I, Yongliang Cheng, hereby submit this original work as part of the requirements for the degree of Master of Design in Design.

It is entitled:
Design a Management System for Livewell Collaborative

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Design a Management System for Livewell Collaborative

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A thesis submitted to
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In partial fulfillment of the requirement for the degree of Master of Design

In the School of Design of the College of Design, Architecture, Art and Planning

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Abstract

Livewell Collaborative is a consortium of member companies, UC students and faculty working in research and development for the 50+ market. Currently, there is no useful and usable management tool for them to manage the studio projects going on in each quarter. There are some web-based management systems that are widely used in the industry. But these current systems are not designed for managing the projects that meet the typical users’ requirements in the Livewell Collaborative. In this thesis, a new management system is designed based on the Goal-Directed Design approach to improve the user experience and facilitate the activity and service in the Livewell. Due to the time constraint, usability test is not in the scope. This thesis only focuses on research and design phases.
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Chapter 1      Introduction to Goal-Directed Design

1.1   What is Goal-Directed Design

1.1.1   Goal-Directed design

Goal-Directed Design is the approach developed by Cooper, a leading product and service design consultancy based in San Francisco. Its fundamental premise is that the best way to design a successful product is to focus on achieving goals. Goal-Directed Design encompasses the design of a product’s behavior, visual form, and physical form (Goodwin, March 03, 2009).

1.1.2   Identify user goals

A goal is an expectation of a desired end-point that a person or an organization expects, plans and commits to achieve. Goals are achieved by setting up intermediate activities and tasks. Analyzing tasks can be very useful at the detailed level, but by identifying the user goals can help us understand the meaning of the tasks and activities, the expectation and aspiration of users. Design for the products or service is to support or facilitate users to finish tasks and finally achieve their goals. Therefore, we can create more successful and satisfactory designs if we always keep the users goals in mind.

1.1.3   User experience

ISO 9241-210 defines user experience as "a person’s perceptions and responses that result from the use or anticipated use of a product, system
User experience includes all the users' emotions, beliefs, preferences, perceptions, physical and psychological responses, behaviors and accomplishments that occur before, during and after the users use the product or service to achieve their goals. It brings up a holistic perspective to how a person feels about using a system and how the user goals can be best accomplished.

1.1.4 Use context

Use context is the combination of factors about the actual situation in which the users will use the product. The design target really depends on the context — who the users are, what they are doing, and what goals they have (Cooer, Reimann, & Cronin, 2007). In order to understand the use context, we need to answer these questions:

- Who are the users?
- What are their tasks and goals?
- What tools can be used to support the user goals?
- What are the user's physical, technical, social and organizational environments in which a product will be used and affect the user experience?

1.2 The process of Goal-Directed Design

1.2.1 Research

Designers' involvement in the research is the first step towards Goal-Directed Design. Different from engineers or programmers, designers can
think from users’ perspective. Different from pure researchers, designers know better on how to do the research to guide design. Involving designers into the research process, the design solution can make more sense from the research data. This phase focuses on preliminary research on users and provides the context for understanding the design problems and opportunities later on. Research in Goal-Directed Design always includes (Cooer, Reimann, & Cronin, 2007):

- **Scope**: define the project goals and schedule.
- **Audit**: review strategic and branding plans, competitive research, domain knowledge and technology.
- **Stakeholder interviews**: interview business problem, constraints, logistics, branding etc.
- **User research**: interview and observation, secondary research and other research methods.

### 1.2.2 Modeling

After user data collected in the research phase, it will be analyzed and synthesized in the modeling phase. The goal of modeling is to find the domain pattern and user behavior pattern. Domain models can include information flow and workflow diagrams. To model user behavior pattern, persona is the most important model to be used; it represents typical users that share the same emotions, beliefs, preferences and perceptions identified during the research phase. The attributes of personas are directly related to design needs and user goals. By sticking
to the goals of a specific persona, the designers can meet the needs of many users who have goals similar to those of the persona. Besides of illustrating the attributes of typical users, persona can also serve as a powerful communication tools for designer to help developers and managers to understand design rationale and to prioritize.

1.2.3 Requirements Definition

This phase employs scenario-based design methods with the important innovation of focusing the scenarios not on user tasks in the abstract, but first and foremost on meeting the goals and needs of specific user personas (Cooer, Reimann, & Cronin, 2007). Designers think from the users’ perspective and describe how the personas use the product or service in their lives in a high detailed level to discuss and analyze how the product or service reshape the user experience. At this phase, business goal and technical constraints are also incorporated to define the requirements of the design to follow.

1.2.4 Framework Definition

At this phase the data collected and analyzed in the former phases will be translated into design elements. Designers lay out the high-level framework for the form and interaction of the product or service. The framework will outline how the features and functionalities group together and what visual language will be used.

1.2.5 Refinement

This phase focuses on the detailed design and implementation. Designers walk through the interface in a high detailed level and apply the visual
elements to achieve a coherent experience. Engineers also work together with designer to provide feedback on the design. There is much iteration in this phase to make sure every detail fits into the users goal and also applicable in the implementation phase.

1.2.6 Evaluation

There are several useful ways to evaluate design. Which approach works best depends on your timeline, budget, and—most important—your objective. For identifying usability issues and evaluating functional design directions, usability testing, expert reviews, and discussions with individual users are the methods of choice. Focus groups and individual user discussions are common approaches to assessing aesthetic impact. (Goodwin, March 03, 2009)

1.2.7 Implementation

The interaction designers and visual designer focus mostly on supporting software construction. This usually involves slicing up image files to deliver production-ready assets, being available on a regular basis to answer questions, and reviewing engineers’ work in progress to ensure that it’s true to the design intent. (Goodwin, March 03, 2009)
In the Goal-Directed design process, personas lead to goals and goals deduce what the users want. Cooper puts user goals at the center of the software design process. That process is part of a series of office practices which depend on the talent and skills of designers and on their application of principles and patterns throughout the process.
Chapter 2  Preliminary research on Livewell

2.1  Understand Livewell

2.1.1  Service at Livewell

Livewell Collaborative, a consortium of member companies, UC students and faculty working in research and development for the 50+ market.

Preliminary research was conducted to understand the nature of the research service, activities and management at Livewell.

Projects sponsored by the member companies are developed as 10-week studios in the Livewell. Faculties from DAAP (College of Design, Architecture, Art, and Planning) and Business school at the University of Cincinnati will lead the studio and students will be recruited and work on the project. All intellectual property developed during the project becomes the property of the project sponsor. Members have access to two studios per year and can track projects through the university.

2.1.2  Activities at Livewell

Each quarter there will be one or more 10-week long projects in the Livewell. Collaborative forums hold in June and December give member companies the opportunity to share knowledge and connect and develop regarding best practices. There are also some workshops and conferences happen occasionally at Livewell.

2.1.3  Project process at Livewell

Phase 0 - before the project
During the planning stage of a project the member identifies the problem space and collaborates with the LWC on the project brief.

Phases 1 - 3 - during the 10-week quarter

The research team focuses on obtaining knowledge about the topic, translates insights to concept ideas and tests and refines concepts to meet the needs of the member. It is not a linear process. Each phase is building on each other.

Phase 4 - After project is completed possible future opportunities regarding the project results for the member and LWC.

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2.2 **Current tools used at Livewell**

Some physical and digital tools are already used at Livewell to facilitate the projects. These tools include:

- Pen and paper: this is a basic tool for taking notes and widely used in the interview, brainstorming, sketching, etc.
• Camera: captures and collects visual information and probably double the amount of data captured. Photos are a credible document for recalling and telling the real story.

• Audio recorder: capture everything people said and help recall some details that could not find in the notes.

• Computer: is an indispensable tool and also a touch point in the digital system. It can store most part of the project data and allow people to retrieve specific information. Designers use it as both visualization and communication tools.

<table>
<thead>
<tr>
<th>Tools</th>
<th>Pen and pager</th>
<th>Camera</th>
<th>Audio recorder</th>
<th>Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Type</td>
<td>Physical</td>
<td>Digital</td>
<td>Digital</td>
<td>Digital</td>
</tr>
<tr>
<td>Function</td>
<td>Take notes, present thoughts</td>
<td>Capture and collect visual information</td>
<td>Capture audio information</td>
<td>Store, retrieve, process information</td>
</tr>
</tbody>
</table>

Current tools used at Livewell

2.3 Understand users

2.3.1 Identify the users and roles

First step of the interview is to identify the interviewees and understand their roles. Three types of users are involved in the Livewell project and will likely use the management system.

One manager and several staff take charge of the office work and daily administration. The manager ensures that project outcomes meet member company’s needs and specifications by managing estimates, budgets, and schedules, and effectively communicating with internal and
external representative roles. Faculty who lead the studio needs to recruit the students, support the development and management of project scope, schedules, budget and process. Multidisciplinary students work together to execute the project and produce the deliverable.

![Diagram showing users of the management system: Faculty, Students, Users, Manager]

### 2.3.2 Identify Interviewees

Because the management system will be specifically designed for Livewell with narrowly defined roles, only three interviewees were selected who could represent three types of roles.

- Peter Chamberlain: faculty in DAAP who has led Livewell studio project each quarter in the recent years.
- Linda A. Dunseath: secretary and executive director at Livewell who manage the office work and partnership with clients at Livewell.
• Mahsino Blamoh: marketing graduate student who used to work in the Livewell as a graduate assistant and participate in many studio projects.

2.3.3 Observation

Users working on the projects and interacting with each other and environment in the Livewell were observed in two quarters. Those activities led to a better understanding of users’ behaviors and project process in the Livewell. This is also helpful for coming up with right interview questions for interviewees.
Chapter 3  Modeling

3.1  Domain Model

Domain model can be thought of as a conceptual model of a problem domain that describes the various entities, their attributes, roles and relationships. An important advantage of a domain model is that it describes and constrains the scope of the problem domain. To be able to effectively understand the project process and stakeholders at Livewell, the domain model below was developed to map out the project process and users’ roles at Livewell.

![Domain model of Livewell](image)

3.2  Personas and goals

After primary domain research, interview the representatives and observation in the several projects, the collected data guided me to develop the personas based on the typical behaviors of the potential users. Based on the difference of roles and behaviors, three types of personas are developed in a narrative way to convey and explain their behavior patterns.
3.2.1 Primary persona (student) and goals

Bill Jobs is a third year undergraduate student at DAAP in the University of Cincinnati. He had coop and worked in a design firm in the last quarter. At the first week of the new quarter, he found there was a notice posted on the wall in. It’s telling a 10-week project working on the elder abuse problem would be at Livewell. He thought it would be fun to work with students from other disciplines and also could be able to have some research experience. Luckily, the registration for this course was still available. So he registered it on the one stop (online students service center) and checked if there was any material about the studio on the blackboard (online course and education center). Studio classes would be twice a week that kept him very busy since he also had other classes. In the first week, the professor who took charge of the studio introduced them to the project. He teamed up with other students and worked on the "fuzzy front-end" research phase in the upcoming three weeks. They visited the nursing home and talk to the elder people. Bill used audio recorder to record the interview with elder people and also took some pictures using digital cameras. After coming back to the studio, working together with team members he used sticky notes and whiteboard to brainstorm and come up with insights about their interview. He also did the secondary research by
searching and reading other relevant online papers. At the group meeting, Bill and other students put all their findings together and shared with each other. They mapped out and visualized the solutions. For the final presentation, they also shot a video to tell a story that the elder abuse was happening. They presented all the deliverables to the clients and put them in the computers at Livewell.

Goal:

1) Access to enough information
2) Have fun working on the project
3) Get experience working in the multi-disciplinary team
4) Get research experience
5) Get credit for the class
6) Effectively communicate with team members
7) Access to enough resources
8) Get timely feedback and guideline

3.2.2 Secondary persona (project lead) and goals

David Cravens works as a professor at DAAP in the University of Cincinnati. He always teaches one studio each year at Livewell. This quarter he leads a studio working on the elder abuse problem. Before the start of the studio he sits together with the clients and the manager at Livewell and set up the scope, budget and final goal for the project. He posted the announcement about the studio in DAAP to recruit the students. In the first week, he
introduced the students to the project and divided them into several groups. He trusted his students and let them work on the project without much regulation. He only gave suggestions with which the project could be on the right track or to make sure the students have the right approach. Every week he had an informal check in with each team and gave feedback to them. After the final presentation of the project, he discussed with clients and the manager at Livewell to find out the future opportunity. He graded each student after the studio project was done.

Goal:

1) Have the students with the right talents and skills
2) Have enough resources
3) Effectively communicate with students
4) Track the project progress
5) Manage the project to ensure it on the right track
6) Effectively communicate with the manager at Livewell
7) Have the successful deliverable to the client

3.2.3 Tertiary persona(manager at Livewell) and goals

Juli Justice is the manager at Livewell. She works on developing new business, maintaining client partnership and managing the projects going on at Livewell. In this quarter, clients reached out and sponsored Livewell to help them on two different projects. She worked together with them to define the project scope, budget and work plan. Before the quarter, she found out the
proper faculties in DAAP and business school to lead the project. She also let the business faculties recruit the students from their college. During the project process, she ensured that the project outcomes meet the clients’ needs and specifications by effectively communicating with internal team and clients. She managed the resources for projects to reconcile them to the budgets. At the project final stage she reported to clients and explored the future collaboration opportunity.

Goal:

1) Maintain and develop new clients
2) Report the project status to the clients
3) Lead the development of client presentations, project plans, and proposals
4) Manage and allocate resources at Livewell
5) Seek new collaboration opportunities from clients
## Personas of the management system in Livewell

<table>
<thead>
<tr>
<th>Manager</th>
<th>Project Lead (Faculty)</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juli Justice</td>
<td>David Cravens</td>
<td>Bill Jobs</td>
</tr>
</tbody>
</table>

### Juli Justice
- The manager at Livewell, she works on developing new business, maintaining client partnership and managing the projects going on at Livewell.

### David Cravens
- Works as a professor at DAAP in the University of Cincinnati. He always teaches one studio each year at Livewell. This quarter he lead a studio working on the elder abuse problem.

### Bill Jobs
- A third year undergraduate student at DAAP in the University of Cincinnati. He takes a class and work on the 10-week project in a multidisciplinary team at Livewell.

### Goals

#### Juli Justice's Goal:
- Maintain and develop new clients
- Report the project status to the clients
- Lead the development of client presentations, project plans, and proposals
- Manage and allocate resources at Livewell
- Seek new collaboration opportunities from clients

#### David Cravens' Goal:
- Have the students with the right talents and skills
- Have enough resources
- Effectively communicate with students
- Track the project progress
- Manage the project to ensure it on the right track
- Effectively communicate with the manager at Livewell
- Have the successful deliverable to the client

#### Bill Jobs' Goal:
- Access to enough information
- Have fun working on the project
- Get experience working in the multi-disciplinary team
- Get research experience
- Get credit for the class
- Effectively communicate with team members
- Access to enough resources
- Get timely feedback and guidelines

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**Personas and goals**
Chapter 4  Scenarios and requirements

Requirements can be defined from drawing on multiple sources. Personas and the scenarios are primary tools for generating requirements. Others include business objectives, customer goals, and external influences such as regulatory agencies, competitors, and influential media. Good design principles and UI patterns are other sources. Plain old brainstorming might also generate a few good ideas. However, not every need and want implied by these various sources belongs in your list of requirements. Persona goals serve as both a lens to focus the potential requirements and a filter to remove problematic ones. If a potential requirement is contrary to your personas’ goals, it usually shouldn’t be a requirement. (Goodwin, March 03, 2009).
4.1 Bill Jobs’ (student) scenarios and requirements

Persona-based scenarios are concise narrative descriptions of one or more personas using a product to achieve specific goals. They allow us to start our designs from a story describing an ideal experience from the persona’s perspective, focusing on people, and how they think and behave, rather than on technology or business goals. (Cooer, Reimann, & Cronin, 2007)

Student is the primary persona who is the target that the management system mainly focuses on. The following are students’ scenarios that describe how the management system is used in a realistic way by students and what the requirements of the system are filtered by students’ personas and goals.

1) Before the new quarter, Bill Jobs goes to the online management system and checks if there is a studio project in the upcoming quarter.

   Requirements: Do not need to sign in to see the announcements of studio projects.

2) Bill decides to take the studio class, so he registers the studio class on the Onestop and gets the permission to login the management system.
Requirements: Can pull the registration data from the Onestop to check the user if have registered before and have the right permission to login the management system.

3) Bill logins the management system and checks the shared documents introducing the project and some assets files from clients.

Requirements: Have the ability to upload all kinds of files (images, word documents, video, etc.) for sharing with team members.

4) Bill has to enter his skills, specialties and experience.

Requirements: Have form to allow users input their personal and academic information and store them back-end.

5) Bill chats with students in the same classes online and gets to know each other before the class.

Requirements: Have the tools supporting instant voice or message chatting.

6) Bill checks online to see if the professor has set up the schedule and meetings.

Requirements: Calendar tool to allow users set up meeting and appointments.

7) Bill posts some research materials for inspiration and other students’ comments on the post.

Requirements: Allow to post and comment on texts, pictures and videos.

8) Bill checks out some audio recorders for the interview.
Requirements: Have the ability to check out resources and get approved online.

9) As a team lead, Bill assigns some works to each team member and wants the team meet together in the next class to discuss with each other.

Requirements: Have the ability to assign works to the each user.
Have the ability to send announcements to a specific group of users.

10) Bill wants to set up a Facebook fan page to engage the elder people and those people who care the elder abuse. So he searches the assets library and pulls out a template of Facebook fan page. He customizes it and put it on the Facebook.

Requirements: Have the ability to search globally. Allow to aggregate the assets and templates.

11) Bill works on a text-based presentation file and sends it to the professor. The professor reviews it and sends his feedback back. Bill updates it and sends it to the professor for reviewing again.

Requirements: Able to allow different users to work on the same file and also notice the sequence number of file’s version.
4.2 David Cravens’ (project lead) scenarios and requirements

Project lead is the secondary persona. The following are students’ scenarios that describe how the management system is used in a realistic way by project lead and what the requirements of the system are filtered by project lead’s personas and goals.

1) David posts the announcement about the new studio class at Livewell on the landing page.

Requirements: Allow to assign different levels of permission to different users. Allow the faculty to post announcements on the landing page.

2) David sets up the schedule and milestone for the projects.

Requirements: Have the digital tool allowing the user to easily set up the schedule and milestone for the projects.

3) David divides the students into different groups and assigns a lead for each group based on the students’ skill and experience information.
Requirements: Able to change the user's role and permission.

4) David checks in the students’ work and he decides to arrange an interview to the nursing home, so he send the application for the interview and needed resources to Livewell.

Requirements: Able to send the application for checking out the resources at Livewell.

5) David needs to talk with the manager at Livewell. He makes an appointment online and sends it out.

Requirements: Able to make an appointment or schedule a meeting.

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Before the studio class</th>
<th>During the studio class</th>
</tr>
</thead>
</table>
| - Post the announcement about the new studio class  
- Set up the schedule and milestones for the projects  
- View the students' skills and set up different teams | - Check in the students' work  
- Send the application for resources at Livewell  
- Makes an appointment online and sends it out |

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Before the studio class</th>
<th>During the studio class</th>
</tr>
</thead>
</table>
| - Allow to assign different levels of permission to different users.  
- Allow the facility to post announcements on the landing page.  
- Have the digital tool allowing the user to easily set up the schedule and milestones for the projects.  
- Able to change the user's role and permission. | - Able to send the application for checking out the resources at Livewell.  
- Able to make an appointment or schedule a meeting. |

Project lead’s scenarios and requirements

4.3 Juli Justice’s (manager) scenarios and requirements

Manager is the tertiary persona. The following are manager’ scenarios that describe how the management system is used in a realistic way by manager and what the requirements of the system are filtered by manager's persona and goals.
1) Juli enters the project scope and budget into the management system and she wants only the faculties who lead the studio can be able to see it.

Requirements: Able to set the permission level to the files.

2) Juli reviews the faculty’s application for the interview to the nursing home and the students’ application for checking out some audio recorders. She approves them and sends the approved application to the related staff.

Requirements: Able to approve applications and send to related staffs.

3) She keeps tracking the project status and ensures everything meet the budget, scope and expectation.

Requirements: Able to check timely project status.

<table>
<thead>
<tr>
<th>Juli Justice's (manager) scenarios and requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before the studio class</strong></td>
</tr>
<tr>
<td>Scenarios</td>
</tr>
<tr>
<td>• Enter the project scope and budget in the management system</td>
</tr>
<tr>
<td>Requirements</td>
</tr>
<tr>
<td>• Able to set the permission level to the files.</td>
</tr>
<tr>
<td><strong>During the studio class</strong></td>
</tr>
<tr>
<td>Scenarios</td>
</tr>
<tr>
<td>• Review and approve faculty’s application for resources checkout</td>
</tr>
<tr>
<td>• Keep tracking the project status and ensures everything meet the budget, scope and expectation</td>
</tr>
<tr>
<td>Requirements</td>
</tr>
<tr>
<td>• Able to approve applications and send to related staffs.</td>
</tr>
<tr>
<td>• Able to check timely project status.</td>
</tr>
</tbody>
</table>

Manager’s scenarios and requirements
Chapter 5  Audit on the competitive products

Competitive audit can help to keep a finger on the pulse of the management system industry. By understanding what features and functions of the competitive products have, it's helpful to identify what service of my design should offer and how to differentiate it.

5.1 Current management system on the market

Currently, there are many web-based tools allow people to work together for project communications, document management, and general project organization. On the market, following products are widely used for small businesses and companies like Livewell in the industries:

- SharePoint: a web application platform developed by Microsoft. It launched in 2001 as a centralized replacement for multiple web applications and supports various combinations of enterprise website requirements. It is typically associated with web content management and document management systems.

- Huddle: the No1 SharePoint alternative product for enterprise collaboration and content management in the cloud and is used by more than 90,000 businesses globally.

- Basecamp: web-based project management tool for entrepreneurs, freelancers, small businesses, and groups inside big organizations.
5.2 **Features and functions**
Functions help users to finish tasks. Features are tools inherent in the products to perform the functions. The list below includes primary features found on the analyzed products:

- **Collaboration**: allow team members collaborate with each other on a regular basis through emails, online chats and forums.
- **File sharing & management**: store different types of files and allow to sort, search and filter files.
- **Project management tools**: manage project process and resources, including task management, schedules, calendars, Gantt charts, milestones, and more.

These features are indispensable for the management system and should be integrated to design. But they don’t cover the entire requirements in the Livewell, mainly because they are designed for generally use and not focusing on specific user or environments.
Chapter 6  

Framework Definition and design execution

The design framework defines the high-level and overall structure of the user interface and associated behaviors. The range of design framework is from the arrangement of functional elements on the screen, to interactive behaviors and underlying organizing principles, to the visual and form language used to express data, concepts, functionality, and brand identity.

6.1 User flow

User flow models a high-level relationships and interactions within the system's UI. It is typically used for one of two purposes. First, it is used to model the interactions that users have with the software, as defined in a single use case. Second, it enables people to gain a high-level overview of the user interface for the application. This overview is effectively the combination of all the behavioral views derived from the use cases. The following is the student, faculty (project lead) and manager's user flow. They're developed based on the student's scenarios and requirements. Each user flow demonstrates how the user interacts with the management system.
Student's user flow
Project lead’s user flow
Manager’s user flow

1. Post announcements
2. Set up project account
3. Assign roles and permission
4. Upload / Download Files
5. Schedule / Meeting
6. Chat / Messenger
7. Approve Resource Request
8. Check in assignments
9. Track project status
10. Archive students’ work

END
6.2 **Wireframe and specification**

A wireframe, also known as a page schematic or screen blueprint, is a visual guide that represents the skeletal framework of a website or software interface. The wireframe depicts the page layout or arrangement of the website’s content or the feature and function of the software, including interface elements and navigational systems, and how they work together. The wireframe usually lacks typographic style, color, or graphics, since the main focus lies in functionality, behavior, and priority of content.

The specifications of the wireframe provide high-level description of key user interaction of the management system. The pages and interactions here will result in product development, promising compelling experience and information flows for users.

1. Landing page
Landing page

This is the default landing page when the user go to the management system. All the upcoming studio classes will be posted here.

1) Livewell logo

2) The user needs to type in user name and password for login the system. The user gets the authorization after he registered the class on Onestop.

3) Image of the new studio announcement

4) Carousel will highlight each coming studio class

5) The user can click arrow symbol to go through entire announcements

6) If the user is also the administration, then “add new announcement” link will show and allow the user to click and add new announcement.

2. Overview page
Overview Page

Overview page is the landing page after the user login the system. It provides the overview of the project and ensures everyone on the same page of the updated information.

1) If the user has multiply studio projects, he can switch workspace from dropdown navigator.

2) Tell the user real-time number of massages.

3) The user’s profile, help documents and sign out option.
4) Global tabs lives on each page as the main navigation.

5) Red colored number tells the user how many new items are created.

6) “What is new” section pulls up all the updated information from other pages.

7) The user can choose from the dropdown options to set up the number of items to show.

8) From the dropdown options, the user can sort and group the items.

9) The text of the title will be hyperlink taking the user to the each related page.

10) Pagination allows the user to go through all the items.

11) “Announcements” section provides all the announcements of current projects.

12) Click “Add new item” will open a pop-up window to allow the user add new announcement.

13) Mouse over or click “More” will display the completed content in the new pop-up window.

14) “Calendar” section gives an overview of all upcoming events and meetings of the project.

15) The user can choose to see the calendar in monthly or weekly view.

16) Click the event or meeting to view full detail or edit this entry.

3. Workspace page
Workspace page is where the user manages his resources and work. It can be customized by adding or closing sections and gives enough flexibility to meet different user’s needs.

1) Click the menu tab will take the user to this page.

2) Workspace can be customized by adding new sections from the quick dropdown menu.

3) “My task” section lays out the user’s tasks in the accordion.

4) Each section can be closed and get it back from “Add a new workspace”.

Workspace Page
5) Mouse rolls over the comment symbol will see the full comment in the pop-up window.

6) Mouse rolls over the attachment symbol will display the information of the attachment. Click “Download” can save the attached file to the local folder.

7) “My meeting section” lays out the user’s meeting and event.

8) Choose monthly, weekly, or daily from the dropdown options will change the view of the meeting section.

9) Click the arrow symbol will take the user to the different span of time.

10) Click the white grid unit will allow the user schedule a meeting or event in the pop-up window.

11) Mouse rolls over the meeting or event, full detail of the entry will be displayed.

12) “My resource request” section is where the user checks the status of the request or creates a new request.

13) The user can click “New Request” button to open a pop-up window and request new resource.
Add new resource request window

14) The status of the requests is color coded.

4. Task page
Task page lists the full tasks in the project and allows the user to create new tasks.

1) Click the menu tab will take the user to this page.

2) By default, task section will lay out a completed list of tasks in the project.

3) Combined filters generate customized view of tasks.

4) Mouse rolls over the comment symbol will open a pop-up window to see detail. Click “View More” will take the user to the comment page if the current pop-up window is not able to display the full detail.

5) Mouse rolls over the attachment symbol will display the information of the attachment. Click “Download” can save the attached file to the local folder.

6) After the section of the accordion is extended, the user can add comment to the task.

7) The user can attach files to the task.

8) Click “Add new task” button will open a modal window.

9) Enter task detail.

10) Click the input box of start date or end date, the calendar pop up to allow the user easily select the right date.

11) Add comment to the task.

12) Attach files to the task.

13) Select people to assign the task.
14) The user can review the task and add the task to the tasks list.

5. **Whiteboard page**

![Whiteboard Page](image)

**Whiteboard Page**

Whiteboard page is where team members start discussion and post insights and inspirations to come up with new ideas and inspire each other.

