

#### MINISTRY OF EDUCATION AND TRAINING

# CAPSTONE PROJECT DOCUMENT

Upscale time

Supervisor:

BÙI VĂN PHÁT

Student: PHAN ĐẶNG NGỌC ÁNH - SE04175 NGUYỄN NGỌC PHƯƠNG LY - SE04259

Capstone Project code: GDP491\_G8

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# **Report 1: CP Proposal**

# **1.1. Problem Definition**1.1.1. Name of this capstone project: Upscale Time1.1.2. Problem abstraction:

Managing usage of social network is really necessary. The strong development of social networks on multiple platforms, on a variety of devices bring new opportunities to connect people with people, that brings work and money for many people. But in fact, social networking is truly addictive, which can cause time consuming. Unlike alcohol or stimulants, the use of social networks is an integral part of human real work items, and for a part of the users it might even serve as a working tool, which makes it difficult to be stopped.

According to Udemy's report about workplace distraction, the number two distraction was the smartphone, with 69% acknowledging that checking a personal device interferes with their concentration. According to <u>TechRepublic</u> (2018), 75% of employees attributed their lack of focus at work to digital notifications.

How does using mobile devices to access social networks affect productivity? What is the most time-wasting cause at work? To answer this question, we have to dig deeper on this issue to find out the answer.

# **1.2. Project Overview**

# 1.2.1 Define the Problem

Productivity is defined as how well and how much a company produces from the resources it utilizes. If a company produces better or more goods from the same resources, it will enhance productivity. Productivity is directly related to the working time of an employee. Every 11 minutes we get distracted, then the brain takes 25 minutes to get back to refocus on the original task (according to the New York Times article). According to <u>Udemy's report</u> about workplace distraction, with 36% say they spend two hours or more checking their smartphones during the workday. That adds up to at least 10 hours every week when they're doing something outside their job responsibilities. Workplace distractions negatively impact performance, productivity, and potential. What's more, to compensate for these interruptions, people work faster, that this increases stress and frustration.

According to the report from The University of Maryland & Total DUI (a non-profit group), It's estimated that the average American spends nearly one quarter of their work day browsing social media for non-work related activities. This means if one thousand of your employees spend just one hour per day "cyberloafing," it could cost you \$35 million each year.

Acknowledge this issue, many applications have been created to help employees achieve the highest productivity and useful use of hourly workplace. The current time-management applications tend to depend too much on the user's efforts. It is necessary to reduce distractions from social networks, create a habit of focusing on working during working time to use time more effectively. Recognizing that, Upscale Time was created with the purpose of preventing distracting causes, actively helping employees to achieve the highest productivity.

# 1.2.2 Research

# 1.2.2.1 State of affairs

# Trouble Maker: Personal devices & Social Media

To understand the impact of workplace distraction, we first needed to understand where people's attention is being pulled. According to <u>Udemy's report</u> about workplace distraction 54% of employees do not work as well as usual when distracted. Additionally, the number two distraction was the smartphone. In <u>a survey by Salary.com</u>, 60% of the people surveyed said they would simply use their own smartphones, tablets, and laptops to access personal websites during work hours. Most survey respondents in Udemy report (58%) said they don't need social media to do their jobs, but they still can't make it through the day without it.



# Today's Workforce Suffers from a Short Attention Span

Millennials and Gen Z are also the most likely age group to describe themselves as distracted at work. According <u>TechRepublic</u> (2018), 75% of employees attributed their lack of focus at work to digital notifications (come from email, social media, etc...). Also in this report, the majority of individuals (56%) even said they do their best work outside of the regular workday because of "digital distractions".





According to the <u>Digital Report January 2019</u>: Vietnam, 58 million users in Vietnam use mobile devices to access social networks. The period of regular access to Facebook in Vietnam is also during working hours.

# 1.2.2.2 Competitor research

TimeTag - Focus your Time

https://www.capparsa.com/timetag-features https://apps.apple.com/vn/app/timetag-manage-your-time/id402739073?l=vi&mt=12



	Pros	Cons
User interface friendly	<ul> <li>Performing quick action with one button when starting and stopping</li> <li>Sync with iOS and macOS automatically</li> </ul>	- Hard to understand process introduction
Structure	- There are notes and tagging sections for each task	- Enter information about the task after the clock runs
Report	<ul> <li>Detailed report on tag, catagories, hours, days, months, earning</li> <li>Export report to CSV file</li> </ul>	

### Pomodone - Your Time Hacker

https://pomodoneapp.com/download-pomodone-app.html https://apps.apple.com/us/app/pomodoneapp-workflow-timer/id1369070238?ls=1 https://apps.apple.com/vn/app/pomo-done-your-time-hacker/id1096128050?l=vi&mt=12

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Delete this task	ind create new	4:52	Connect your favorite Task Manager	25	Setti	ngs				ж,

	Pros	Cons
User interface friendly	<ul> <li>Users find out by creating tasks</li> <li>like tutorial when downloading</li> <li>Countdown above icon located</li> </ul>	- Most information presented under text form.

	on the dock - Synchronize automatically when opening the app on macos and ios devices	
Structure	<ul> <li>Install pomodoro with available time, simplified operation</li> <li>There are buttons Pause, Stop, Switch task</li> <li>Chrome extension allows domain blocking</li> </ul>	
Report	- Connect to other task management 3rd-party applications (Trello, Wunderlist)	<ul> <li>Both applications want to view the full report must log in to the account on the web browser</li> <li>iOS: display reports within the past month MacOS: no reports on the application</li> </ul>

### Be focused - Focus Timer

https://xwavesoft.com/be-focused-pro-for-iphone-ipad-mac-os-x.html https://apps.apple.com/vn/app/be-focused-focus-timer/id973134470?l=vi&mt=12



	Pros	Cons
User interface friendly	<ul> <li>Notice at the end of a cycle</li> <li>Countdown next to logo app</li> <li>located on the menu bar</li> </ul>	- The interface theme cannot be changed

Structure	<ul> <li>Have Pause button, Switch task</li> <li>Keep Pomodoro settings in the following task</li> </ul>	- Don't have Stop button
Report	- Manage tasks by name and by day, week, month, year	

# Comparison table of competitors

Function	Pomodone	Timetag	Be Focused
Reminders	1	✓ (can schedule)	1
Offline mode	1	1	1
Diary note	-	1	-
Kios mode	-	-	-
Visual reports	1	1	1
Pomodoro	1	-	1
Timer	<ul> <li>✓ (manual stop optional)</li> </ul>	<ul> <li>✓ (set the time to finish the task after starting the timer)</li> </ul>	<ul> <li>✓ (only the play, pause, skip buttons)</li> </ul>
Time-based game	-	-	-
Switch task	1	-	1

Block domain	<ul> <li>✓ (web browser plug-in version)</li> </ul>	-	-
Automatically sync	<ul> <li>✓ (just sync the task list)</li> </ul>	✓ (pro version)	<ul> <li>✓ (pro version) automatically synchronize the results using clock between Mac, Ipad and Iphone)</li> </ul>
Change app theme	✓ (light & dark)	✓ (light & dark)	-
Export report	-	1	1

# 1.2.2.3 Technology

### Time management method

The Pomodoro Technique

The Pomodoro Technique is a time management method developed by Francesco Cirillo in the late 1980s.[1] The technique uses a timer to break down work into intervals, traditionally 25 minutes in length, separated by short breaks. Each interval is known as a Pomodoro. For the purposes of the technique, a pomodoro is the interval of time spent working.[1] We'll install a time divided by this method, help the user divide the amount of time to work, enhance the ability to focus.

Synchronized with Apple ID

# 1.2.2.4 Survey Research

The survey collected 109 results, and drew the following conclusions:

#### 1. The chart determines the age and work of participants:

#### Bạn thuộc nhóm tuổi nào dưới đây?





Công việc hiện tại của bạn thuộc nhóm nào?





According to the survey, we can see that most users are aged between 18 and 23 (69.7%), followed by 19.3% of users aged 23 to 28, parts from 28 to 35 years old quite modest at 1.8% and the age beyond these ages accounted for 9.2%.

This survey attracted 55 unemployed people, 31 office workers, 13 freelance workers and another work group of 14 people. It seems that students and office workers aged 18 to 28 are very interested in using and managing their time at work, through their voluntary participation in this survey.

2. The chart identifies participants' distractions during working hours and which technology applications / products are the cause of that.

#### Bạn có hay làm việc riêng trong giờ làm việc/học tập không?

109 câu trả lời



### Điều gì khiến bạn mất tập trung khi đang làm việc/học tập?

109 câu trả lời



#### Chart 2. About the frequency and causes of distraction at work.

When asked about the frequency of personal work during working hours / school hours, more than half of the respondents selected "Occasionally" with 59.6%, 33.9% frequently worked separately and a few people seems more disciplined - "rarely" with 7%. This shows that most people really do not use 100% "the amount of time that should be spent on work" to work.

Learning about the things that can distract them, 95% of the participants were unable to deny the appeal of social networks at work, 20.2% of people lost focus by Mobile Game, 23.9% of people extract their working time to use other applications on the phone, the noise around also makes many people distracted (33%), other reasons make 9/109 people lost focus while working.

It seems that entertainment and social networking applications are the main factors preventing people from using 100% of their working time effectively.

Những ứng dụng giải trí và mạng xã hội nào đã chiếm nhiều thời gian truy cập của bạn trong giờ làm việc/giờ học, mà không phục vụ cho công việc/học tập?



# Bạn sử dụng MXH hoặc các ứng dụng khác trên ĐTDĐ trong lúc làm việc/học tập với những mục đích nào?



# Chart 3. Social Network statistics takes up a lot of time to access during school hours / working hours without serving for work / study.

As long as the social applications and networks that have taken up a lot of time spent during working hours / school hours are excluded from work / study, almost all participants do not ignore social networks. famous - "Facebook". 57.8% of people are drawn to the appeal of "Messenger", 55.5% of people spend a lot of time on "Instagram", mobile games also cause 20.2% of people to lose it. The number of people who use the working time / study time to access online shopping applications is 17.4% and 16.5% of people access electronic newspapers during the time they should have worked.

Up to 95 people in 109 people admitted that they used the above applications while studying/working just for entertainment, 53 people have the purpose of watching the news, 32 people want personal sales and 64 people use working time to chat online. This shows that Social Network seems too popular and they are addictive and take up too much time that should be devoted to work / study.

From reliable international reports, researchers have discovered: "43% of Americans categorize themselves as disorganized, and 21% have missed vital work deadlines. Nearly half say disorganization causes them to work late at least 2 or times each week". Jane Von Bergen, "So many reasons to neaten up...", Boston Globe 3/12/2006 Esselte survey, David Lewis.





Chart 4. Chart of frequency of application / technology product usage during working hours/study hours and its impact.

Regarding the frequency of using social networks and other applications that do not work / study during working / studying hours, 43 participants admitted that they often do this and if they are working, only If you need to see the application notification, they will immediately access it. 62 others have less frequency, sometimes they will do this. At this frequency rarely do, a small number - only 4 people. And no one is not doing this.

Asked about the productivity of work that is affected by the use of smartphone applications during working hours, up to 36.7% of people think their productivity is worse,

time-consuming. and not done well. 7.3% of people think their productivity is higher because the use of applications gives them inspiration to work. The number of people affected both positively and negatively by using applications on the phone during working hours accounted for 39.4%. And 16.5% of people are not affected.

It can be seen that the number of people affected negatively from this is not small. In addition to distracting, it also reduces productivity, wastes a lot of time and makes users form harmful habits.

Also from a prestigious international survey: "Most people actually use 60% or less of available work time. When more than 38,000 people in 200 countries were queried about individual productivity, it showed that even though they were physically at work five days a week, they were only productively using three days." - Microsoft Survey, March 15, 2005

# Bạn có hay lên dự định mình sẽ hoàn thành bao nhiêu công việc (hoặc bao nhiêu % công việc) trong ngày không?

109 câu trả lời



Có, tôi thường xuyên làm như vậy.
 Thỉnh thoảng.
 Không, tôi làm việc tùy theo cảm hứng và các yếu tố xung quanh.

# **1.2.3 Specify Requirement**

Through our opponents' research, we have found a solution that exists:

- The workflow is difficult to follow.
- Users can't easily meet the requirements of the application.
- Lack of motivation to continue using.

Acknowledging all the problems and solutions that exist, we have come up with new solutions:

- Give method Podomoro and timepiece to increase concentration for users.

- Integrating games into the calculation of working hours - as a mission delivery.

- Do it together - Complete the task of concentrating together, increasing the sense of responsibility.

- Reflection - detailed statistics of focus time and distraction time by month, week, day, task.

# **Report 2: Design Proposal**

# 2.1: Building the first sitemap

### 2.1.1: War room

To find out how to operate our application system, we have implemented a war room to find out the characteristics of users, to draw conclusions about what pain points in the current user line. After that, we came up with solutions based on our research. We have introduced the most important functions and solutions that we need to address first. There are 3 sections including user characteristics, their difficulties and solutions.











# 2.1.2: User Story Mapping

As a result of the discussion in the war room, our team has paired users' needs with the necessary features to solve those things. These features focus on our customers' achievements, accountability, and striving.



### 2.1.3: First sitemap

With an application goal that will be clear during use, we rely on the user story mapping done earlier to build the first sitemap.



# 2.2: User Requirement Specification

# 2.2.1: Conclusions from user research, interview and survey

Based on the initial market research and what we have learned from the war room, we can figure out various traits from our product's target audience.

Ages	18-24
Occupation	Student, unprofessional workerwork newbie
Income	Low average
Hobbies	<ul> <li>EarnMake money to secure the future</li> <li>Using smartphone</li> </ul>

Signature traits	<ul> <li>Easily distracted by social networks.</li> <li>Use your smartphone regularly.</li> <li>Spend a lot of time on Social Networks.</li> <li>Don't use the working time effectively.</li> </ul>
Objectives	- Focus 100% on work - Easy to use - Compare focus time and distraction time
Operating system	iOS & macOS

# 2.2.2: Empathy mapping

We create empathy mapping to provide insight into users and external impact on their needs and decisions.



### 2.2.3: Persona



Nguyễn Quỳnh Như Tuổi: 24 Nghề nghiệp: Nhân viên văn phòng Thời gian đi làm: 3 năm Tiểu sử: Như vốn là người nghiện mạng xã hội và thường khó để cắt cơn nghiện, ngay cả lúc đang làm việc. Cô hay mang việc công ty về nhà vì chưa hoàn thành xong và thường xuyên thức xuyên đêm để làm nhưng không hẳn đều hoàn thành chúng. Cô dường như thức trắng đêm nhưng mất 2/3 thời gian để sử dụng điện thoại và rất khó để bắt đầu vào việc. Con người sẽ có xu hướng xem nốt tin này thôi, nhưng "nốt" này sẽ lặp lại rất nhiều lần, kết quả là mất rất nhiều thời gian.

#### Sở thích:

- Thích dùng MXH như Facebook, Instagram và Messenger.
- Tính cách: hướng nội.
- Màu sắc yêu thích: Đen.
- Điện thoại đang sử dụng: Samsung.
- Thời gian sử dụng điện thoại 1 ngày: 4 tiếng.

#### Khó khăn:

- Không thể nào tập trung hoàn toàn vào một việc 100%, có lúc không đi đúng theo kế hoạch định sẵn.

