2020

Final Report – FirstScreen Inc. V1.0

GROUP 4

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1. Executive Summary

FirstScreen company is going to launch a program for wellness checks of employees and the public to minimize infection at workplaces and Daycares. For this purpose, a BETA test will be conducted at such places by using a screening device. The data captured by the screens include Employee ID, non-contact temperature, date, and time, keep attendance records, and helps in tracing contacts. PHIPA and HIPPA are software that will be used. A stable Wi-Fi and ethernet will also be required for effectively running the device. Moreover, the software subscription will cost about $7.00 per month per profile, according to a 36-month contract for a subscription. The operating system required for the device will be Android IOS and for PC we will need MySQL, Tomcat, Java, HTML, pearl scripts, and .bat files.

2. High level Business Requirements

Firstscreen provides a non-touch automated employee wellness screening system to overcome the risk of business disruption due to contagion. The COVID 19 event has compelled organizations to be compliant with public health, privacy, and employment laws to ensure overall well-being. Firstscreen offers user-friendly software and on-site monitoring hardware to check the employees for early signs of illness. It facilitates organizations with a real-time dashboard that delivers prompt results when an employee/visitor arrives on site. Based on this data, the company can grant or refuse site access to employees. Organizations are looking up to adapt such safety measures not only during the pandemic but regularly, and to do so we need to elevate business level prerequisites assessing the organization's requirements.

2.1. Overview of Functional Requirements

Employer perspective: -
- Admin uploads profiles of all employees and visitors to the software FirstDash.
- Admin monitors FirstDash portal for wellness results.
- Real-time results of temperature and survey administered when the employee arrives on-premises.
- Admin can access a real-time list of At-Risk employees and take immediate action.
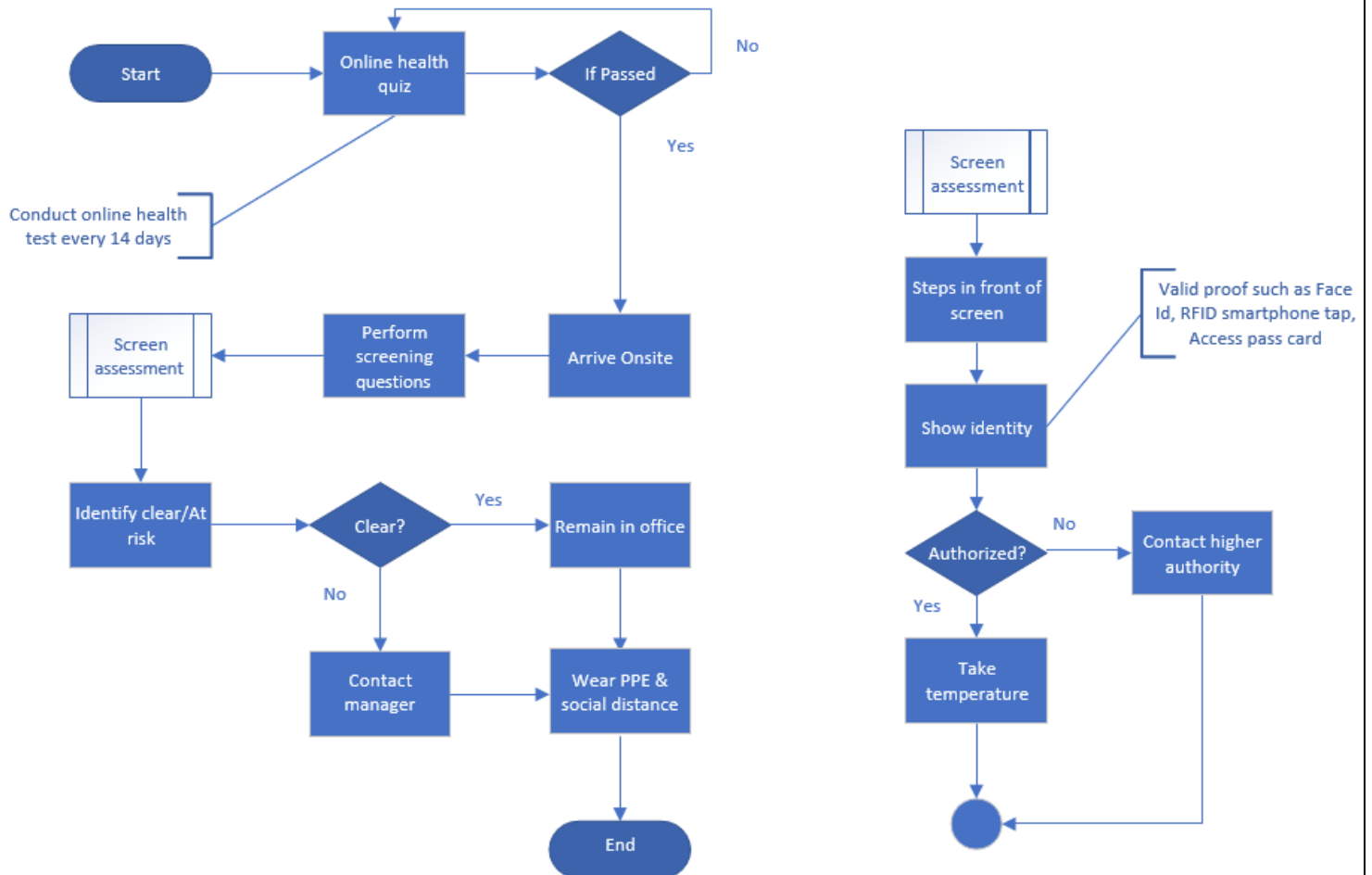
Employee perspective: -
- Employees complete an electronic self-assessment survey prior to arriving at the workplace.
- Answers are sent to FirstDash software which is PHIPA/HIPAA compliant.
- Employees and visitors enter designated entrance areas in the workplace.
- Employees stand in front of a scanner for Identification and Temperature reading.
- If the Scanner displays " Normal" - employees enter premises.
- If the Scanner displays " At Risk" employees will see Administer for further instructions.