1) Click the menu tab will take the user to this page.

2) Discussion section allows the user to initiate a new topic or reply others’ post.

3) Each item of the accordion can be extended.
4) **Type texts into the “Reply” box.**

5) **The user can also insert an image or attach files to his response.**

6) **Click “Add discussion” will start a new discussion.**

7) **“Insight & Inspiration” section allows team members post their research insights and useful resource for inspiring each other.**

8) **Click “Add insight & inspiration” will open a modal window to allow the user create new post.**

9) **The user can add external links, insert images or attach files to the post.**

6. **People page**
People page provides a view of members’ profiles. If the user is the administrator, he can change people’s role and permission.

1) Click the menu tab will take the user to this page.

2) Team member section lists each team member’s profile.

3) The user can easily change the view by choosing “extend view” to see full profile or “simply view” to see only member’s photo and name.

4) The list of members can be sorted by role, alphabetical order, team (if the user is in the multiply teams).

5) The team lead or project lead can add new members into the list.

6) Extended view of profile shows member’s photo, name, role, contact information and major.

7) Extended view of profile shows the member’s skill sets and experience.

8) The user can send message to his members.

9) The administrator can change the member’s role and permission from the quick dropdown options.

10) Project leaders section lists faculties who lead the project.

11) Managers section lists the managers’ profiles at Livewell.

7. Shared files page
Shared Files

Shared files page is where members upload and share documents and assets.

1) Click the menu tab will take the user to this page.

2) Shared documents section allows the user to upload files or open any shared file.

3) The user can customize the viewer to preview or list.

4) Files can be sorted by date, type and people who upload it.

5) Click “Add new file” can upload multiply new files.

6) Files are organized by file folder. The user can also create a new file folder.

7) Asset library allows the user upload or open design assets including patterns, stencils, templates, brand assets, etc.
6.3 Interface design

Graphic interface design defines the look and feel. The following is landing page design of the management system. The thumbnails of upcoming studio classes are grouped together. The user can navigate through the announcements by clicking the thumbnail or arrow symbol. The slideshow automatically plays every 20 seconds.

Landing page design

The following is tab page design. The layout is grid structured. Main menu tabs are in blue and keep the consistent by using the same shape. The activated tab is in light yellow to pop out from the other tabs. The new updated information will be indicated in red. All the main action buttons
are in blue. The secondary action buttons are in gray. Modal window will drop show as the layer covers the current content. List of items are structured in accordion and status are color coded.
Chapter 7       Conclusion

7.1 Design approach

7.1.1 Avoid design bias

Because this thesis is an individual project, user research mainly depends on the expert’s experience and skills. In order to think out of a full range design possibilities and avoid of designer’s bias, one way is to do competitive audit to see what other products that try to solve the similar problems, what their features and functions are, what their targeted users are, etc.

7.1.2 Other factors that will affect design

A designer’s talent and skill will affect the design solution. To ensure a successful design, a designer should have multiply skills including analytic, conceptual, visual, communications, interpersonal, etc. Besides of user research and collecting meaningful research data, designers apply other practices, their talent and skills, as well as principles and patterns to solve problems. Design principles help designers make choice through different options on behalf of the targeted users. A design pattern is a reusable form or structure as a solution for commonly occurring problems. Utilizing the design pattern to solve similar problems can save time for designers.
7.2 Design solution

The design in this thesis only provides high-level solution for facilitating the management of projects at the Livewell. Deeper levels of interface design are not covered due to the time constraint. Compared to the competitive products, the management system for the Livewell has these unique features:

- Integration with Onestop: the user can login without reset user name and password.
- Skill and experience management: help the faculty to set the role of each student based on the student’s skill and experience.
- Physical resources check out and approval: allow the student check out the physical resources at the Livewell and get approval from the manager.
- Asset library: this specific category allows the users keep aggregating useful assets for the project.
- Insight & Inspiration: help team members inspire each other.
- Consistent user experience: any action except of link to external site will open a modal window without interrupting the current user experience.
- Customized view: the interface is scanable and scalable. Current view can change to grid view, tab view, preview view, etc.
Bibliography


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