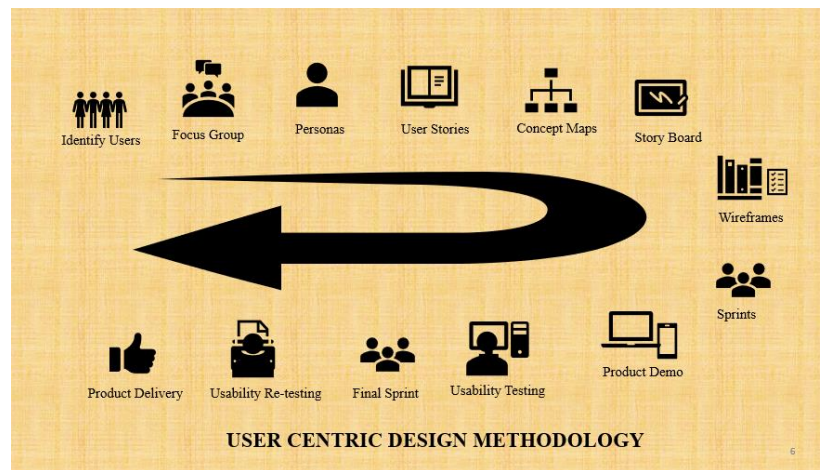


User Centric Design

The flow diagram of the User Centric Design below shows the steps we have followed to achieve a Working Prototype.



Our user centric design approach has three phases: Discovery, Ideation and Implementation. Each phase has specific activities focused on eliciting user needs.

- Discovery – Our team developed concepts for discussion and iteration including the following activities:
 - Identified potential users of the Knowledge Management Portal (KMP) and set up Focus Groups in order to brainstorm and interview the prospective users
 - Developed personas that represented California state agency employees, the intended users of this application
 - Designed a mockup of homepage for the application to use as a springboard for user persona interviews and surveys
 - Conducted surveys and interviews to obtain feedback on the homepage, eliciting user expectations regarding the functionality of the application
- Ideation – during this phase, our team refined our conceptual understanding of user requirements, by completing the following:
 - Conducted [storyboard](#) sessions to review user feedback and expectations
 - Created initial user stories reflecting each persona and their requirements
 - Established a product backlog used for Sprint planning
 - Utilized a Sprint Backlog for subsequent sprints
 - Developed [wireframes](#) based on whiteboard sessions and user stories
 - Developed a template to facilitate usability testing, and conducted Usability Testing with users and held one-on-one interviews, to review wireframes and elicit feedback
 - Developed mockups based on wireframes and results of Usability Testing
 - Conducted additional Usability Testing for mock-ups
 - Developed final user stories based on results of Usability Testing.
 - Created our style guide and established design philosophy based on user feedback
- Implementation – our team’s implementation efforts included the following
 - Began our first sprint cycle

- Conducted Sprint Planning to commit to user stories to develop in the sprint
- Conducted daily scrum meetings
- Developed first iteration of Knowledge Management Portal (KMP)
- Conducted Usability Testing to elicit user feedback
- Refined user stories and product backlog based on user feedback
- Conducted Quality Assurance and Accessibility Testing.
- Conducted Sprint Review meeting to demo completed software and to elicit acceptance/changes from stakeholders
- Initiated subsequent sprint cycles including scrum meetings, usability testing, quality assurance and accessibility testing, and defect resolution
- Released our KMP solution

The following table delineates the various User Roles that we have identified for the KMP and their respective login credentials and permissions.

User Role	User ID	Password	Permission
Author	Kim	Password1	View, Create, Save, Update, Submit, Search
Approver	Ben	Password1	View, Update, Search, Approve/ Publish, Create (same role as author)
Viewer	John	Password1	View, search

User Roles:

After reviewing the Working Prototype Guidelines in the RFI - Attachment 1, we identified the following User Roles and permissions where the Author Role inherits the permissions of the Viewer Role and the Approver Role inherits the permissions of the Author Role.

User Role	Permission
Viewer	Login, Search, View, Feedback, Rating
Author	<i>Login, Search, View, Feedback, Rating, Create, Save, Update, Submit for Approval</i>
Approver	<i>Login, Search, View, Create, Save, Update, Submit for Approval, Feedback, Rating, Approve/ Publish</i>
Administrator	Create New User, Manage Roles and Permissions (These functions can be performed through back end database only for the Prototype)

The Epics:

Based on the Working Prototype Guidelines in the RFI - Attachment 1 and iterative interactions with the [User Personas](#), we defined the following Epics and User Stories for the Working Prototype.

