HKUST ENTREPRENEURSHIP CENTER
香港科技大學創業中心

Enhancing the User Friendliness of the **HKUST Entrepreneurship Centre Application**

ISOM3010 L2 Group 3
Anna | Jane | Liesl | Ryan

Today's Agenda

5 Phases

Initiation

- Scope Statement
- Team

Planning

- WBS
- Timeline
- Budget
- Sequence
- Risk Management

Execution

- Tasks
- Roles and Responsibilities
- Cost

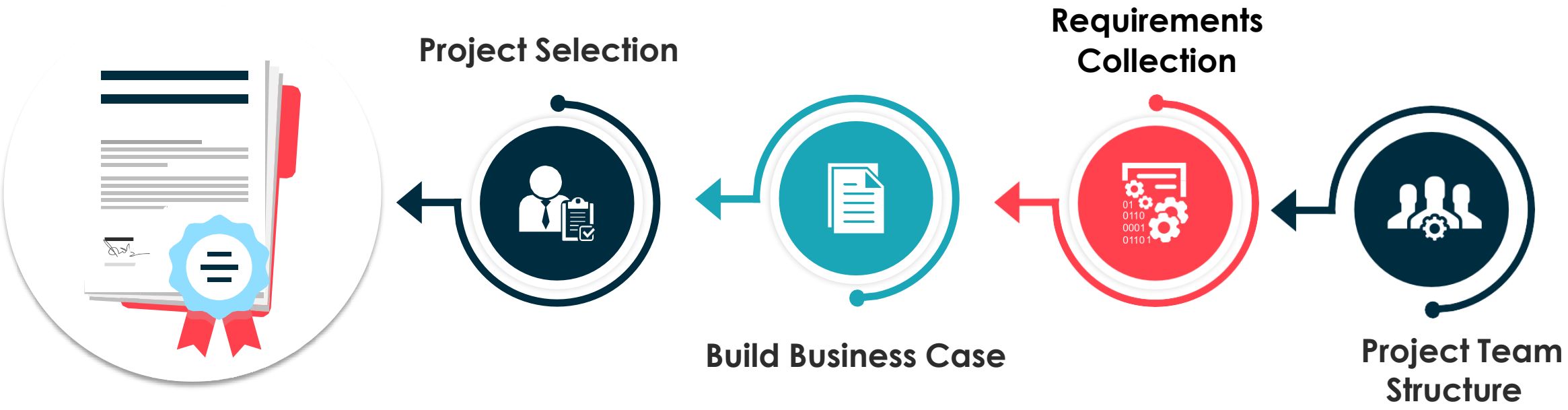
Control

- Status Report
- Actual vs Planned
- CPI

Conclusion

- Performance Analysis
- Knowledge Sharing
- Closure

Project Initiation



Introduction To HKUST EC App

What is the HKUST Entrepreneurship Center?

Aim:

- Cultivate HKUST Entrepreneurship Spirit
- Provide entrepreneurship opportunities for students through events and competitions
- Source internal and external funding for students' start ups

Key Events and Offerings

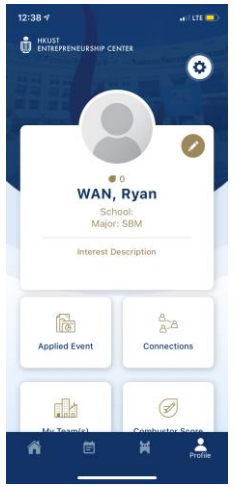
Key Events:

- hackUST
- HKUST Sino-Million Competition

Other Activities:

- Professional Webinar Talks
- Start-Up related educational sessions
- Funding

HKUST EC App



Key Functions

- Create User Profile
- Sign Up for Competitions/ Events
- Network
- View Past Events

Our Business Case, HKUST EC's Challenges and Their Requirements

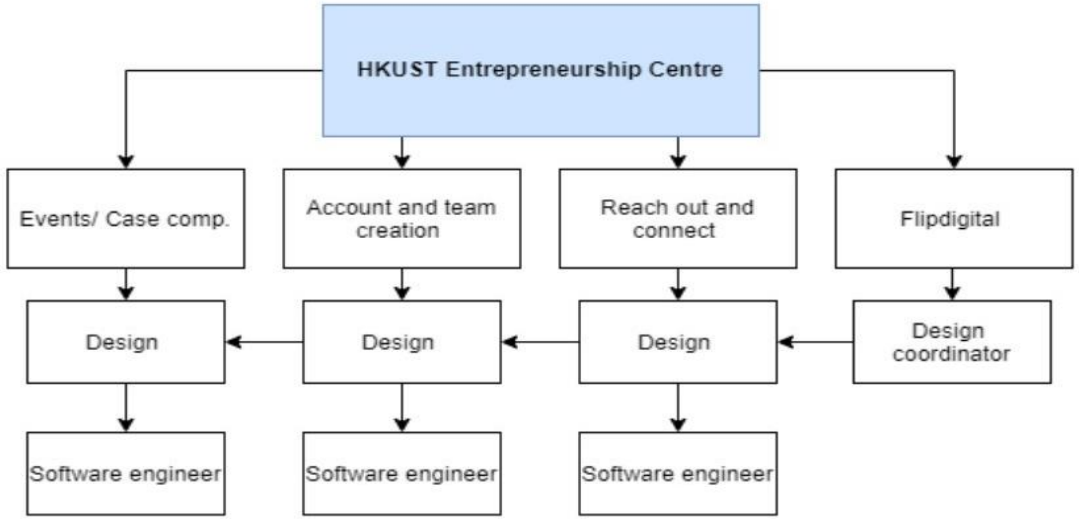
Current Pain Points

Unreliable Server

Buggy Database

Not User-Friendly

Company O Chart



EC's Requirements: Understand users' feedback and technical feasibility of app

Increase Sign Ups

Cultivate Networking

Integrate with ITSC

Key Question: What Are We Going to Do To Make EC Better?

Requirement Collection | Users

Our Means Of Requirement Collection

Focus Group

- 10 students, involved with start-ups, and joined events by EC before

Key Takeaways:

- "Terrible user experience"
- Cannot properly search for other users, as the users' information is mismatched
- Want to focus on networking

Survey

- 20 students, involved with start-ups and are HKUST students that have used the EC app before

Key Takeaways:

- Two key valued functions are:
  - Sign up for events
  - Find teams to join competitions
- Worst user-friendly functions:
  - Inviting people to join team
  - Creating teams

Proposed Functions

Profile Creation

- Sign in through ITSC integrate student information
- Display full name on search function.
- Edit "preferred name" for user

Create/Join A Team

- Display people that are "looking for a team"
- Allow users to enter "strengths, interests, reasons for joining, contact information"
- Add a search function to find teams by name

Connecting with Users

- Update profiles on search functions, and avoid wrong profiles
- Display users that are "looking to connect" on search function
- Contact users by requesting to send a message on search function

Sign Up For Event/Competitions

- Successfully display events and description for specific event

Project selection – Weighted Scoring Model

User requirement

1. Chat function
2. Information update
3. Search option
4. Team creation

Company goals

1. Case entries
2. Promotion
3. Implementation
4. Time

Qualitative justification Linkage

Project A
Connect & Join Team
3.95

Project B
Event Booking
2.9

Project C
Account Editing
2.1

Project Description

Description

Redesign the interface of the HKUST Entrepreneurship Centre App to enhance user journeys and satisfaction. The project will mainly focus on the improvement in its team creation, connection and join functions.

Objectives

To fix the unusable functions such as editing profile and connection search

To add a new function: instant messaging/ chat room for teams/ Entrepreneurship-themed social media platform

To optimize the utility of the team creation, connection and join functions of the app

To optimize user experience in connecting with like-minded people and form teams to start growing their businesses.

Other

Assumptions/ Constraints/ Risks:

- Requirements collected are clear and sufficient
- Unpredictable technical problems might occur
- Technician resources might not be available within the tight schedule and budget

HKUST EC:

- Support the project implementation by offering funds and approvals of the scope
- Project Manager of this project

Team Structure

Project-Based Structure

Flips digital

The EC Project

- **Full-time Project Manager**
- **Designers x 2**
- **Software Developers x 2**
- **App Tester x 1**
- **Project Team Members x2**

Rationale Behind

Customized and specific services

Focus on solutions and implementation

Higher flexibility in changing requirements
More responsive to customers' needs

Most team members are part-time and students

Project Planning

Defining Activities

Work Breakdown Structure

Improve Team Creation, Connection, Join Functions

Phase 1: Project Initiation
4 days

1. Potential Projects
2. Build Business Case
3. Use Weighted Scoring Model to select project
4. Create Stakeholder Assessment Matrix
5. Complete Project Charter
6. Get Sponsor Sign-off

Phase 2: Project Planning
7.25 days

1. Define Project Requirements
2. Scope Planning
3. Defining Activities
4. Sequencing Activities
5. Project Scheduling
6. Cost Estimation
7. Define Risks and Risk Management Approach
8. Define Human Resources Plan
9. Define Communications Flow

Phase 3: User Interface Design
3 days

1. Design Team Creation Flow
2. Design User Connection and Interaction Functions
3. Design Event Sign Up Function
4. Design Calendar View

Phase 4: App Development
5 days

1. Design Team Creation Flow
2. Design User Connection and Interaction Functions
3. Design Event Sign Up Function
4. Design Calendar View

Phase 5: Database Development
3 days

1. iOS App Coding
2. Android App Coding

Phase 6: Testing
8 days

1. Connect with existing ITSC Database
2. Connect with Entrepreneurship Center Event Database

Phase 7: Project Closure
2 days

1. Closeout Meeting with Entrepreneurship Center
2. Hand Over Code to Entrepreneurship Center
3. Complete Final Status Report
4. Acceptance Sign-off by stakeholders

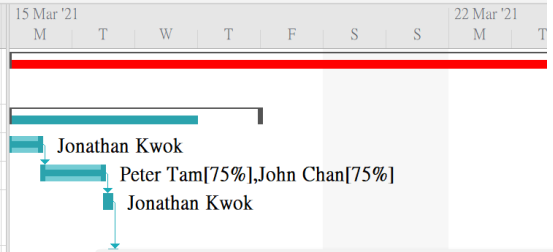
Scheduling and sequencing record – MS Project

MS Project

- ✓ **Schedule Tasks**
- ✓ **Set Dependencies**
- ✓ **Assign Resources**
- ✓ **Cost Estimation**
- ✓ **Timeline Construction**
- ✓ **Resource Levelling**
- ✓ **Progress Tracking**

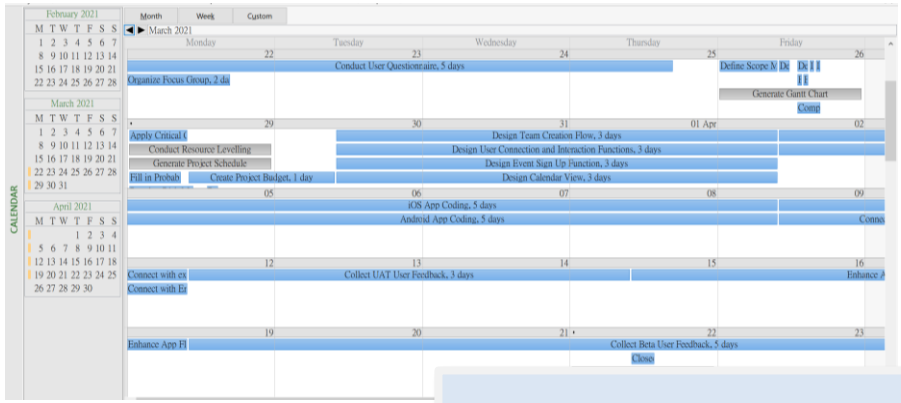
Project Planning

	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		**Improve Team Creation, Connection, Join Functions**	**28.75 days**	**Mon 15/03/21**	**Thu 22/04/21**		
2	✓	**Phase 1: Project Initiation**	**4 days**	**Mon 15/03/2**	**Fri 19/03/21**		
3	✓	Identify Potential Projects	0.5 days	Mon 15/03/21	Mon 15/03/21		Jonathan Kwok
4	✓	Build Business Case	1 day	Mon 15/03/21	Tue 16/03/21	3	Peter Tam[75%],Jo
5	✓	Use Weighted Scoring Model to select project	2 hrs	Tue 16/03/21	Tue 16/03/21	4	Jonathan Kwok
6	✓	Create Stakeholder Assessment Matrix	2 hrs	Tue 16/03/21	Tue 16/03/21	5	John Chan[75%], Peter Tam[75%]
7	✓	Complete Project Charter	1 day	Wed 17/03/21	Wed 17/03/21	6	Jonathan Kwok



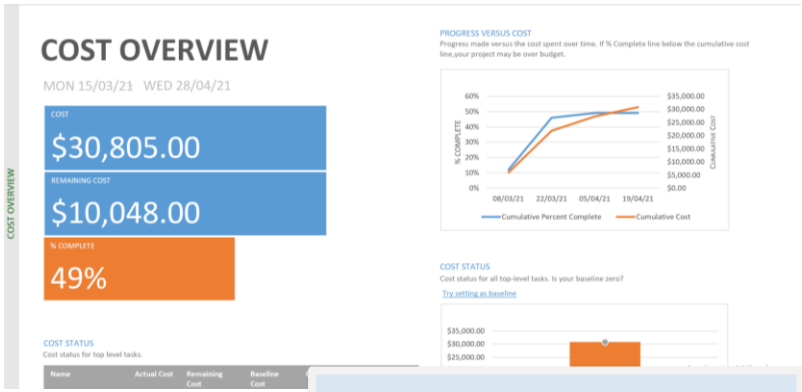
Gantt Chart

Project Execution



Calendar

Project Control



Reports

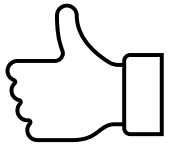
Scheduling Techniques – CCPM & Program Evaluation Review Technique

Phase 3: User Interface Design

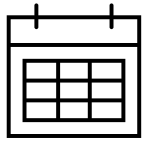
Task	T_0	T_L	T_P	T_E	VAR
Design Team Creation Flow	16 hours	24 hours	30 hours	23.66	5.44
Design User Connection & Interaction Functions	16 hours	20 hours	32 hours	21.33	7.11
Design Event Sign Up Function	8 hours	12 hours	20 hours	19	4
Design Chatroom Function	30 hours	34 hours	40 hours	34.33	2.77
Total Duration		**90 hours**		**98.32 hours**	**19.32**

Rationale

Intuitive



Standardised



Closer to actual activity usage

Critical Chain Project Management

- Identify Critical Chain with Network Diagram on MS Project

Scheduling Techniques – CCPM & Program Evaluation Review Technique

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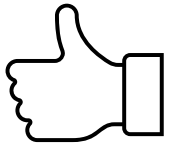

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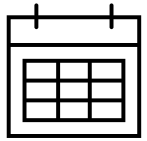


