

INFO-420

Software Project Management

Assignment #4

Group 6

Risk Analysis, Controls, Implementation,
Closure and Evaluation, and Final Paper
For

BHYR Furniture Retail



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Introduction

Problem

BHYR furniture retailer has seen a recent trend of declining sales and visits. The nature of BHYR before the pandemic was a physical warehouse location, where customers could come and go. However, the pandemic has changed that, minimizing the number of customers that come to BHYR retail stores.

Opportunity

BHYR Furniture Retail has the chance to adapt to the current environment and change the way customers can use services and buy products. Additionally, BHYR has the chance to optimize their shopping experience and try to reach out to a wider customer base.

Project's MOV

This project will be successful if BHYR can increase profit margins by 30% within a year of this project's completion.

How achieving MOV will help organization

Achieving the MOV will help the company regain sales numbers and continue to be fully operational during the pandemic.

Project charter

Project Name	FurnitureHub Mobile Application
Project Stakeholders	<p>BHYR Furniture Retail: A furniture company creating FurnitureHub Mobile Application in order to increase sales.</p> <p>ReVamp: Contractor working for BHYR Furniture Retail who will provide services to assist with the development of FurnitureHub Mobile Application.</p>
Project Description	FurnitureHub will be a mobile application that allows customers to purchase furniture from BHYR Furniture Retail.
MOV	This project will be successful if BHYR can increase profit margins by 30% within a year of this project's completion.
Quality Issues	FurnitureHub will meet all guidelines required in IEEE Mobile/App Guidelines.
Resources Required	BHYR Furniture Retail will provide an office space, along with work laptops and office materials to allow for collaboration and support for the project team. BHYR Furniture Retail will additionally receive aid in development work from ReVamp.
Assumptions and risks	<ol style="list-style-type: none"> 1. BHYR Furniture Retail may need to invest in a larger budget than their initial budget to complete FurnitureHub. 2. Either BHYR Furniture Retail or ReVamp may lack adequate resources to implement features in FurnitureHub. 3. Either BHYR Furniture Retail or ReVamp may overstep established critical deadlines, causing a delay in FurnitureHub. 4. There may be less demand for user usage of the application as the pandemic will most likely be over within three years.
Project Administration	<p>Communication plan: BHYR Furniture Retail and ReVamp will hold meetings at the beginning and end of sprints to report updates on FurnitureHub.</p> <p>Scope management plan: Scope will be submitted, logged, and reviewed by both BHYR Furniture Retail and ReVamp during meetings.</p> <p>Quality management plan: BHYR Furniture Retail and ReVamp will assure that guidelines in IEEE Mobile/App Guidelines are being followed in the project life cycle during meetings.</p>

Acceptance and approval	Signature	Date
	BHYR Furniture Retail Project Manager: <u>Jane Doe</u>	11/01/2020
References	IEEE Mobile/App Guidelines. (n.d.). Retrieved November 01, 2020, from https://brand-experience.ieee.org/guidelines/digital/mobileapp-and-responsive-design-guidelines/mobile-apps/	

Project scope

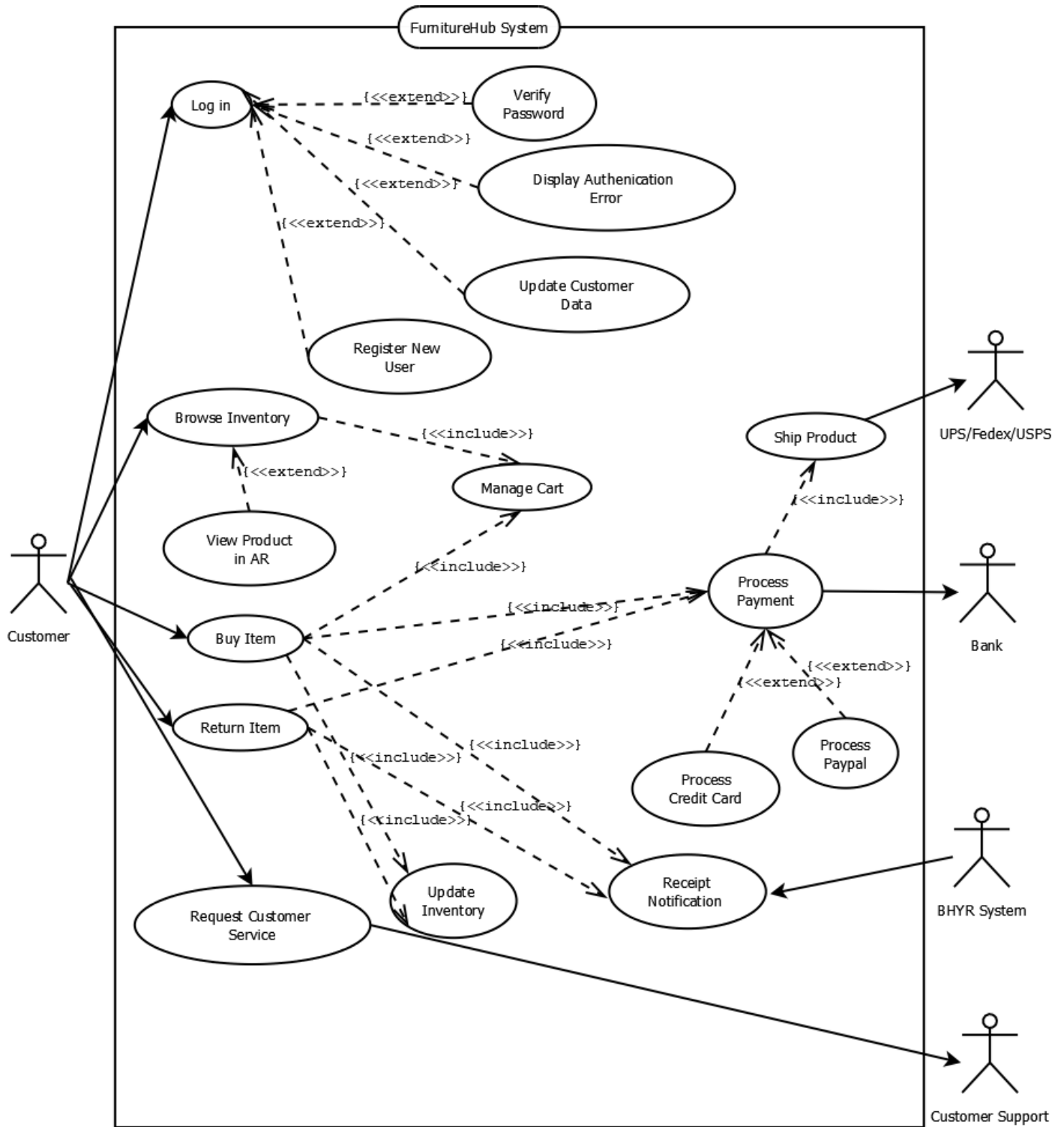
Scope Statement

1. To develop a mobile application that promotes sales during the pandemic for BHYR Furniture Retail while creating a simplified customer experience.
2. To provide the customer with an augmented reality experience altering the familiarity of furniture shopping for the safety of the customer.

Deliverable Definition Table

Deliverable	Structure	Approval Needed By
Business Case	Document	BHYR Furniture Retail Project Manager
Project Charter & Project Plan	Document	BHYR Furniture Retail Project Manager
Current System Study	Document	BHYR Furniture Retail Project Manager and ReVamp Project Manager

Use Case Diagram



Use Case Explanation

There are many different tasks that a customer can perform within the BHYR Furniture Retails system. The customer will start out by logging into the system. If it is a new customer they will be prompted to create an account. All returning customers will be given the opportunity to update any personal data such as address, email address, or password.

The customer will then be able to browse the inventory that is offered by BHYR Furniture Retails. If the customer finds an item they like they will then be able to add it to their cart. The BHYR Furniture Retails System allows for the customer to view the furniture in the room before it is bought with the systems augmented reality experience.

Once the customer decides that they would like to purchase a product the system inventory will remove the product and then the customer will be promoted to process a payment via Paypal or credit card. Once the payment has processed the system will send receipt notification to the customer.