Epic 1: User Authentication and Authorization

- User Authentication based on Username and Password and Role Based Access Control (RBAC) for the Article Viewers, Authors and Approvers

Epic 2: Knowledge Article Creation

- Create new articles, save and update draft articles, submit draft articles to the Approver for approval and publishing, and notify the Approver for review and approval tasks.

Epic 3: Knowledge Article Review, Approval and Publishing

- Review and update the knowledge article that has been submitted for approval and publish it to the knowledge management portal.

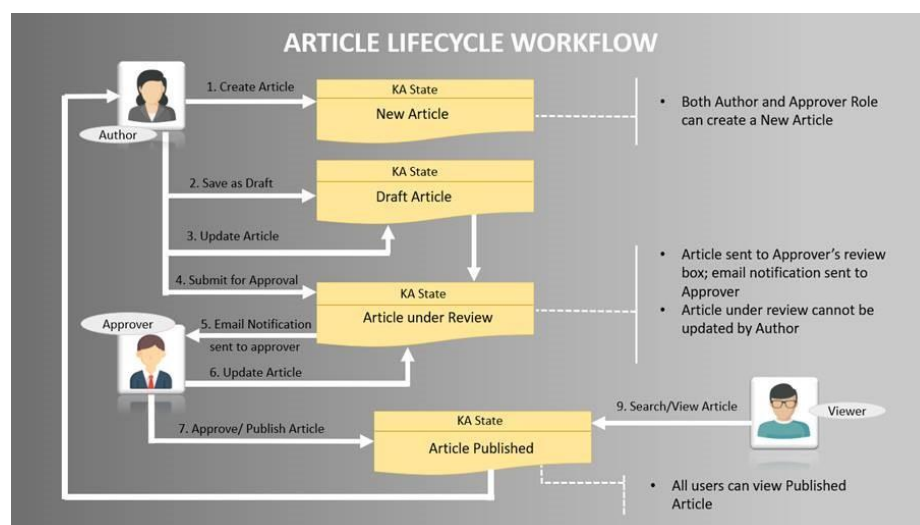
Epic 4: Knowledge Article Search and View

- Search the knowledge management portal to view articles.

Epic 5: Knowledge Article Learning, Feedback and Rating

- View Knowledge Articles, provide comments/feedback and rate the articles.

Article Lifecycle Workflow:



User Personas:

Kim

Role:
Knowledge Article Author

Technology:

- Work Desktop
- iPhone
- iPad

Background

Kim has been working with the Department of Technology for almost a decade now and is responsible for optimizing and transforming the processes, information, application systems and technologies into an efficient and integrated environment, supportive of the execution of business strategy.

Pain Points

- a) Need to bother my colleagues for information about existing processes
- b) Difficult to get information on a timely manner
- c) Do not have a system to share knowledge that I have learnt during my tenure

Goals

- a) To be able to create a new Knowledge Article and classify it into category and sub-category
- b) To be able to save the Article in draft state until complete and ready for submission
- c) To be able to include keywords as Article Tags for easy search
- d) To be able to get an article from its draft state and update the Article
- e) To be able to submit the article for review to the designated Approver

Needs

- a) Desktop accessibility
- b) Email notification when my Article is approved/published
- c) Able to see feedback/comments on the Article

Ben

Role:
Knowledge Article Approver

Technology:

- Work Desktop
- iPhone
- Apple Watch

Background

Ben is the chief of the Enterprise Architecture Branch at California Department of Technology and is responsible for establishing technology strategy and enterprise architecture practice at CDT that can be leveraged by other departments across the state of California.

Pain Points

- a) Do not have a system to document, store and manage the technology and architecture knowledge base that can be shared with various users within CDT and other departments
- b) No process to validate the authenticity, accuracy and completeness of the information being shared

Goals

- a) To be able to view and take action on the article submitted for my review/approval
- b) To be able to make changes/update the Article that is submitted for my review
- e) To be able to approve the Article and publish it

Needs

- a) Mobile and desktop accessibility
- b) Email notification when an Article is submitted for my Review
- c) Role-based secure access to the portal by login
- d) Reminders in case an article has been lying in the review bin for a certain number of days

John

Role:
Knowledge Article Viewer

Technology:

- Work Desktop
- iPhone

Background

John has been working with the Department of Health Care Services and other State Agencies for a decade and half now and is responsible for ensuring all aspects of projects (Business, Information, Technical and Application Architecture) align to the stated direction of the agency's Strategy.