2.2. Overview of Informative Security Requirements and Privacy Protection

The data that is acquired from the electronic assessment and the survey are administered by the Employee admin and necessary action are taken. The data is secured and hosted on the cloud. The data would be transferred from the client side to the data center through a secured VPN to keep the data safe from unauthorized access. The collected data will be kept anonymous and confidential to allow the users build confidence among the employees.

3. As is Process Flow

Long term care home and daycares AS-IS process flow
V1.0
Group 4

```
Start → Online health quiz → If Passed
                              No → (back to Online health quiz)
                              Yes ↓

Conduct online health test every 14 days

Arrive Onsite → Perform screening questions → Screen assessment
                                                    ↓
                                         Identify clear/At risk → Clear?
                                                                   Yes → Remain in office
                                                                   No → Contact manager → Wear PPE & social distance → End

Screen assessment
    ↓
Steps in front of screen
    ↓
Show identity — Valid proof such as Face Id, RFID smartphone tap, Access pass card
    ↓
Authorized?
    No → Contact higher authority
    Yes → Take temperature → (End circle)
```

4. Solution

1. Hire freelance beta testers to perform the beta release
   - We can find freelance testers on freelance sites like Upwork and on social media platforms like Reddit, Twitter, and Quora.

2. Entrust testing companies to perform the beta release
   - Companies like beta testing, qamentor will house beta testing in real-world scenarios.

3. Perform the beta release in small long-term centers
   - Select long-term care and pick volunteers who are willing to participate in the testing process.
   - We should pick volunteers from employees, patients, and visitors. Providing perks like gift cards, coupons, etc. to the volunteers will improve the efficiency of the process. Long term centers who are willing to participate in the beta release must be provided with some free subscription tenure like 3 or 6 months.

4. Visitor tracking System (Frequency Tracking)
   - Admin will be notified on the having higher frequency of employees.

5. Alert System Privacy
   - Only Admin staff will be notified of infected employee

6. Resident temperature monitoring system
   -
   - Care takers will be equipped with additional hardware
   - Caretakers will carry the device during daily monitoring of residents
   - Resident temperature will be logged to the first screen device
   - Firstscreen will analyze the data
   - Alert admin on temperature variations and admins can inform doctors on the same

   Temperature logs will provide doctors to analyze the situation

5. Project Scope

Project Title: FirstScreen.

Date: 11/03/2020   **Prepared by** Harpreet Kaur, Hareesh Reddy Yasa

Project Justification:

The key objective of this project is to deliver a non-touch screening device that helps lower the probability of business interruption due to infection in the COVID 19 event, by keeping a check on physical condition of each employee along with other additional beneficial information like:

1. Employee ID
2. Depicts body temperature without any physical contact.
3. Records entry date and time of each employee.
4. Builds database for employee.
5. Helps in keeping record of attendance.
6. Stores data for contact tracing.

Product Requirements:

1. Real-time results of identification and temperature of employees and visitors.
2. Device needs FirstDash software to perform effectively.
3. A secured VPN is required for informative security and privacy protection.
4. Hardware like Wi-Fi, ethernet, USB cable, IR external camera.
5. Software like Android IOS, MySQL, application EXE.
6. For PC we need HTML, Java, MySQL, .bat files, Tomcat, and pearl scripts.
7. Legal requirements including all Federal and Provincial regulations

Product User Acceptance Criteria:

- If all the requirements with stakeholders and business are satisfied, then this product is acceptable.
- The product is tolerable if the Beta-testing is successful.
- Also, the product is suitable if all the protocols like Ministry of Labor, Health Canada, Privacy Commission and Human Rights Board are satisfied.

6. Comparison & Evaluation of Solutions

     a. Cost:
- Cost-effective compared to similar data collection methods.
- Incurs low costs, due to freelance beta testing and small long-term centers.

     b. Reliability:
- Exposing the software to the real world and trusting companies to perform beta testing before release.
- One of the biggest advantages is that it helps in finding the actual status of software (whether it is ready for release or not) before release.

     c. Customer Satisfaction:
- It helps in reducing the risk of software failure by understanding the end-user point of view regarding the product and fixing it accordingly.
- Reduces Product failure risk with the help of customer user point and their validations.

     d. Scope of Testing:
- It provides a range of testing environments ensuring the quality of the software.
- Issues/Bugs that are neglected by testers or developers that matter to real customers are uncovered in beta testing. Real-Time

     e. Feedback:
- It helps in improving the overall quality of the software as more bugs can be discovered because of varied test environments, OS, testing patterns and the feedback can be used to improve the functionality of the system.
- Provides thorough and critical feedback about the usability and user experience making scope for improvement.

7. Business & Solution Requirements

Solution Requirement:

1. Hiring freelances:
   - Hire Freelancers for beta testing.
   - We will look them up on social media or freelance sites.
   - Provide them the device along with the documentation for the functions and applications.
   - Equip them with a description of the workflow.

2. Testing companies:
   - Conduct meetings with testing companies.
   - Provide documentation of the workflow.
   - Prioritize the features that demand in-depth testing.
   - Inform them about the expectations regarding the functionality of the product.

3. Long term centers:
   - Perceive for long term centers that will volunteer by contributing to the beta release.

Business Requirement:

1. Conduct meetings to communicate with freelances.
2. If the testing demands high expenses, then we will discuss and negotiate for the price settlement with the company.
3. The feedback from the testing company is required after the testing has been completed to understand how the actual product works. It can be done by either asking them to provide a document on feedback or through feedback sessions.
4. Ensure the application is working smoothly in real-time.