If the customer is not happy with their purchase they have the opportunity to return the item. When an item is returned it will be added back into the systems inventory and the payment method will be refunded. A return receipt notification will then be distributed to the customer.

The customer will also have the ability to contact customer service is they have any questions in regards to any open order or processed return.

Work Breakdown Structure (WBS)

WBS

+0.0 BHYR Furniture Retail Mobile Platform Project

-1.0 DEVELOP CHARTER AND PLAN

-1.1 DEVELOP PROJECT CHARTER

- 1.1.1 Identify stakeholders
- 1.1.2 Project description
- 1.1.3 Create clear and concise project MOV
- 1.1.4 Identify project scope
- 1.1.5 Identify assumptions and risks
- 1.1.6 Identify resources required

-1.2 DEVELOP PROJECT PLAN

- 1.2.1 Organize project administration
- 1.2.2 Identify project organization structure
- 1.2.3 Project schedule
- 1.2.4 Project budget
- 1.2.5 Review and prepare project charter
- 1.2.6 Present project charter to BHYR
- 1.2.7 Milestone:** BHYR signs off on project plan

1.3 Milestone: Charter and project planning phase complete

-2.0 ANALYSIS

-2.1 GATHER REQUIREMENTS

- 2.1.1 Review and organize goals of the project
- 2.1.2 Develop functional requirements
- 2.1.3 Develop non-functional requirements

-2.2 DEVELOP DIAGRAMS

- 2.2.1 Develop data diagrams
- 2.2.2 Develop use case diagrams
- 2.2.3 Develop sequence diagrams

-2.3 DETAILED ANALYSIS

- 2.3.1 review and prepare analysis
- 2.3.2 present analysis to BHYR
- 2.3.3 Milestone:** BHYR signs off on analysis

2.4 Milestone: Analysis phase complete

-3.0 DESIGN

-3.1 USER INTERFACE DESIGN

- 3.1.1 Review and gather requirements
- 3.1.2 Organize and compile needed interfaces
- 3.1.3 Develop interface wireframes

3.1.4 Translate wireframes to graphical UI

3.1.5 Integrate central color theme

-3.2 DEVELOP SOFTWARE INFRASTRUCTURE

3.2.1 Identify software components

3.2.2 Identify software interfaces

3.2.3 Identify software adapters

-3.3 DEVELOP SYSTEM MODEL

3.3.1 Review software infrastructure

3.3.2 Identify connections between software and hardware

3.3.3 Organize and prepare software design document for presentation

3.3.4 Milestone: BHYR signs off on design document

3.4 Milestone: Design phase complete

-4.0 IMPLEMENTATION

-4.1 PREPARE TECHNICAL ENVIRONMENT

4.1.1 Review and prepare all necessary aspects pre-development

4.1.2 Set up technical environments and dependencies

4.1.3 Document all preparations

4.1.4 Describe development methodologies, tools, and procedures

-4.2 DEVELOPMENT OF DATABASE AND CODE

4.2.1 Create all components of the database

4.2.2 Integrate database into backend

4.2.3 Create front facing user interface

4.2.4 Connect frontend and backend

4.2.5 Review and touch up beta for presentation

4.2.6 Milestone: BHYR approves to progress to testing phase

4.3 Milestone: Construction phase complete

-5.0 TESTING

-5.1 TEST PLAN

5.1.1 UI/UX interface testing

5.1.2 Code/branch coverage

5.1.3 Smoke testing

5.1.4 Performance testing

5.1.5 Feature testing

-5.2 REPORT TEST RESULTS

5.2.1 Review test plan with BHYR

5.2.2 Carry out test plan

5.2.3 Analyze results

5.2.4 Prepare results and presentation

5.2.5 Present test results to BHYR

5.2.6 Address software issues if any

5.2.7 Milestone: BHYR signs off on test results

5.3 Milestone: Testing Phase complete

-6.0 MAINTENANCE AND SUPPORT

-6.1 EVALUATION OF PROBLEM OR ISSUE

6.1.1 Review and record relevant defect information

6.1.2 Reproduce and dissect issue

6.1.3 Prepare defect/issue report

6.1.4 Propose a defect fix

-6.2 ISSUE DEFECT PATCH

6.2.1 Review defect/issue report

6.2.2 Carry out proposed fix

6.2.3 Confirm defect fixed

6.2.4 Present patched version

6.2.5 **Milestone:** BHYR signs off on defect patch

6.3 Milestone: Implementation phase complete

Schedule and Budget

The assumptions we took in order to create an estimate of budget was the average base-pay of backed up software engineering companies in comparison to competitor software engineering companies. Base pay for a software engineer is about 74k annual, and at IKEA, a competitor of BHYR Furniture Retail, software engineers are paid about 92k annually. As a smaller business, BHYR estimates that their software engineers will be paid 70k annually. The type of resource in the schedule and budget consists of project team members. The method we took to calculate the labor rate for this resource is the following:

$$\$70,000 / 2,000 \text{ work hours} = \$35 * 2.5$$

To get a labor rate of \$87.5 / hour

WBS no.	Duration	Resource Type	Number of resources	Total effort (Hrs)	Cost
1.1					
1.1.1	0.5 day	Project Manager	1	4 hours	\$350
1.1.2	0.5 day	Project Manager	1	4 hours	\$350
1.1.3	0.5 day	Project Manager	1	4 hours	\$350
1.1.4	0.5 day	Project Manager	1	4 hours	\$350
1.1.5	3 days	Project Team Member	3	72 hours	\$6,300

1.1.6	2 days	Project Team Member	1	16 hours	\$1,400
1.2					
1.2.1	1 day	Project Manager	2	16 hours	\$1,400
1.2.2	2 days	Project Manager	2	32 hours	\$2,800
1.2.3	1 week	Project Manager	3	168 hours	\$14,700
1.2.4	1 week	Project Manager	3	168 hours	\$14,700
1.2.5	4 days	Project Team Member	3	96 hours	\$8,400
1.2.6	1 day	Project Team Member	2	16 hours	\$1,400
1.2.7	1 day	BHYR Stakeholder	2	16 hours	\$1,400
2.1					
2.1.1	2 days	Project Manager	2	32 hours	\$3,063
2.1.2	1 week	Project Team Member	4	224 hours	\$19,600
2.1.3	2 week	Project Team Dev.	4	448 hours	\$39,200
2.2					
2.2.1	1 week	Project Team Dev.	2	112 hours	\$9,800
2.2.2	1 week	Project Team Dev.	2	112 hours	\$9,800
2.2.3	1 week	Project Team Dev.	2	112 hours	\$9,800
2.3					
2.3.1	4 days	Project Team Member	2	64 hours	\$5,600
2.3.2	2 days	Project Team Member	2	32 hours	\$2,800
2.3.3	1 day	BHYR Stakeholder	2	16 hours	\$1,400
3.1					
3.1.1	1 week	Project Team Member	2	112 hours	\$8,225
3.1.2	2 week	Project Team Member	3	336 hours	\$29,400
3.1.3	2 week	Project Team Member	3	336 hours	\$29,400

3.1.4	4 weeks	Project Team Dev.	5	1,120 hours	\$98,000
3.1.5	4 days	Project Team Member	2	64 hours	\$5,600
3.2					
3.2.1	3 weeks	Project Team Member	2	336 hours	\$29,400
3.2.2	3 weeks	Project Team Member	2	336 hours	\$29,400
3.2.3	2 week	Project Team Member	2	224 hours	\$19,600
3.3					
3.3.1	2 week	Project Team Member	2	224 hours	\$19,600
3.3.2	3 week	Project Team Member	2	336 hours	\$29,400
3.3.3	2 week	Project Team Member	2	224 hours	\$19,600
3.3.4	6 days	BHYR Stakeholder	2	96 hours	\$8,400
4.1					
4.1.1	2 week	Project Team Member	2	224 hours	\$19,600
4.1.2	2 week	Project Team Member	2	224 hours	\$19,600
4.1.3	1 week	Project Team Member	1	56 hours	\$4,900
4.1.4	5 days	Project Manager	1	40 hours	\$3,500
4.2					
4.2.1	7 weeks	Project Team Dev.	4	1568 hours	\$137,200
4.2.2	6 weeks	Project Team Dev.	2	672 hours	\$58,800
4.2.3	7 weeks	Project Team Dev.	4	1568 hours	\$137,200
4.2.4	6 weeks	Project Team Dev.	4	1344 hours	\$117,600
4.2.5	4 weeks	Project Team Dev.	2	448 hours	\$39,200
4.2.6	4 weeks	BHYR Stakeholder	3	672 hours	\$58,800
5.1					
5.1.1	3 weeks	Project Team Member	3	504 hours	\$44,100

5.1.2	4 weeks	Project Team Dev.	3	672 hours	\$58,800
5.1.3	3 weeks	Project Team Member	3	504 hours	\$44,100
5.1.4	7 weeks	Project Team Dev.	4	1568 hours	\$137,200
5.1.5	5 weeks	Project Team Member	4	1120 hours	\$98,000
5.2					
5.2.1	2 weeks	Project Team Member	2	224 hours	\$19,600
5.2.2	20 weeks	Project Team Member	5	5600 hours	\$490,000
5.2.3	2 week	Project Team Member	4	448 hours	\$39,200
5.2.4	1 week	Project Team Member	1	56 hours	\$4,900
5.2.5	1 week	Project Manager	3	168 hours	\$14,700
5.2.6	6 weeks	Project Team Dev.	4	1344 hours	\$117,600
5.2.7	2 weeks	BHYR Stakeholder	3	336 hours	\$29,400
6.1					
6.1.1	2 weeks	Project Team Member	2	224 hours	\$19,600
6.1.2	2 weeks	Project Team Member	2	224 hours	\$19,600
6.1.3	1 week	Project Team Member	1	56 hours	\$4,900
6.1.4	1 week	Project Team Member	2	112 hours	\$9,800
6.2					
6.2.1	1 week	Project Team Member	1	56 hours	\$4,900
6.2.2	4 weeks	Project Team Dev.	3	672 hours	\$58,800
6.2.3	2 week	Project Team Dev.	2	224 hours	\$19,600
6.2.4	1 week	Project Team Member	2	112 hours	\$9,800
6.2.5	1 week	BHYR Stakeholder	2	112 hours	\$9,800

Risk Analysis

The following is a risk analysis (with prioritization using P.I. score calculated from probability and impact) for BHYR Furniture Retail's Mobile Platform Project:

Risk (Threats)	P.I. Score	Ranking
Risk 2: Key member leaves project.	25	1
Risk 8: Software components are untestable.	20	2
Risk 5: Response time not acceptable.	20	2
Risk 7: Software components do not integrate during tests.	15	3
Risk 1: ReVamp delays contracting work.	10	4
Risk 6: Software components do not integrate during design.	9	5
Risk 4: Not enough project resources.	8	6
Risk 3: Some 3rd party software have unobtainable licenses.	6	7

Risk 1: Early stages of development of the mobile software has begun. Unfortunately, internal conflicts within ReVamp (a contractor hired by BHYR) causes them to consider a pause provision which ultimately hinders the speed at which BHYR's technical team can perform their duties. This puts the Mobile Platform Project behind schedule.

- This threat occurs in the *implementation phase*.
- **Detection:** It was an *unknown-unknown* risk because it was identified after it occurred and, therefore, caught the project team off guard.
- This is an *external risk*, and BHYR and the project team should not be held responsible for the increased time it takes for early development.
- This risk affects *schedule* and *budget*.
- **Prevention & Mitigation:** Project Security Funds and obtaining more internal developers.
- **Probability Score:** 2 | **Impact Score:** 5 | **P.I. Score:** 10

Risk 2: Sometime into the development process of the project, a key project member encounters unforeseen issues (sickness and or other emergencies) and must leave for an extended period of time.

- This threat occurs in the *implementation phase*.
- **Detection:** It was an *unknown–unknown* risk because it was identified after it occurred and, therefore, caught the project team off guard.
- This is an *internal risk*, and BHYR and the project team should take responsibility for this matter.
- This risk affects *schedule* and *budget*.
- **Prevention & Mitigation:** Project Security Funds and having more than 1 key project member per development team.
- **Probability Score: 5 | Impact Score: 5 | P.I. Score: 25**

Risk 3: Whilst brainstorming and listing possible softwares to use for the development of the project, the team finds out that some of the softwares have unobtainable licenses and are forced to look for even more alternatives.

- This threat occurs in the *design phase*.
- **Detection:** It was an *unknown–unknown* risk because it was identified after it occurred and, therefore, caught the project team off guard.
- This is an *internal risk*, and BHYR and the project team should take responsibility for this matter.
- This risk affects *schedule*.
- **Prevention & Mitigation:** Explore and identify licensing beforehand.
- **Probability Score: 2 | Impact Score: 3 | P.I. Score: 6**

Risk 4: As development begins, ReVamp (a contractor hired by BHYR) experiences a shortage of project resources including but not limited to general office supplies, work laptops, and software memberships.

- This threat occurs in the *implementation phase*.
- **Detection:** It was an *known–unknown* risk because this risk is perceivable but the extent is unknown.
- This is an *external risk*, and BHYR and the project team should not be held responsible for the increased time it takes for early development.
- This risk affects *schedule* and *budget*.
- **Prevention & Mitigation:** Project Security Funds and purchasing more before development.
- **Probability Score: 4 | Impact Score: 2 | P.I. Score: 8**

Risk 5: The project team along with contractors from ReVamp have just finished the implementation phase and received the okay to progress to the testing phase. However,

during testing, the project finds out that the response times are unacceptable as they are incredibly slow.

- This threat occurs in the *testing phase*.
- **Detection:** It was an *known–unknown* risk because this risk is perceivable but the extent is unknown.
- This is an *internal* and *external risk*, and BHYR’s project team and ReVamp should take responsibility for this matter.
- This risk affects *schedule* and *budget*.
- **Prevention & Mitigation:** Project Security Funds and exploring different algorithms beforehand.
- **Probability Score:** 4 | **Impact Score:** 5 | **P.I. Score:** 20

Risk 6: Whilst planning and designing the software, the project team finds out that certain components do not integrate well with others. This forces the team to completely reevaluate the way that certain components need to be implemented.

- This threat occurs in the *design phase*.
- **Detection:** It was an *unknown–unknown* risk because it was identified after it occurred and, therefore, caught the project team off guard.
- This is an *internal risk*, and BHYR and the project team should take responsibility for this matter.
- This risk affects *schedule*.
- **Prevention & Mitigation:** Choosing easily integratable technologies.
- **Probability Score:** 3 | **Impact Score:** 3 | **P.I. Score:** 9

Risk 7: During the last stretch of development, the team encounters a giant impediment. Some pieces of the software do not integrate with the rest when trying to piece them together. This forces the team to completely reevaluate the way that certain components need to be implemented.

- This threat occurs in the *implementation phase*.
- **Detection:** It was an *unknown–unknown* risk because it was identified after it occurred and, therefore, caught the project team off guard.
- This is an *internal* and *external risk*, and BHYR’s project team and ReVamp should take responsibility for this matter.
- This risk affects *schedule* and *budget*.
- **Prevention & Mitigation:** Choosing easily integratable technologies.
- **Probability Score:** 3 | **Impact Score:** 5 | **P.I. Score:** 15

Risk 8: During testing, the project team discovers that some components are completely untestable. This requires the project team to refactor the components that violate testability which will require a hefty amount of additional time and other resources.

- This threat occurs in the *testing phase*.
- It was an *known–unknown* risk because this risk is perceivable but the extent is unknown.
- This is an *internal* and *external risk*, and BHYR’s project team and ReVamp should take responsibility for this matter.
- This risk affects *schedule* and *budget*.
- ***Prevention & Mitigation:*** Project Security Fund and establishing coding standards before hand
- ***Probability Score:*** 4 | ***Impact Score:*** 5 | ***P.I. Score:*** 20

Management Controls

Activities that will control the project include the following:

Project communication:

1. Strict adherence to the formal project organization (matrix) as well as specifying the informal organization. These define the official line of authority and communication including the informal relationships and internetworking of people within the organization.
2. A project manager must be in control of the project and identify problems, issues, and situations that will impact the project schedule and budget.
3. The following is an implementation of the communications plan:

	Same Time	Different Time
Different Place	Telephone/Teleconference Video conference Instant messaging Electronic Mail/Wikis/Blogs	Electronic mail/Instant Messaging Wikis/Blogs
Same Place	Face-to-Face meetings	Electronic mail/Instant Messaging Wikis/Blogs

Risk management:

1. Create a Risk Plan	Begins with having a firm commitment to the entire risk management approach from all project stakeholders.
2. Identify Risks	Must be identified clearly so that the true problem, not just a symptom, is addressed.
3. Analyze Risks	Requires that those risks be analyzed to determine what threats require attention or a response.
4. Develop Risk Strategies	Determine what threats should be addressed.
5. Monitor and Control Risks	Various risk triggers must be monitored continually.
6. Respond and Evaluate Risk	Provide risk metrics for determining whether a particular

	threat has occurred.
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Quality management:

Quality Management Planning	<p>Adequate time and budget must be allocated in the project plan for testing and other activities to ensure that the project team is building the right product or system and building it the right way.</p> <p>This is explored in further detail in the Project Schedule and Budget section.</p>
Quality Assurance	Auditing along with checks and balances to assure that the project team is following the processes outlined in the management plan.
Quality Control	Focuses on monitoring the activities and results of the project to ensure that the project complies with the quality standards.
Standards	Agreed upon specifications or criteria to ensure that all of the projects deliverables meet their intended purpose.

Change management:

Although less significant, BHYR is going through a major revision of conducting sales after completion of the Mobile Platform Project, requiring a Change Management Plan to be in place.

Approach / Strategy	<p>Normative-ReEducation Approach</p> <p>Instead of changing individuals, BHYR will aim to restate the goals of the company and implement new practices to create a new social norm within the company.</p>
Steps to support the Change Management Plan	<ul style="list-style-type: none"> - Assess willingness, readiness, and ability to change of all members affected by said change. - Develop or adopt a strategy for change and how to deal with change for the affected party. - Implemented change management plan and track progress of affected

	parties.
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Project Implementation

After the completion of testing, BHYR Retail plans to transfer the project from the development environment to the production environment using the “phased” approach. The phased approach allows for the desired system to be incrementally introduced to the organization, in successive modules or parts.

Due to the fact that BHYR Retail developed the product using the Agile methodology, this makes using the phased approach the best selection for the transitioning of environments. This approach allows BHYR to plan for multiple product releases, where each subsequent product release has additional features and functionalities that can be added to the previous. Using the phased approach also allows BHYR to correct mistakes or get a feel for the initial implementations, which allows implementations in the future to be less error-prone and run more seamlessly.

Although there are many benefits to using this approach, it should also be acknowledged that there are possible downsides to be wary of as well. The phased approach is the more time-consuming and expensive in comparison to both the direct cutover approach and the parallel approach, but BHYR believes that it is better to err on the side of being more cautious rather than being too hasty for the transitioning. However, it is also important to note that unrealistic target dates or problems faced during the early stages of implementation can easily create a chain reaction of problems for this approach as well.

Project Closure

The FurnitureHub Mobile Application project is deemed to be completed normally as expected. The project’s scope is achieved within the budget, schedule, and quality parameters that were outlined. By developing a thorough risk management plan, BHYR was able to mitigate and prevent minor discrepancies that occurred during the different parts of the life-cycle of the project. Additionally, by setting deadlines in advance of the committed target release date, BHYR was able to ensure that any potential risks are addressed within the appropriate time frame for a phased release approach.

Some of the challenges that the ReVamp development team faced during the implementation included testing difficulties along with addressing performance requirements for the system. However, this risk was handled accordingly by allocating more resources (manpower, hardware technology) towards system performance and ensuring that any third-party services work efficiently with the system under significant load. During the implementation phase, ReVamp started to realize that the performance of the application was falling a little short of the set requirements, but this was communicated in advance with BHYR and a clear

discussion allowed a realistic revision to the performance expectations for the system under the given budget.

In order to bring this project to closure, ReVamp will need to ensure that they get BHYR's (the sponsor) approval on the project's successful completion. In order to do this, ReVamp will need to ensure the delivery of any hardware, implementation of any servers, along with documentation and training provided for the application usage. ReVamp will need to also ensure that they provide customer support for any technology-related complications after the release of the application.