Pain Points

- a) Need to bother my colleagues for information about existing processes
- b) Need to conduct knowledge transfer sessions for new employees each time – no standard knowledge hub to access all information at a go

Goals

- a) To be able to search an Article by its content, title or keyword
- b) To be able to search an Article by its classification – category/sub-category/author
- d) To be able to view the rating corresponding to each Article
- e) To be able to look up all Articles published within a particular time period

Needs

- a) Mobile accessibility
- b) Able to see feedback/comments on the Article

User Stories:

Epic 1: User Authentication and Authorization

ID	Description
1.1	As a KMP User (viewer/author/approver), I want to login using my username and password so that I can access the KMP functions
1.2	As a KMP User (viewer/author/approver), I want to be authorized so that I get access to the KMP functions that are permissible for my role
1.3	As a KMP Administrator, I want to create new users so that they can be on-boarded to the KMP (This User Story can be performed through back end only for the Prototype)
1.4	As a KMP Administrator, I want to manage roles and permissions for various users

Epic 2: Knowledge Article Creation

ID	Description
2.1	As a KMP Author, I want to create a new Knowledge Article so that I can share my knowledge with other employees and customers
2.2	As a KMP Author, I want to categorize my new article under appropriate category and sub-category so that I can classify my article
2.3	As a KMP Author, I want to add necessary keywords as tags so that the article can be searched efficiently
2.4	As a KMP Author, I want to create a new Knowledge Article by uploading an existing document so that I can share the article with other employees and customers
2.5	As a KMP Author, I want to save my new article as draft so that I can work on my article at a later point in time

ID	Description
2.6	As a KMP Author, I want to submit my new article to the approver so that the approver can review, approve and publish the article to the portal
2.7	As a KMP Author, I want an automated email notification to the approver when I submit an article for approval
2.8	As a KMP Author, I want to see all my published articles, draft articles and in-review articles when I login to the system so that I can take easy action on those articles
2.9	As a KMP Author, I want to receive an email notification when my article is approved and published by the approver

Epic 3: Knowledge Article Review, Approval and Publishing

ID	Description
3.1	As a KMP Approver, I want to receive an email notification when a new article is submitted for approval
3.2	As a KMP Approver, I want to view all the articles submitted to me for review and approval in my inbox so that I can take quick action on these articles
3.3	As a KMP Approver, I want to review and update (as required) the articles submitted to me for approval
3.4	As a KMP Approver, I want to approve and publish the articles submitted to me for approval and publication
3.5	As a KMP Approver, I want to an automated email notification to the author when I approve and publish his article

Epic 4: Knowledge Article Search and View

ID	Description
4.1	As a KMP Viewer, I want to search published knowledge articles' title, article summary, article content, and associated tags using plain text so that I can find the article I am looking for
4.2	As a KMP Viewer, I want to perform advanced search of articles using article category, author, approver and article created from and to date

Epic 5: Knowledge Article Learning, Feedback and Rating

ID	Description
5.1	As a KMP Viewer, I want to view the ratings and comments for the existing articles in the portal so that I gain understanding about the popularity, demand and effectiveness of the articles and derive the need for future articles
5.2	As a KMP Viewer, I want to view list of most popular tags so that I can understand the demand for knowledge articles in specific areas
5.3	As a KMP Viewer, I want to rate the published articles so that I can represent the effectiveness of the article for my need
5.4	As a KMP Viewer, I want to provide my comments and feedback for the published articles so that I can communicate my feedback to the user group

Storyboards:

Login Page (Author/Approver)

Banner

RETURNING USER?
LOGIN
Login Id
Password
☐ Remember me

NEW USER?
SIGN UP
First Name
Last Name
Email

Article Page (Author/Approver)

Add New Article
Article Name

Article Title
Summary
Article Content

Category
SubCategory
Article Tag

Landing Page (Approver)

Banner
Article Name

Comments
Author
Category
SubCategory

Landing Page (Author)

Banner
Article Name

Comments
Author
Category
SubCategory

Article Page (Author/KMP Viewer)

Banner

Article:
Summary:
Category: SubCategory: Tag:
View Feedback:

Comments:
Name 1:
Name 2:
Name 3:

Business Process Lifecycle:

