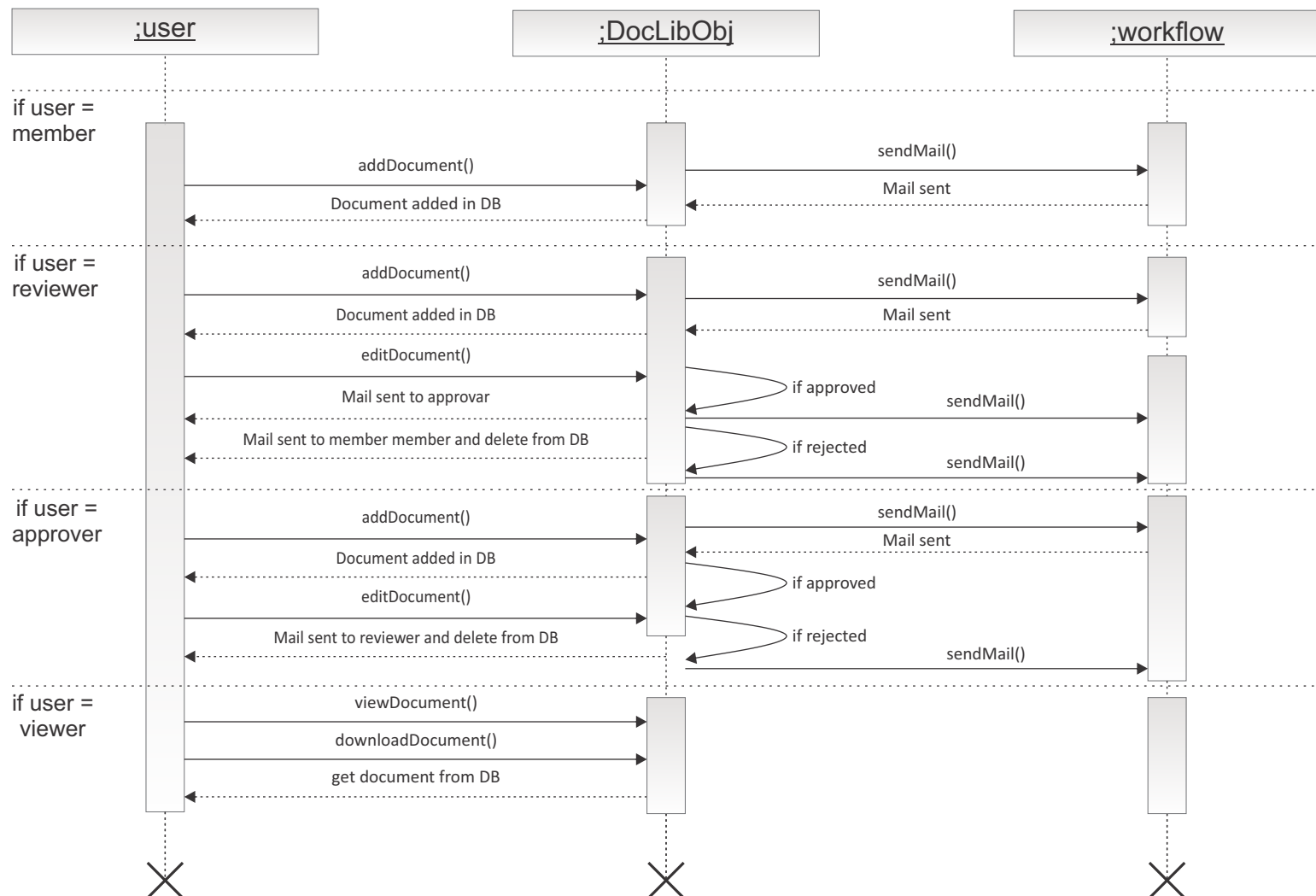


## 5.5 SEQUENCE DIAGRAM - CREATE/ADD USER IN GROUP

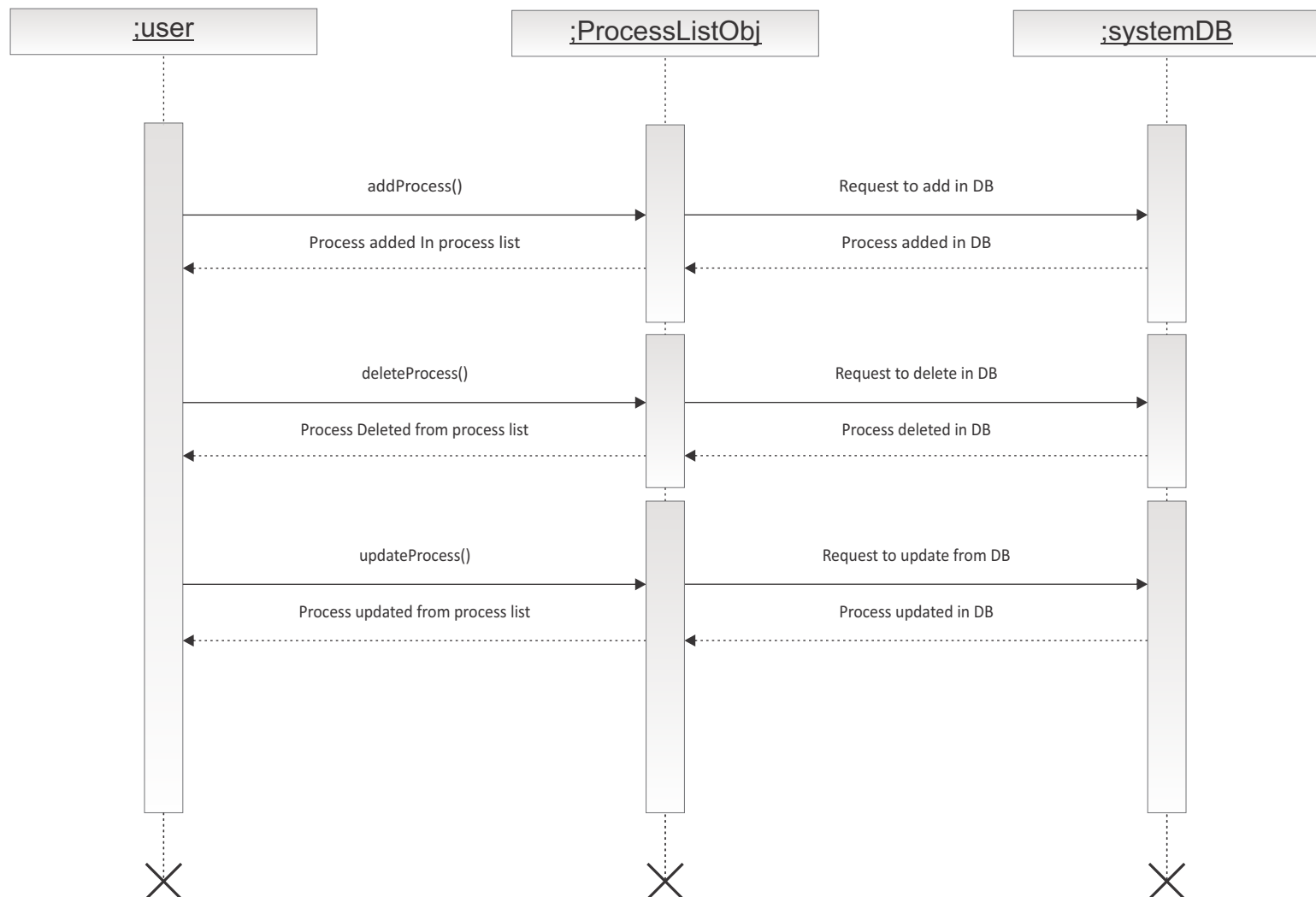
A sequence diagram is a UML diagram that depicts interactions among various application components or participants over time, including but not limited to system objects, actors, and other systems or services, in order to accomplish a task.



## 5.6 SEQUENCE DIAGRAM - INTERACTION OF DIFFERENT USER WITH DOCUMENT LIBRARY



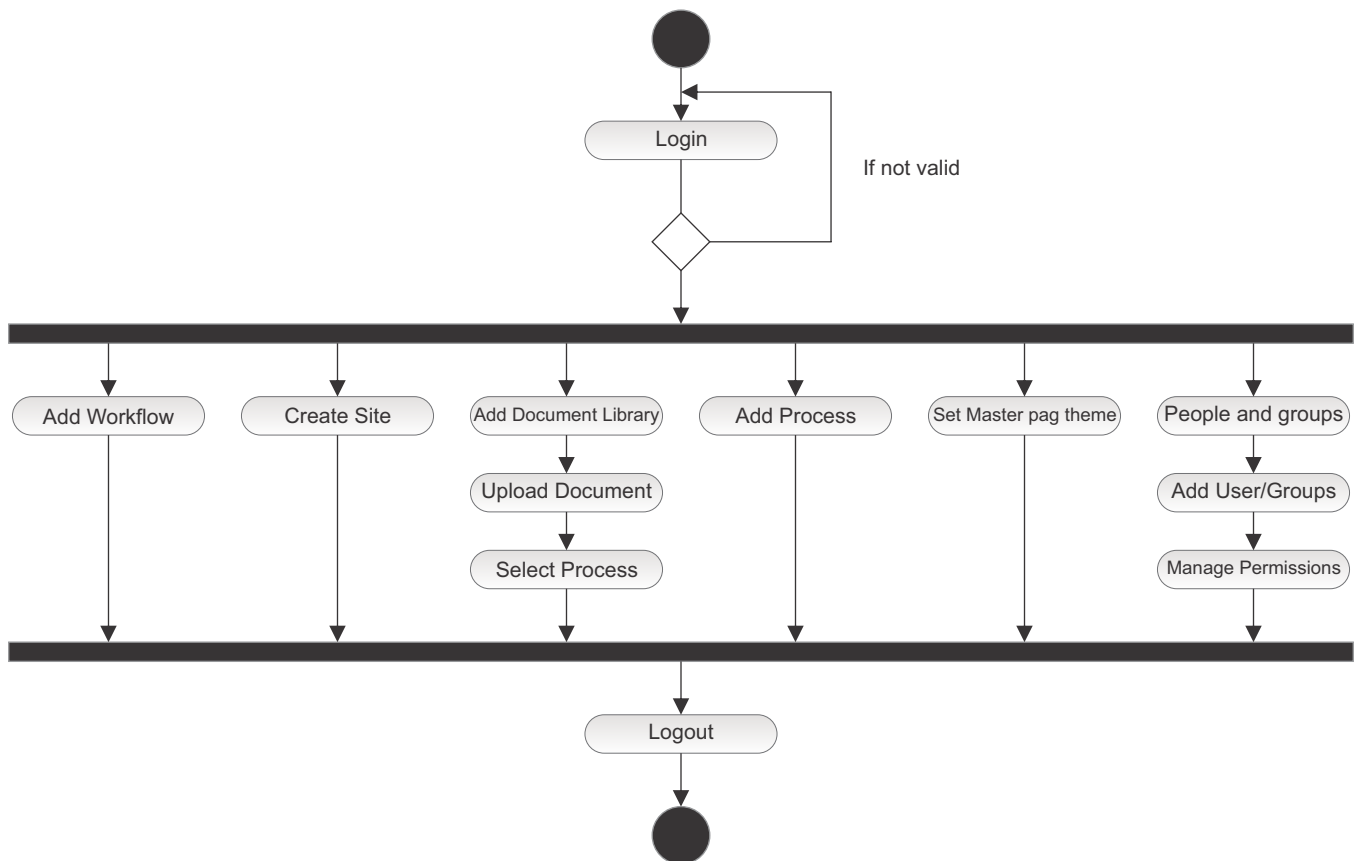
## 5.7 SEQUENCE DIAGRAM - ADD NEW PROCESS IN LIST BY MEMBER



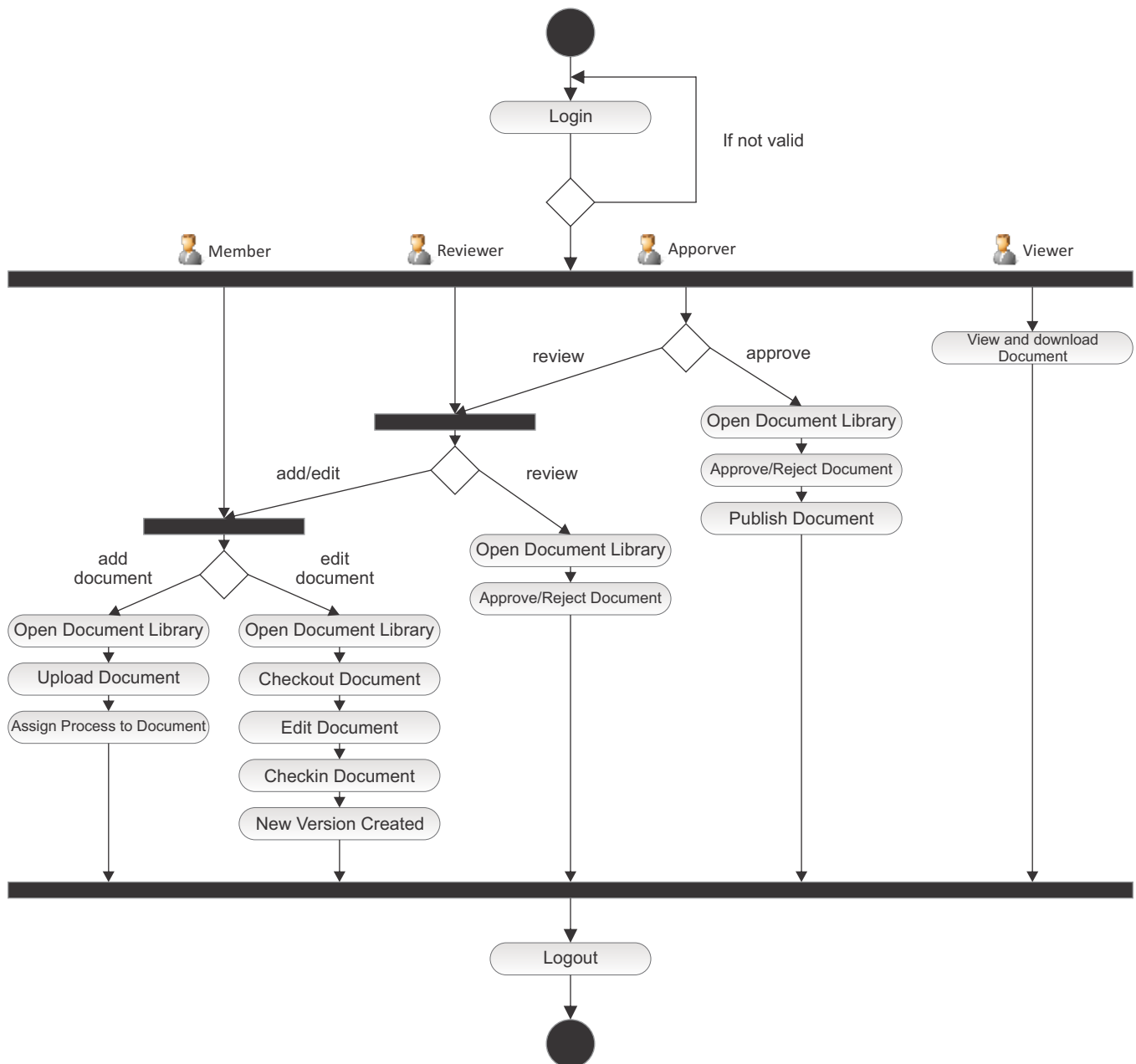


## 5.8 ACTIVITY DIAGRAM - ADMINISTRATOR

A special case of a state diagram in which all or most of the states are action states and in which all or most of the transitions are triggered by completion of actions in the source states.

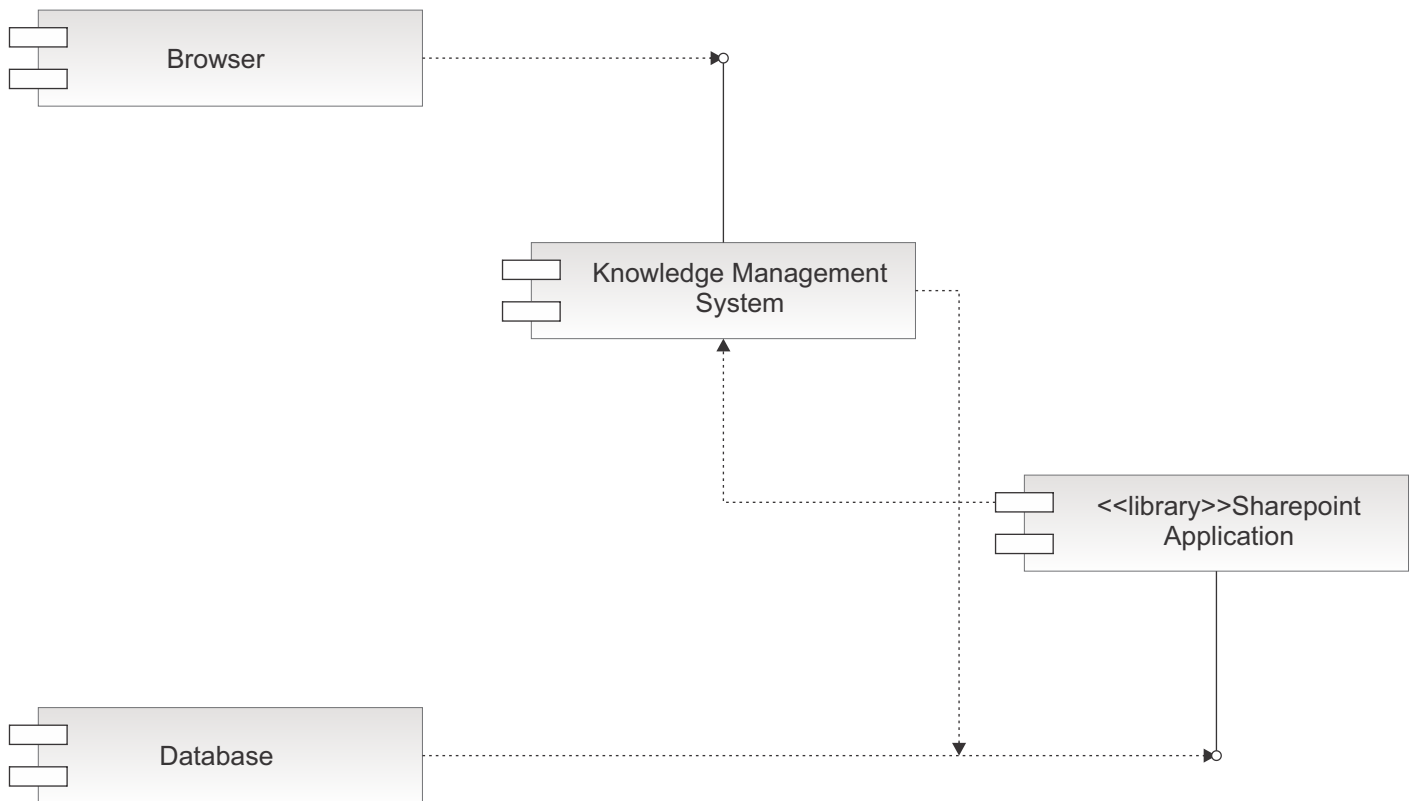


## 5.9 ACTIVITY DIAGRAM - USER



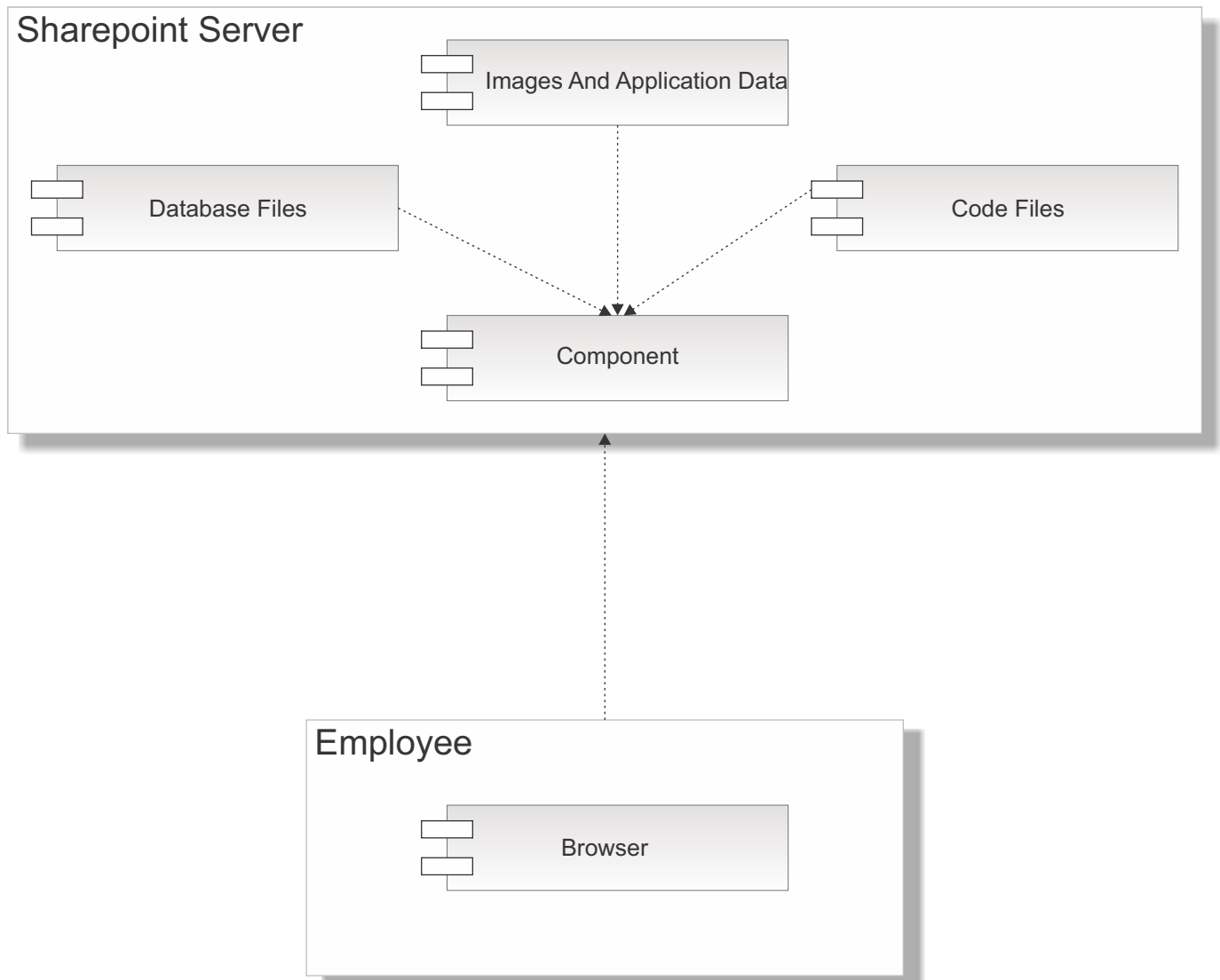
## 5.10 COMPONENT DIAGRAM

In the Unified Modeling Language, a component diagram depicts how components are wired together to form larger components and or software systems. Components diagrams are used to illustrate the structure of arbitrarily complex systems.



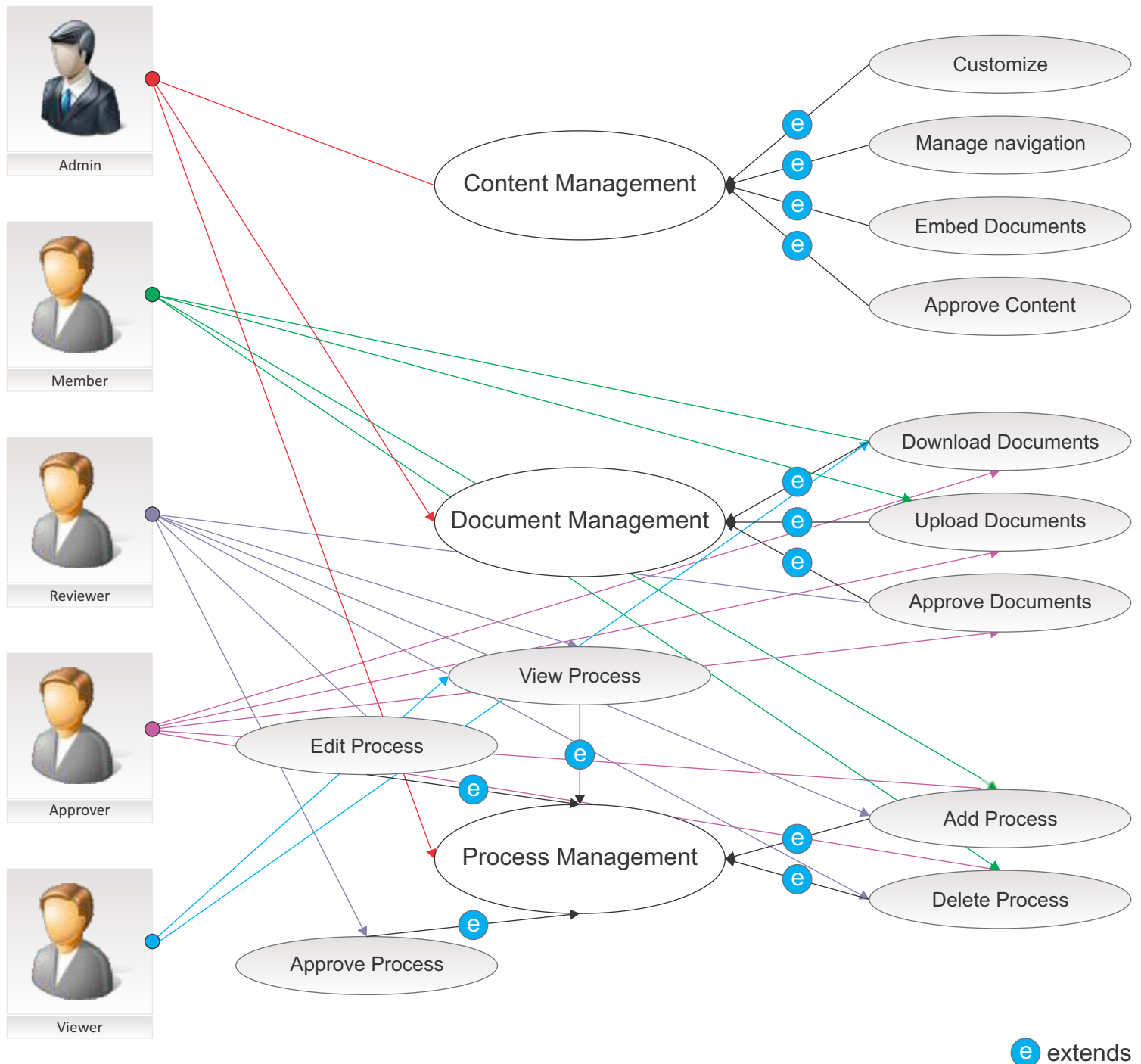
## 5.11 DEPLOYMENT DIAGRAM

Illustrates the physical deployment of the system into a production (or test) environment. It shows where components will be located, on what servers, machines or hardware. It may illustrate network links, LAN bandwidth, etc.



## 5.12 SYSTEM CONTEXT DIAGRAM

A simplified diagram which is useful for specifying the boundaries and scope of the system.



## **5.13 System requirement specification**

### **5.13.1 Introduction**

#### **5.13.1.1 Purpose**

KMS refers to a system for managing knowledge in organizations, supporting creation, capture, storage and dissemination of information. It makes better-informed decisions through centralized access to information and improved abilities to locate relevant content; implement comprehensive control over the storage, security, distribution, reuse and management of documents.

The idea of KMS is to enable employees to have ready access to the organization's based documented of facts, sources of information and solutions. Sharing this information organization wide can lead to more effective engine design and it could lead to ideas for new or improved equipment.

The purpose of this document is to define the project scope, to list down and prioritize each requirement in sufficient detail so that this document could serve as a reference for subsequent implementation phases.

#### **5.13.1.2 Intended Audience and Reading Suggestions**

The intended audiences for this document are all the employees of Bitscape and staff at Bitscape who has and will be participating in various activities for this project such as:

- Requirement gathering meeting
- Reviews of deliverables
- Approvals and sign-offs
- Business process analyst team
- Creation of acceptance test case
- Acceptance testing
- Project monitoring and tracking

#### **5.13.1.3 Client background and area of operation**

##### **Bitscape Infotech Private Limited**

##### **Work area:**

technology consulting business and providing end-to-end IT solutions.

##### **Contact Person:**

Asjad Lakhani

**Contact Information :**

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 S G Highway, Ahmedabad – 380051.

**Phone:** +91-79-65530689

**5.13.2 Overall Description****5.13.2.1 Application Perspective**

**The application includes following modules:**

**User account management:**

Rights based access to each modules of the application must be provided for security purpose. These rights must be well defined with various user levels. Levels of user are predefined in the organization. Each user profile and login details must be maintained.

**This module includes following sub modules:**

- Authentication
- Add/Edit/Delete User
- Edit Profile
- View Profile
- Enable/Disable User
- Role Management
- Activity Tracking

**Quality management System:**

QMS enables the organization to identify measures, control and improve the various core business processes that will ultimately lead to improved business performance. Organization's processes, document templates, document guidelines, process workflows, contents, process navigation must be managed. Easy document access and refined information are essential for quality maintainance in the organization.

**This module includes following sub modules:**

- Add/Edit/Delete process
- Process Workflows
- Content Management System
- Embedded/Inline MS Word Integration
- Embedded/Inline Editing
- Process navigation through left panel
- Parent-Child hierarchy
- Document links management and downloads

**Information security management system:**

ISMS is to design, Implement and maintain a coherent suite of workflow, Navigation, Contents, Policies such as anti-virus policy, IT security policy, password policy and many more for effectively managing information security.

**This module includes following sub modules:**

- Add/Edit/Delete process
- Policy Workflows
- Content Management System
- Embedded/Inline MS Word Integration
- Embedded/Inline Editing
- Process navigation through left panel
- Parent-Child hierarchy
- Document links management and downloads

**Software Process Database System:**

This includes two main modules within it – Metrics Baseline Report and Organization Goal Document

**Metrics Baseline Report:**

- Add/Edit/Delete MBR
- MBR Workflows
- Content Management System
- Embedded/Inline MS Word Integration
- Embedded/Inline Editing
- Process navigation through left panel
- Parent-Child hierarchy
- Document links management and downloads

**Organization Goal Document:**

- Add/Edit/Delete OGD
- OGD Workflows
- Content Management System
- Embedded/Inline MS Word Integration
- Embedded/Inline Editing
- Process navigation through left panel
- Parent-Child hierarchy
- Document links management and downloads

**Document flow management:**

Users can update and delete documents, Maintain old and new versions of documents, Search for any document and maintain categories as well.

**This module includes following sub modules:**

- Document listing and keyword based search
- Document Uploads/downloads
- Document change flows



- Document categories
- Embedded/Inline MS Word integration
- Embedded/Inline Editing

#### **Task management:**

User of Bitscape can get the list of their pending tasks on main page.

#### **This module includes following sub modules:**

- Listing and search
- Task completion

#### **Version history management:**

The entire major versions of documents, pages and content are maintained.

#### **This module includes following sub modules:**

- Automatic document version flow
- Undo Changes

#### **Reports:**

#### **Organization requires following reports for decision making:**

- User Usage of KMS
- Task Completion vs. task pending and total tasks
- Top 10 recently visited user with activity tracking
- Time to complete the task

#### **5.13.2.2 Assumption:**

System will provide administrator login for application to function, Approvers and reviewers with rights to review and approve and members to contribute and viewers to view the documents.

#### **5.13.2.3 Application functions:**

##### **User account management:**

- User can login and logout
- Manage users and control access to application
- Ability to add/update/delete user by admin
- Edit profile by the owner
- View profile
- Ability to change password of each user
- Ability to enable/Disable users by admin
- Role management by admin
- Forget password

**Quality management System:**

- Ability to add/edit/delete process
- Ability to create and manage process workflows
  - Review flow
  - Approval flow
- Ability to embed/inline MS Word integration
- Content Management System
- Embedded/inline editing should be allowed to authorized user subject to approve and review flow
- Parent-child hierarchy should be maintained

**Information security management System:**

- Ability to add/edit/delete process
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**Software Process Database System:**

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- Embedded/inline editing should be allowed to authorized user subject to approve and review flow
- Parent-child hierarchy should be maintained

**Human Resource Management System:**

- Ability to add/edit/delete process
- Ability to create and manage process workflows
  - Review flow
  - Approval flow
- Ability to embed/inline MS Word integration
- Content Management System
- Embedded/inline editing should be allowed to authorized user subject to approve and review flow
- Parent-child hierarchy should be maintained

**Organization Goal Document:**

- Ability to add/edit/delete OGD
- Ability to create and manage OGD workflows

- Review flow
- Approval flow
- Ability to embed/inline MS Word integration
- Content Management System
- Embedded/inline editing should be allowed to authorized user subject to approve and review flow
- Parent-child hierarchy should be maintained

#### **Document Flow management:**

- Ability to manage document listing
- Ability to search based on keyword
- Ability to upload/download documents
- Create and manage document change flows
  - Review Flow
  - Approval Flow
- Ability to embed/inline MS Word integration
- Embedded/inline editing should be allowed to authorized user subject to approve and review flow

#### **Task Management:**

- Ability to manage back-up and restore feature
- Manual/Automatic backup and restore

#### **Version History Management**

- **Automatic document version flow:**  
Draft approved to 1.0 -> 2.0 -> 3.0
- **Undo changes:**  
Version history should be available and document back up should be available by version number.

### **5.13.2.4 User classes and Characteristics:**

#### **5.13.2.4.1 User Classes:**

Each user accessing the application will belong to one or more user classes from those that are listed in table below:

## **5.14 System features:**

The overall requirements have been categorized below into following modules. Each requirement has a priority associated with it based on the inputs provided by BITSCAPE.

### **5.14.1 User account management:**

This section discusses the requirements related to User account management module.

User account management is needed to manage the information of all users i.e. Admin, site members, site approvers, site reviewers, site viewers. It manages the personal details, user account details and contact details of each user of the application. It is also essential for security purpose as some parts of application are accessible only by administrator.

#### **This module includes following sub modules:**

- Authentication
- Add/Edit/Delete User
- Change Password
- Edit Profile
- View profile
- Enable/Disable User
- Role management
- Forgot Password

### 5.14.2 Quality management System:

**This module includes following sub modules:**

- Add/Edit/Delete/View process
- Process work flows
- Content Management System
- Embedded/Inline MS Word integration
- Embedded/Inline Editing
- Process navigation
- Parent – child hierarchy
- Document links management and downloads

### 5.14.3 Information security management System:

**This module includes following sub modules:**

- Add/Edit/Delete/View policy
- Policy work flows
- Content Management System
- Embedded/Inline MS Word integration
- Embedded/Inline Editing
- Process navigation
- Parent – child hierarchy
- Document links management and downloads

#### 5.14.4 Software Process Database system:

This module includes following sub modules:

**Metric baseline report:**

- Add/Edit/Delete MBR
- MBR Workflows
- Content Management System
- Embedded/Inline MS Word integration
- Embedded/Inline Editing
- Process navigation
- Parent – child hierarchy
- Document links management and downloads

**Organization goal document:**

- Content Management System
- Embedded/Inline MS Word integration
- Embedded/Inline Editing
- Process navigation
- Parent – child hierarchy
- Document links management and downloads

#### 5.14.5 Document Flow management:

**This module includes following sub modules:**

- Document listing and keyword search
- Document downloads/Uploads
- Document change flows
- Document categories
- Embedded/Inline MS Word integration
- Embedded/Inline Editing



#### 5.14.6 Task Management:

**This module includes following sub modules:**

- Listing and search
- Task Completion

#### 5.14.7 Version history Management:

**This module includes following sub modules:**

- Automatic document version flow
- Undo changes

### 5.14.8 Reports

**Organization requires following reports for decision making:**

- User usage of KMS
- Task completion VS. task pending & total tasks
- Top 10 recently visited user with activity tacking
- Time to complete the task and so on.

# **Chapter 6**

## **User Manuals**

# **Chapter 7**

## **References**

**Website/ Online Resources :**

- <http://www.microsoft.com/sharepoint>
- <http://sharepoint.technet.com>

**Book/ Reading References :**

- SharePoint 2010 - As a Development Platform
- SharePoint 2010 - Building Solutions in SharePoint 2010
- SharePoint 2010 Administrators Campaign
- Sharepoint 2010 Building Solutions with SharePoint 2010
- Worx ASP.NET MVC 3