- Dạo này thường lười biếng, gần tới deadline mới làm.

- Mình đã sử dụng một số loại app để nhắc nhở hoàn thành công việc rồi nhưng vẫn thấy không hiệu quả lắm, thậm chí còn sử dụng app khoá điện thoại nhưng vẫn không hiệu quả.

#### Mong muốn

- Trải nghiệm sự thúc ép bản thân thực hiện đúng kế hoạch mình lập ra.

- Kiểm soát việc sử dụng mạng xã hội.
- Cho người dùng biết hậu quả của việc không hoàn thành.



Nguyễn Việt Cường Tuổi: 20 Sinh viên K13 FU Nghề nghiệp: Designer Freelancer Thời gian đi làm: 2 năm Tiểu sử: Tính cách không thích bị gò bó cũng như không thể ngồi một chỗ quá lâu, Cường gần như rất khó để tập trung ngồi làm việc trong thời gian dài. hay bị mất tập trung, xao nhãng và quên thực hiện công việc cần làm. Thế nên hầu hết những kế hoạch của Cường đều thường không đem lại kết quả như đúng dự định ban đầu, có khi chậm hơn tiến độ khoảng 1 ngày.

#### Sở thích:

- Thích lướt newfeed Facebook và các clip ở phần FB Watch.
- Tính cách: hướng ngoại.
- Màu sắc yêu thích: Đỏ.
- Điện thoại đang sử dụng: IPhone 6s
- Thời gian sử dụng điện thoại 1 ngày: 6 tiếng.

#### Khó khăn:

- Thói quen trì hoãn công việc.
- Hay quên mất việc mình đang làm và làm việc khác.

 - Khi phải tập trung làm việc gi đó và kèm áp lực thì thường nhanh nản.

#### Mong muốn

- Có thể khoá một ứng dụng khiến mình không tập trung trong thời gian làm việc.
- So sánh thời gian giải trí và làm việc trong ngày.
- Sự chửi bới tàn nhẫn cho hành động lười biếng, ham vui, thiếu
- trách nhiệm. Hãy chà đạp em bằng ngôn từ đi!!
- Tôi muốn thay đổi, trách nhiệm với bản thân và công việc hơn.

# 2.3: Building first prototype

# 2.3.1: User flow

Setup timer: Personal mode



Setup timer: Team mode





# 2.3.2: Paper Sketch













The process of choosing to use "Building Time - Cooperate mode"









< Thiết bị tết nổi DR Các thiết lị hiện đang đàng nhập : Macbook Annie Ipad Annie Thực hiện tiến tắt cả các thiết bi cựng một lực.	Cai-bat Thông báo	Caldet Am thanh (2)
Từ động O Hồi lại		



The process of "Building Time - Personal mode"

The process of choosing to use "Building Time - Cooperate mode"

# 2.3.3: Paper Prototype



# 2.3.4: Balsamiq Prototype:











# 2.4 Visual Design

# 2.4.1 Moodboard

![](_page_35_Picture_2.jpeg)

# 2.4.2 Style guide

![](_page_36_Figure_1.jpeg)

#### **|** COMPONENTS BUTTONS dt2wm/gg Selected • Primary kifia Secondary O Selected . 21/09/2019 Typing \$1,09/2019 • Drap down 164 September 2018 2 T2 T8 T4 T5 T6 T7 0.5 Value 11 1 2 3 4 5 5 7 8 9 10 Very size and crey placed 11 12 13 14 15 16 17 18 19 26 🧿 22 💷 🔛 25 28 27 28 29 30 OTHER COMPONENTS Tag X 00 00 🗩 🍊 NOTIFICATION POPOVER ite particle segments sectory benchmark with the JS What is a discussion for the first beauty for the sector of the sector o Voligotiamessage from Gali kiv ACTIVE INCOME INCOME INC. Allow Notifications The majestic Booky Mountains are a major toucid location in the western United States Alize

### 2.4.3 Logo

![](_page_38_Picture_1.jpeg)

# 2.5. Usability testing plan:

### 2.5.1. How we test it:

To perform the first usability test, we used the prototype created on Balsamiq with the clickable-buttons buttons-can-be-clickable and the basic switching between screens to help users feel like they are really experiencing the application. Real use my application.