8. Recommended Solution & Approach

Our Approach is to perform the beta release in small long-term centers

- Select long-term care and pick volunteers who are willing to participate in the testing process.
- We will then pick volunteers from employees, patients, and visitors. Providing perks like gift cards, coupons, etc. to the volunteers will improve the efficiency of the process. Long term centers who are willing to participate in the beta release must be provided with some free subscription tenure like 3 or 6 months.

9. Schedule

Days	Tasks
Day 1	Delivery of Solution to first screen
Days 2-4	Analysis of solution
Days 5-6	Preparation for Implementing solution
Days 6-7	Installation of solution for long term care
Days7-14	Testing phase
Day 15	Feedback Analysis
Day 16-23	Testing Phase
Day 24-26	Final Analysis
Day 26-30	Updating of new features and feedback Implementation

10. Estimated Time for Beta Testing

Sr. No	Description	Time
1.	Planning	5 days
2.	Implementation with long term care provider	10 days
3.	Feedback Analysis	5 days
	Total Time	20 days

11.   Software & Hardware Requirements

Software	Platform	Costs
Microsoft SQL Server	Windows, MAC Os	Open Source
First Screen Software (for Clients)	Windows, MAC Os	$ 7.00/ month (Clients Pay)
Apache Tomcat	Windows, MAC Os	Open Source
Java 8	Windows, MAC Os	Open Source
HTML	Windows, MAC Os	Open Source
ActiveState Perl (For Pearl Scripts)	Windows, MAC Os	Open Source
.bat files	Windows, MAC Os	Open Source
Application EXE	Windows	Open Source
PowerBI	Windows	Open Source
Testim	Windows	Open Source
Eclipse	Windows, MAC Os	Open Source
Android Studio	Windows	Open Source

Note: - The Software used for this system are open-source platforms, so it is cost effective. There is no hidden cost for the chosen software.

Sr.no.	Hardware	Purpose	Cost Estimation
1.	Desktop /Laptop /Computer	To manage the captured data and store the data.	$600.00 Per computer
2.	Wireless Router	To provide internet connection.	$150.00
3.	Ethernet Cables	Use for connection purpose.	$25.00
4.	Infrared camera for temperature screening	To capture the temperature of the employee.	$800 to $1000 per camera
5.	RFID (Radio Frequency Identification)	Tracks the identity of the employee.	$50.00
6.	Hard Disk (500 GB)	To store the data on to the computer.	$90.00

12.   Maintenance of Software and Hardware required

Software Maintenance
- Provide the useful updates of the software.
- Bug or error fixing modification.
- Maintaining the daily records and history data.
- Software subscription and discounts.
- 24/7 online help desk support.

Hardware Maintenance
- Relocation or Re-establishment of hardware system.
- Complete system Installation service.
- Installation of new hardware system at the same location.
- Regularly hardware and system check.
- 24/7 Help desk/ live chat support.

13.   Workforce Estimate

Responsibilities	Working Hours/Day	Working Days/Week	Total Working Days	Wage/Hour	Total Wage
Project Manager	8	5 (For 2 weeks)	10	$ 30	$ 2,400
Tester	8	5 (For 2 weeks)	10	$ 20	$ 1,600
BA	8	5 (For 1 week)	5	$ 25	$ 1,000
				Total Estimate Wage	$ 5,000

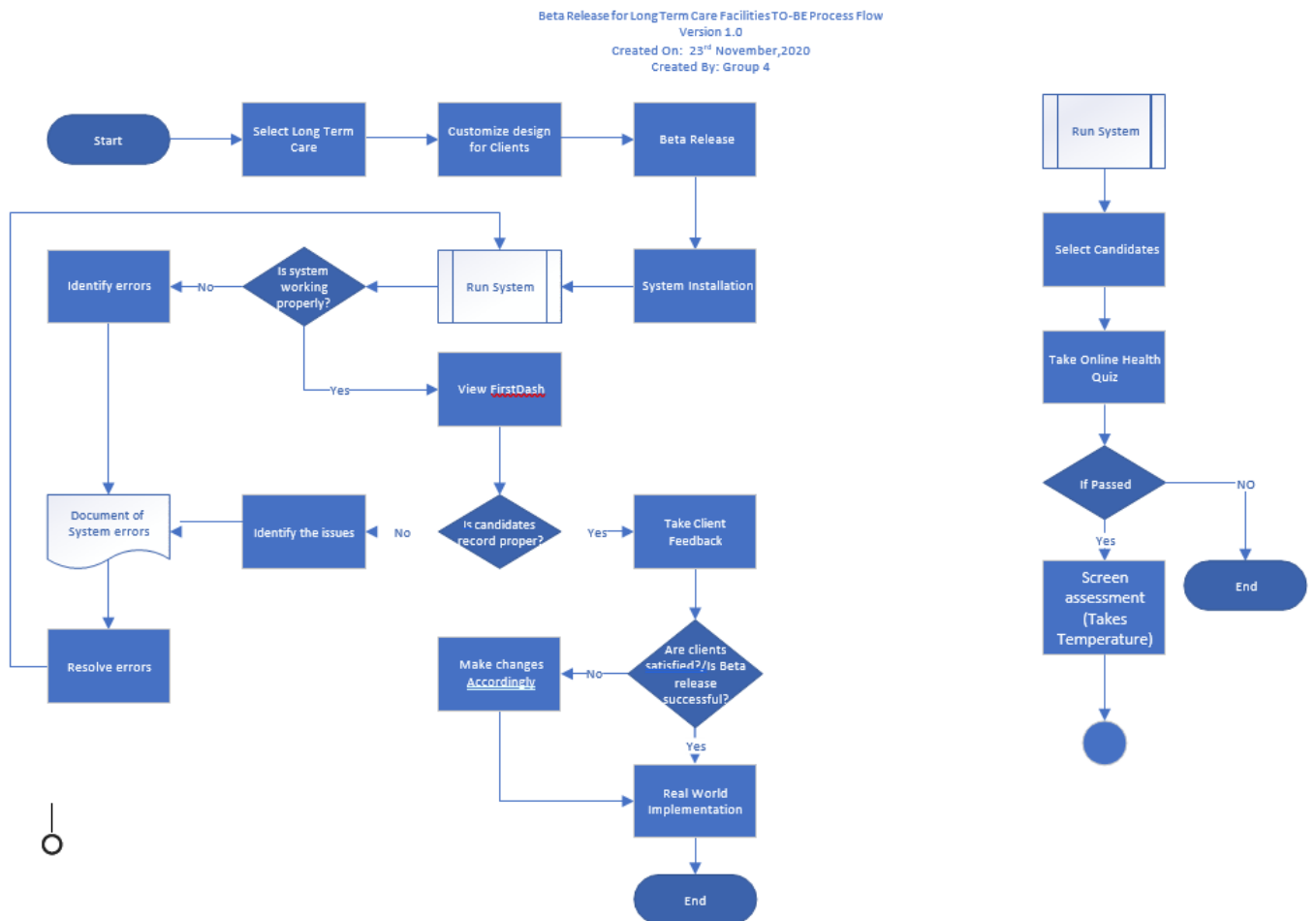| Incentives	Cost
Gift Cards, Coupons	$ 200
Long Term Subscription for 3 months	$ 21 (3*$ 7=$ 21)

Total Expenses = Total Estimate Wage + Incentives

= $ 5,000 + $ 221

= $ 5,221

14.   To-Be Process

Beta Release for Long Term Care Facilities TO-BE Process Flow
Version 1.0
Created On: 23rd November,2020
Created By: Group 4

15.   Gap Analysis

Current State:

FirstScreen is a start-up Company that develops Covid-19 Screening application. Currently it is using different approaches to perform wellness check of the employees and public in Day cares, workplaces and in other places, they also provide business continuity solutions. The Software subscription costs around $7.00 per month for a subscription.

Future State:

As FirstScreen is a start-up company, it aims to become successful in the long run. For this to happen, our recommended solution approach is to perform the Beta release in small long-term care centers. The recommended solution ensures that the system is being exposed to real world.

Freelance beta testing makes it cost efficient in small long-term cares. Our Solution approach provides customers perks like gift cards, coupons which will add value to the existing solution and are economically better compared to the similar Solutions.

GAP Description:

FirstScreen currently does not have enough success in Beta release in long-term care centers with the existing approach, the gap that exists is the recommendation of Beta release in Small long-term care centers with our cost-efficient approach.

16.　　Description of Functionality Utilized

SOLUTION	FUNCTIONALITY
Long-term Care	It will provide us volunteers who will help in beta-testing by being a part of it.
Gift Cards and Coupons	Help to encourage more volunteers to participate in testing process.
Hiring Freelancers	They will perform beta testing to check the functions and applications of the device that whether its working according to the documentation provided or not.
Meetings	Organizing meetings with testing companies to provide them the workflow document which will be effective in examining the overall functionality of the final product.

SOFTWARE	FUNCTIONALITY
Microsoft SQL Server	This relational database management system is beneficial in storing and retrieving data on demand. This data may be requested by any software application, either it is on same computer or on another computer in the same network.
First Screen Software	Cloud base software automates the practices for collection as well as management of information about each employee.
Apache Tomcat	This open-source software supports in implementation of Java-Servlet, Server Pages, Expression Language, WebSocket technologies that helps in responding to any kind of requests and also extend the applications that webservers hosts.
Power BI	Provides interactive visualization and business intelligence abilities with interface. It simple to use and helps the user easily create dashboards and reports.
Eclipse	It is an integrated development environment. It is used in computer programming. It is responsible for customizing the environment as it contributes of a base workspace and an extensible plug-in system.
Android Studio	It is the official integrated environment for Google's Android operating system. It helps in better coding and working faster.

17.   Installation Process:

Requirements -

- Software requirements: Microsoft SQL server, first screen software, Apache Tomcat, Power BI, Android Studio
- Hardwar Requirements: Desktop, Wireless Router, Ethernet cables, Infrared Camera, RFID (Radio Frequency Identification)

Process -

1. Setup computer or laptop and upload company information which include company logo, Employees id and face images.
2. Install RFID and infrared camera on the desktop or wall mounted device to identify the identity of employees
3. Setup wireless router and make internet connectivity with all the devices.
4. Build database using Microsoft SQL Server for employee trends and attendance record.
5. Create Dashboard using Power BI to display real time results to security/Receptionist/Manager.

18.   Transition Requirements

1. Training sessions on the usage of first screen application for the volunteers who are participating in the process -2 sessions with a duration of 1 hour

2. Awareness session on the data privacy policies of the firstscreen application to the long-term care 1 session with a duration of 1 hour

3. Perform beta release of the application, with limited access and whitelisting the IP address of the selected long-term care.

4. Clear the test data in the server databases and ensure proper environment is set up for the beta release

5. Implement proper management mechanism for tracking the issues and feedback during the beta testing

6. Provide temperature gun as a backup in case of connectivity or hardware failures
   - Provide training for a duration of 1 hour for backup training

7. Arrange for physical space to host the hardware and perform temperature checks

8. Use Informative banners to inform the staff about the guidelines to use the Firstscreen system.

9. Realignment of responsibilities for the various user groups including the staff and the managerial positions

10. Prepare proper schedules to achieve the milestones

19.   Change aspects that may be required

Training:
- ➢ Volunteers would need some training regarding the usage of the device to be part of this process.
- ➢ At least, one awareness session would be required on description of data privacy policies and how they are beneficial.
- ➢ One training session for employees who will operate the device, on how to deal with the situation if they encounter any person with the symptoms of Covid-19 and not get panic.
- ➢ A training session for using temperature guns also in case if there is any problem with internet.