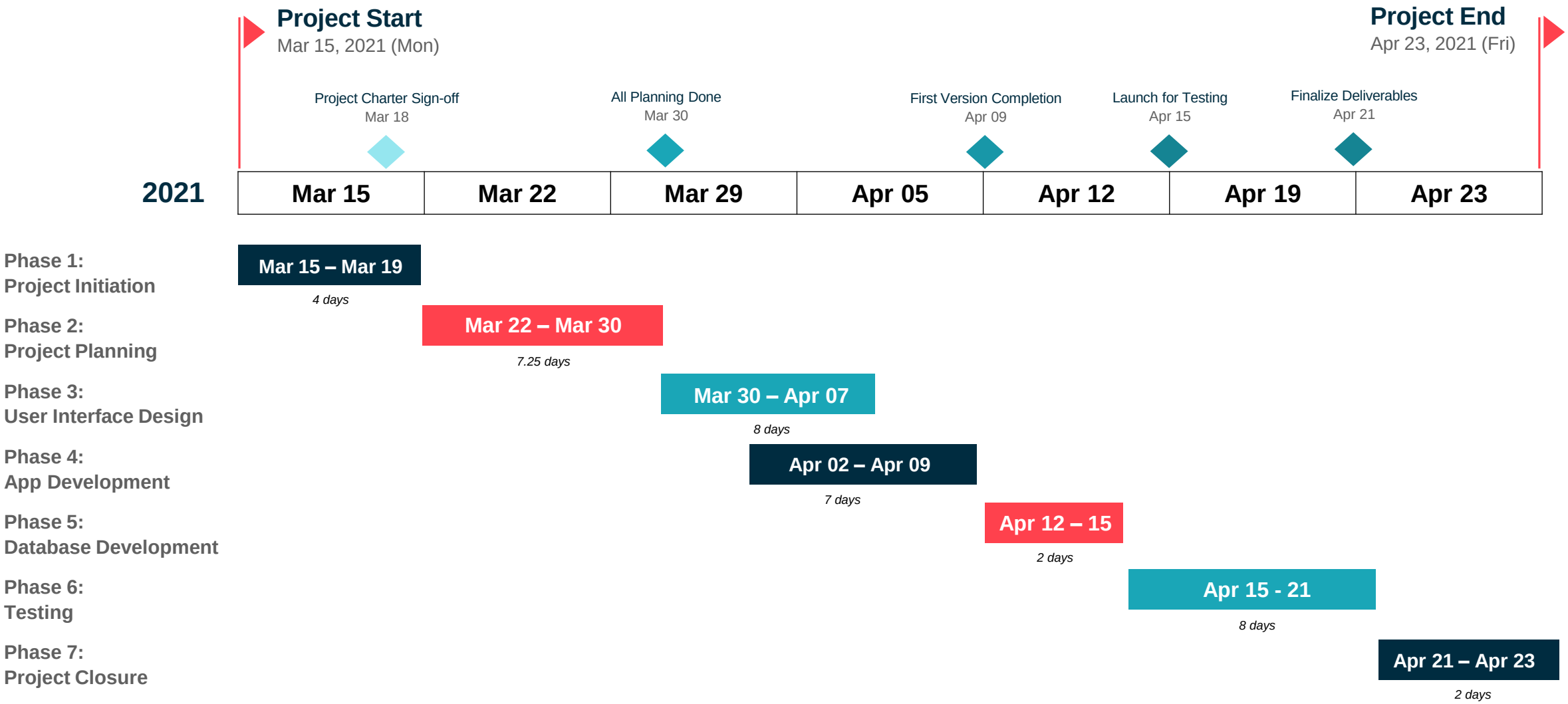
Closer to actual activity usage

Critical Chain Project Management

- Identify Critical Chain with Network Diagram on MS Project

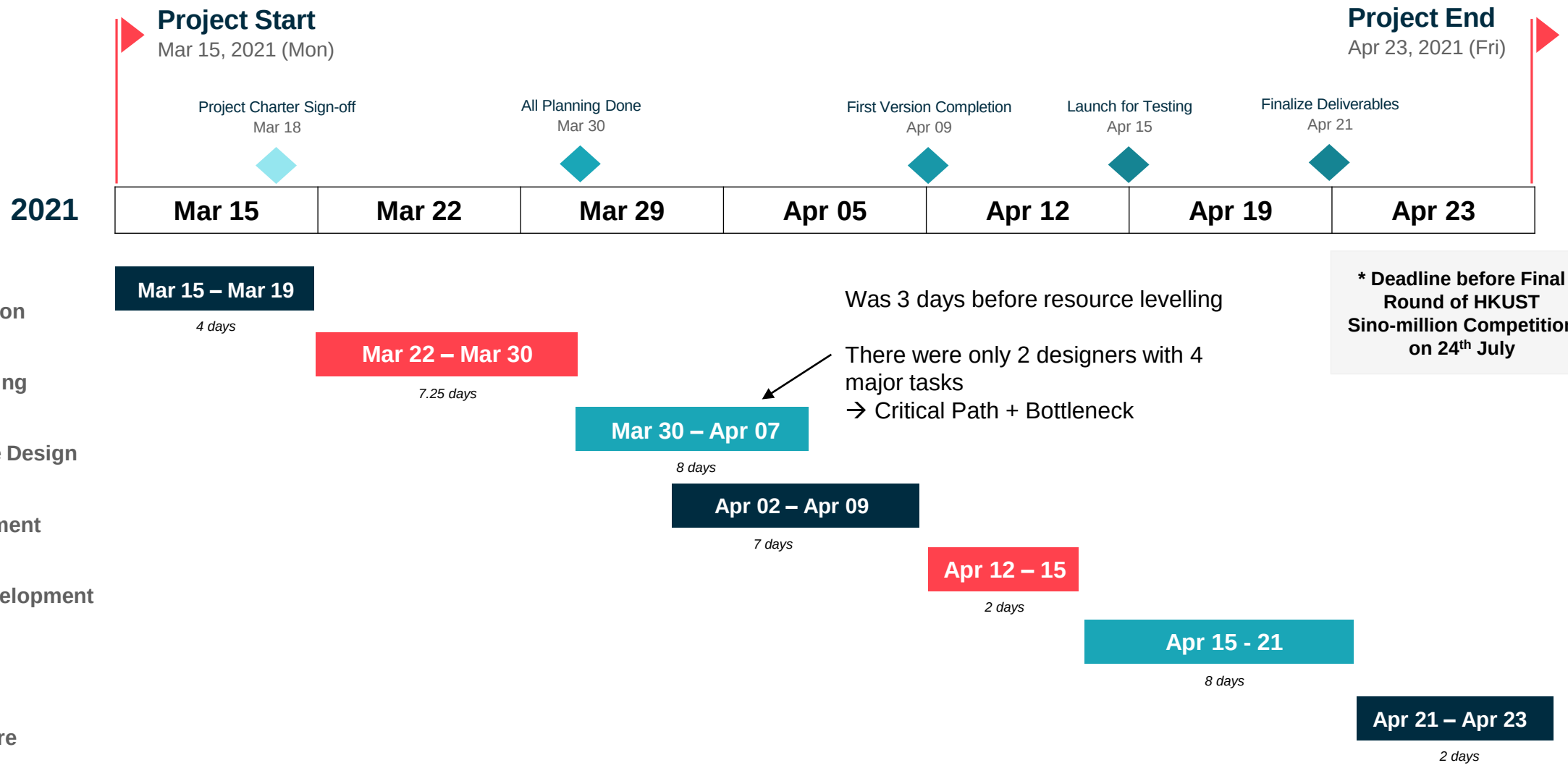
Project Scheduling

Baseline Estimated Timeline



Project Scheduling

Baseline Estimated Timeline



Cost Estimation

Budgeting

		# units (hours or pcs)	$ per unit	Total	
Project Delivery	Software Cost (monthly subscription)	3	$1,000	$3,000	
	Database (monthly subscription)	3	$2,500	$7,500	
	Smart Phone Devices	1	$5,000	$5,000	
	Subtotal			**$15,500**	**25.9%**
Project Management	Project Manager	137	$100*	$13,700	
	Project Team Members x 2	114	$60*	$6,840	
	Designers x 2	72	$70*	$5,040	
	Software Engineers x 2	96	$75*	$7,200	
	Subtotal			**$32,780**	54.8%
Other Cost	App Testing Focus Group	10	55	$550	
	Miscellaneous Cost			$1,000	
	Subtotal			**$1,550**	2.6%
	Risk (Contingency) – 20% of total estimate			$9,966	20%
	Total (Scheduled)			**$59,796**	

*: Blended cost with overtime wage

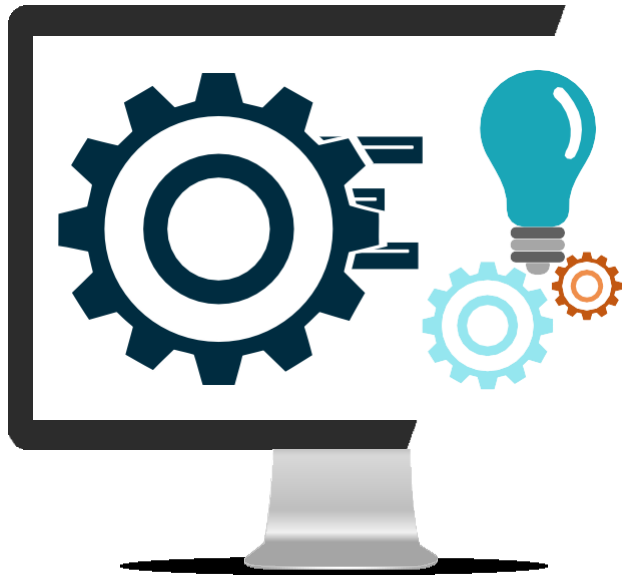
We took a relatively conservative approach with risk and miscellaneous cost projection in order to have a larger margin of safety.

Define Risks and Risk Management Approach

Methods used in Risk Management

Risk	Trigger	Consequence	Risk Severity	Risk Likelihood	Risk Level	Avoidance, Mitigation, Transference and Accpetance	Responsibility	Risk Response
Unclear technical feasibility with integrating with ITSC	Not assessing technical integrations prior to development	Database is not updating with new users and information from EC	Not Tolerable	Probable	High	Transfer	Peter, John	Both ITSC and EC databases must be consulted by a team of experts, and a technical team and integrate them together
Server overload with instant messaging	Too many requests for instant messaging, storage of messages overload server	EC App will be slow, and may be down if there is a server overload	Undesirable	Possible	Medium	Mitigation	Peter, John	Conduct function point analysis, estimate number of queries, and select server to handle the requests
Apple App Store takes longer than expected to approve	New functions must be reviewed by Apple Store and have the chance to be rejected	Delayed launches with new updated app, and users continue to use old app	Tolerable	Possible	Low	Acceptance	Jane, Anna	This is something out of control and fully relied on Apply's policies and teams. Before launch, team must do a review of features to ensure that they are aligned with policies

Project Execution

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LTE
HKUST
ENTREPRENEURSHIP CENTER
WAN, Ryan
MentorHUB@HKUST
Upcoming Events (14)
View All
MentorHUB
@HKUST
Accelerator Funds and Space
MentorHUB@HKUST
Deadline: 28 Feb 2021 23:59
27 Jan 2021
Workshop
21 Apr 2021
Home