With the goals of expediting the sponsor's approval, ReVamp will aim to deliver a final project report and presentation to BHYR. The final project report and presentation will offer clarity on the quality of the work that has been done and show that all the set objectives for the project were met. This will allow ReVamp to provide BHYR with the confidence that all the deliverables and milestones are completed correctly. ReVamp believes that this formality shall not be too surprising for BHYR as they have been in constant communication with the project sponsor regarding the status of the project at different phases during the project's life cycle. BHYR classifies as a knowledgeable sponsor as they have an important stake in the outcome of the project to ensure that their financial goals and the MOV are addressed through the implementation of this application. Therefore, any negotiations that occur will be done in good faith through discussions held between the project manager and the project sponsor.

Finally, the final presentation meeting will allow ReVamp to officially transfer the product into the hands of BHYR by providing them with all that's needed to get the application into production. Since customer support is part of the contract, a support team will remain on-site to ensure that the application runs smoothly and is updated accordingly for any fixes to encountered issues. On ReVamp's end, the project manager will need to complete a few more administrative formalities to mark the end of the project. This will include ensuring that all the deliverables and open items are completed, verifying the acceptance of the sponsor, organization of documentation, release of any unneeded project resources, and scheduling project evaluations with the team (more on this in the next section). The project manager will also schedule a small ceremony to celebrate the launch of the app with the stakeholder to collectively acknowledge all of the efforts that have contributed to the success of this project.

Project Evaluation

To ensure the success of the project, BHYR Retail plans to work with ReVamp to conduct a common project evaluation between the project team members and the organization. The project evaluation will look at four different elements: an individual performance review, a postmortem review, a project audit, and an evaluation of the success of the project's MOV. In addition to providing closure to the project, these evaluations will serve as an opportunity to acknowledge the team's performance on the project and the individual contributions that have been part of the effort.

The individual review will be conducted by the project manager for each individual team member. It will measure each team member's performance by asking the individual to evaluate their own performance, asking specific questions on the behaviors, and how performance could be improved. These questions will be fair, consistent, and objective. This interaction will be held in-person and will take place in the form of a performance appraisal. Through such a framework, both the results and the behavior/process measures will be addressed at an individual and team level for an objective review. This will also eliminate any biases and make the review more constructive and helpful.

The postmortem review, also known as the project close-out review, will be conducted by the project manager and the entire project team directly after the conclusion of the project. This review will look at the project's initial MOV. It will discuss the project scope, schedule, budget, and quality objectives. It will review each of the project deliverables. It will review the various project plans and Project Management Body of Knowledge (PMBOK) areas. It will review the project team performance.

The team interactions will take the form of a debrief to some extent. BHYR and ReVamp have decided to follow the form of debrief because debriefs allow team members to gain confidence in each other as a unit and decrease decision-making time (which is a key aspect in risk mitigation). BHYR aims to use debriefs as a method to reflect on the strengths and weaknesses of the team along with clarifying roles, priorities and goals in the bigger picture. Through this approach of "team-bonding", team members start to understand each other and value their responsibility and roles as part of the overall success of the organization.

The project audit will be conductive with an objective outside party. The outside party should have no direct involvement with the project, as well as be impartial and objective. The outside party should still have a broad sense of experience in projects, and should not be afraid to counter any objections to criticism. They must also act in BHYR's best interests, and be willing to listen and learn.

In addition to advocating project evaluations, BHYR also believes in providing their employees with rewards based on their performance judged through an objective set of measures. Prior to starting the project, each employee sets individual objectives and goals which contributes towards the overall team effort in some sense. In general, if the employee has demonstrated that they have surpassed their own standards that were set, they deserve to be rewarded for their valued efforts. Rather than giving bonuses, BHYR aims to incorporate an incentive pay system in which employees will receive money based on increased performance against predetermined targets.

Lastly, an evaluation of the project's success of MOV will be measured after the project's release. It will ask the following questions: Did the project achieve its MOV? Was the sponsor/customer satisfied? Was the project managed well? Did the project manager and team act in a professional and ethical manner? What was done right? What can we do better next time?

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