Risk Management:
- ➢ If in any case, there is problem with connecting or operating the device or there is any hardware issue than in this situation we can use temperature guns as a backup.

20.   Coaching Plan

Name: Ketki Gadi   Coach: Hardik Patel
Position: Project Manager   Date of Plan: 7th November 2020

Current Situation (reason for coaching, starting point)

Reason: Enhance delegation skills
Having problems with proper assignment of tickets to team

Goals (where do you want to end up?)

- Improve detailing of feature tickets

- Enhance overall management of tickets

Dates and Locations of Coaching Sessions

Online Zoom call held on November 7, 2020
Online Zoom call held on November 12 2020

Responsibilities

Coach	Person Being Coached
• Understand the delegation skills of the person • Give guidance on delegation skills • Motivate to be a team player	• Brainstorm the delegation issues faced • Perform a retrospective within the team to understand the issues • Share high level details of conflicts

Evaluation Plan (how will we measure success?)

Successful completion of tickets by assigned team members of upcoming sprint

Name: Hardik Patel   Coach: Rony Cherian
Position: Assistant Project Manager   Date of Plan: 6th November 2020

Current Situation (reason for coaching, starting point)

Reason: Improve public speaking
Facing difficulties in properly conveying ideas to the team

Goals (where do you want to end up?)

- Fluent communication with the team

- Building a good connection with clients

Dates and Locations of Coaching Sessions

Online Zoom call held on November 6, 2020
Online Zoom call held on November 10 2020

Responsibilities

Coach	Person Being Coached
• Understand the hurdles faced in public speaking • Guide to overcome those hurdles • Provide tips to improve speaking	• Brainstorm on ways to improve public speaking • Try to figure out the reason behind his impedance

Evaluation Plan (how will we measure success?)

Analyze video recording
Supply evaluation sheet to anonymous team members

Name: Mitun Balar   Coach: Ketki Ghadi (Project Manager)
Position: SME   Date of Plan: 9th November 2020

Current Situation (reason for coaching, starting point)

Reason: Strengthen decision making capability
Over flexibility and bias in decision making

Goals (where do you want to end up?)

- Improve decision making capabilities

- Enhance ability to determine range of flexibility required

Dates and Locations of Coaching Sessions

Online Zoom call held on November 9, 2020
Online Zoom call held on November 17 2020

Responsibilities

Coach	Person Being Coached
- Understandings on decision making capabilities - Guide client to improve decision making - Provide tips for decision making	- Analyze the past decisions - Brainstorm on flexibilities made on the project - Open to receive tips from coach

Evaluation Plan (how will we measure success?)

Evaluation by team members on decisions on upcoming sprint

Name: Rony Cherian   Coach: Jeel Patel (Communication Specialist)   Position:
Project SME   Date of Plan: 7th November 2020

Current Situation (reason for coaching, starting point)

Reason: Inactive participation in group discussions and client meetings
Struggling to actively participate in group meetings and discussions

Goals (where do you want to end up?)

- Active participation in group discussions and client meetings
- Effortlessly convey ideas to the team and clients

Dates and Locations of Coaching Sessions

Online Zoom Meeting held on 7th November, 2020
Online Zoom Meeting held on 9th November, 2020

Responsibilities

Coach	Person Being Coached
- Understand the hurdles faced in public speaking - Guide to overcome those hurdles - Provide tips to improve speaking	- Make efforts to participate in group discussions - Build good connections with the clients - Convey ideas and suggestions with ease

Evaluation Plan (how will we measure success?)

Successful participation in group discussions and conveying ideas.