Project Control & Conclusion

Actual Completion

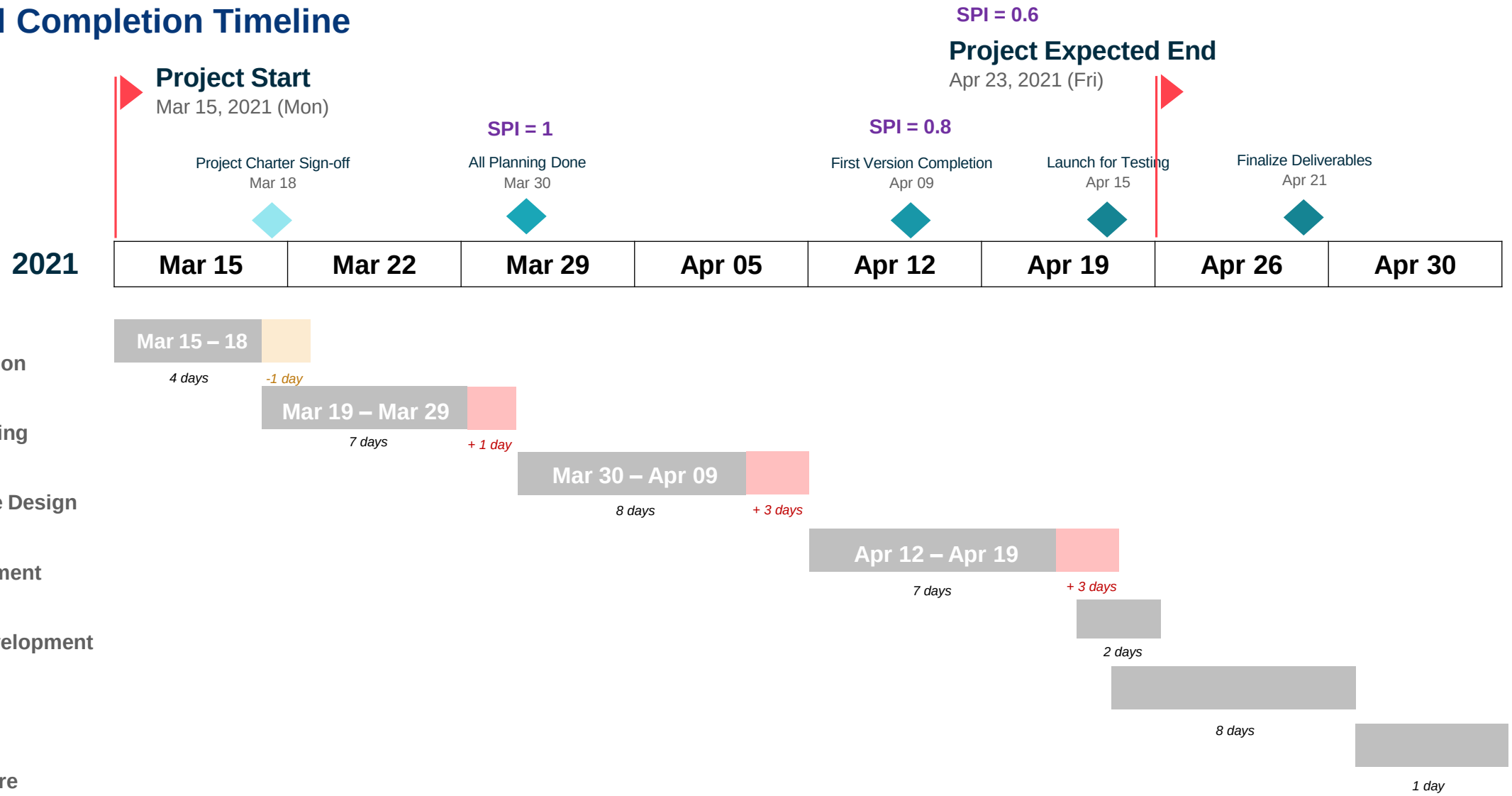
SPI

CPI

Key Performance Indicators (KPIs)

Progress Summary

Actual Completion Timeline



Earned Value Management

Actual Completion as of Apr 22, 2021

58% % complete

Cost Overview

$42,278.64 **Baseline Cost**

$23,224.63 **Actual Cost**

$11,473.64 **Cost Variance**

~1.0 **CPI**

Progress Overview

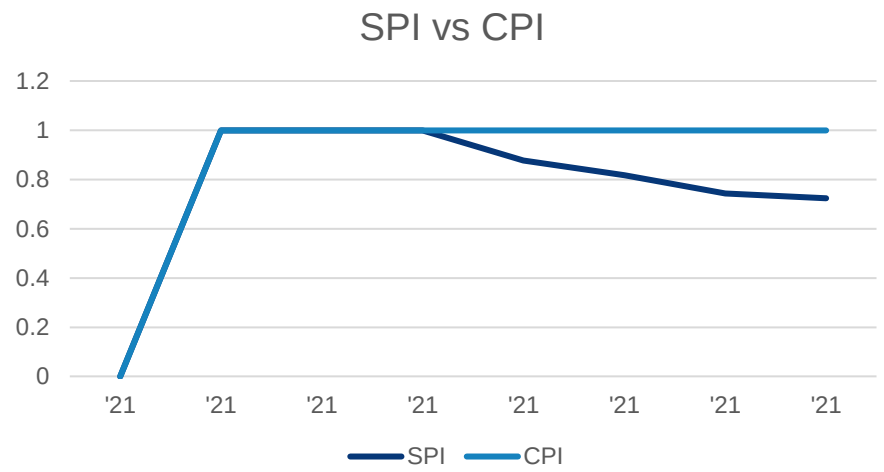
3 **phases incomplete**

Apr 30, 2021
new expected completion date based on progress

5 **working days late**

33 **total duration now**

0.6 **SPI**

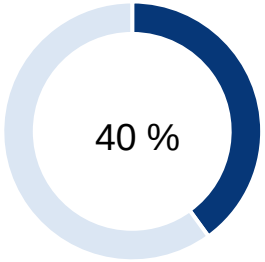


Conclusion

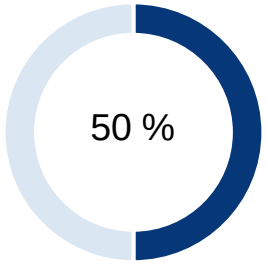
- Cost is kept within budget as we provided 20% risk buffer in
- Some costs have not been actualised in the current progress (app tester, extended software costs)

- Serious delay in progress due to the slack in UI Design Task
- Duration is still lower than original raw estimate → power of CCPM
- 58% progress proves the theory of CCPM and PERT

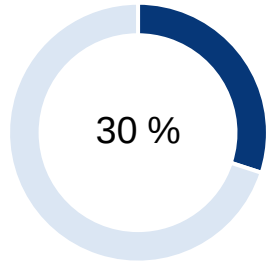
Expected Completion KPIs



Reduce uninstall rate by 40%



Reduce complaint rate by 50%



Increase user satisfaction rating by 30%

Qualitative Indicators

Correct profile displays

Add two functions: Chat box and linking to social media.

Minimize software failures and existing bugs

Reduce the number of steps in user flows of team creation and invitation to less than 5

launch the app **before May**

Complete the project **within budget of $60,000**

(Expected) Completion KPIs (Scope Statement) - Jane

Reduce uninstall rate by 40%

Reduce complaint rate by 50%

Increase user satisfaction rating by 30%

Qualitative Indicators

Correct profile displays

Chat box and linking to social media.

Minimize software failures and existing bugs

Reduce the number of steps in user flows of team creation and invitation to less than 5

launch the app before May

Complete the project within budget of $10,000

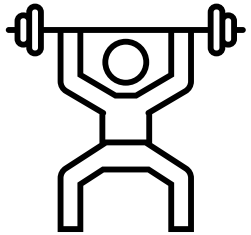
What did we learn?

Project Reflection

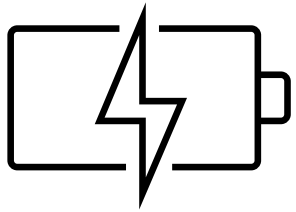
Key Takeaways

Teamwork

Knowledge sharing

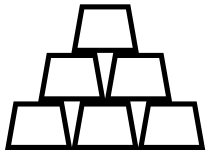


Understand individual strengths

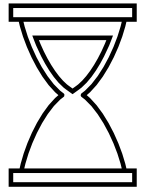


Apply self motivation in a team

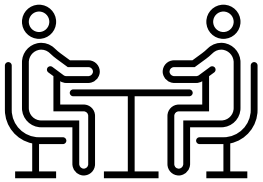
Project Planning



Break large things into small, actionable steps



Time management and procrastination



Refine understanding through open communication and discussion

Evaluation and Reflection

What was done well?	What was NOT done well?	What else could be improved?
Well-defined scope statement to establish team goals	Project scheduling	**Time pressure: buffer and slack**
Perform change control in response to potential scope creep and risks	Overlook the effort needed to implement the system	**Probability-Impact Matrix for risk assessment**
Cost control		**Use Function Point Analysis to estimate the effort needed for each worker**