Name: Jeel Patel   Coach: Mitun Balar (SME)
Position: Project SME   Date of Plan: 7th November, 2020

Current Situation (reason for coaching, starting point)

- Reason: Enhance critical observation skills
- Enhance analytic and problem-solving skills

Goals (where do you want to end up?)

- Improve Creativity and the ability to solve problems with observation skillset
- Improve analytical and critical thinking.

Dates and Locations of Coaching Sessions

Online Zoom Meeting held on 7th November, 2020
Online Zoom Meeting held on 9th November, 2020

Responsibilities

Coach	Person Being Coached
- Understand requirements to find logical Solutions - Guide to make logical decisions - Understand situations and apply creative ideas	- Apply logical thinking to find Solutions - Apply decision making skills accurately

Evaluation Plan (how will we measure success?)

Successful participation in group discussions and conveying ideas.

Name: Harpreet Kaur   Coach: Bharath Kethireddy (Technical Specialist)
Position: Scribe Specialist   Date of Plan: 8th November 2020

Current Situation (reason for coaching, starting point)

Reason: Improve decision making skills
Difficulty in making individual decisions

Goals (where do you want to end up?

- Make accurate project decisions individually
- Understand project requirement to deliver outputs

Dates and Locations of Coaching Sessions

Online Zoom Meeting held on 8th November, 2020
Online Zoom Meeting held on 10th November, 2020

Responsibilities

Coach	Person Being Coached
• Understand Project requirements to make important decisions • Guide to make accurate decisions • Build confidence to take decisions	• Take necessary decisions for the project • Understand the requirements to make decisions

Evaluation Plan (how will we measure success?)

Successful decision-making skills.

Name: Hareesh Yasa   Coach: Urvesh Patel (Technical Specialist)

Position: Technical Specialist   Date of Plan: 11th November 2020

Current Situation (reason for coaching, starting point)

Reason: Inactive participation in group discussions and client meetings
Struggling to actively participate in group meetings and discussions

Goals (where do you want to end up?)

- Active participation in group discussions and client meetings
- Effortlessly convey ideas to the team and clients

Dates and Locations of Coaching Sessions

Online Zoom Meeting held on 11th November, 2020
Online Zoom Meeting held on 13th November, 2020

Responsibilities

Coach	Person Being Coached
- Understand the hurdles faced in public speaking - Guide to overcome those hurdles - Provide tips to improve speaking	- Make efforts to participate in group discussions - Build good connections with the clients - Convey ideas and suggestions with ease

Evaluation Plan (how will we measure success?)

Successful participation in group discussions and conveying ideas.

Name: Urvesh Patel   Coach: Harpreet Kaur (Scribe Specialist)
Position: Technical Specialist   Date of Plan: 13th November 2020

Current Situation (reason for coaching, starting point)

- Reason: Enhance critical observation skills
- Enhance analytic and problem-solving skills

Goals (where do you want to end up?)

- Improve Creativity and the ability to solve problems with observation skillset
- Improve analytical and critical thinking.

Dates and Locations of Coaching Sessions

Online Zoom Meeting held on 13th November, 2020
Online Zoom Meeting held on 15th November, 2020

Responsibilities

Coach	Person Being Coached
- Understand requirements to find logical Solutions - Guide to make logical decisions - Understand situations and apply creative ideas	- Apply logical thinking to find Solutions - Apply decision making skills accurately

Evaluation Plan (how will we measure success?)

Successful implementation of critical observation skills

20.. References:

(n.d.). Retrieved from
https://conestoga.desire2learn.com/d2l/le/content/383801/viewContent/8179908/View

Reference:
(n.d.). Retrieved from,
https://conestoga.desire2learn.com/d2l/le/content/321458/viewContent/6465377/View

(n.d.). Retrieved from,
https://conestoga.desire2learn.com/d2l/le/content/383801/viewContent/8179908/View