# 2.5.2. Requirement and preparation

Our team workedmet up together to map out the goals for the test and gather all neccesary information in order to conduct our testof the information we will need to conduct our test. In a basic level, here is our plan:

Recruiting target audiences:

- Who are they? We gathered a group of target users who are interested in traveling and choose online booking method to plan their trips.
- How many participants do we need? We decided to pick 6 participants for traveler display and 6 other for host display: 2 beginners who have never experienced any similar system; 2 intermediates who have experienced similar systems and 2 experts who have actually used similar systems.

Our task scenarios and evaluating scale:

We create a facilitator scenario with series of main function tasks and participants were asked to complete tasks, recognize buttons, the way screens are linked together, while the rest of the team observed and took notes. By watching our users navigate the product, listening to their praises and concerns about it, we can see whetherwhere if the participants enjoyed the user flow or being confused at any step; based onaccording to the questionnaire below:

- Do they understand the purpose of the app and recognize the system's main functions?
- Do the information architecture and navigation make sense?
- When exploring the product, do they getbecome confused at any point?
- Is there any feature missing or being unnecessary?

We also create an evaluating scale to have an overall look at the usability problems, including these elements:

- Success rate
- Time on task
- Errors made in performing the test
- Confusion (Unexpected user actions)
- System features used (not used)
- System bugs or failures.

#### Participants' feeling about our app and further questions:

In the final of the interview, we provide follow-up questions that ask participants to evaluate the product or tasks performed.

- What would they change about the product?
- How would they describe the product in their own words?
- How likely or unlikely would they be to use this product once it's finished?

# **Report 3: Pre Design**

# 3.1: Usability testing

### 3.1.1: How we test it

To perform the first usability test, we used the prototype created on Balsamiq with the buttons-can-be-clickable and the basic switching between screens to help users feel like they are Real use my application.

### 3.1.2: Requirement and preparation

### 3.1.2.1: Requirement

We conduct this usability testing to know whether users understand our system after trial or not, how to use the application to make them easy to grasp, other issues and suggestions for new solutions.

The process of combining user interaction with questions from the group about how they feel when using it. We divided into 4 parts:

#### > Identify participants:

To understand more about their participants and connections to the product, based on many questions:

Personal information such as age and occupation of participants.

Are they in the object the application is targeting?

Do they often use social networks? Do they often get distracted by social networks during working hours? How do they control that?

How much do they know about time management? 3 options: ignorant, know a little can learn, be experienced / expert.

Do they know and recognize the main functions of the application?

> Monitor participants and ask them questions after they interact with the app:

Specify the tasks that participants need to perform. It is important to observe them, their interaction will show that this experience is difficult or easy to use.

- Let participants experience the on-screen actions themselves (swipe, press, ...). Do they understand and gradually get used to how to operate after a few uses?
- Give the task and let them find a way to do it themselves.
- Can they do all those tasks? Do they have to stop at any screen?
- Navigating in the app is easy or difficult for them?
- How is the connection between each main function? Do participants have to return anytime?

#### > More questions about application structure and design:

- Is it easy to use?
- Is the size of the button enough to interact with the finger?
- Does the overall layout of the screen feel eye-catching?
- Any comments and suggestions for products?

#### ➤ General feeling of participants when using:

Ask questions about feelings and suggest that they answer pictograms and onomatopoeia or any keywords they think of.

- Do you have any feelings when using the application?
- Want to use the application again?
- Which product logos do they think of?
- What do you think about writing in the app
- The most unexpected / impressive experience when using this app, if any?

#### 3.1.2.2: Preparation:

The preparation step included finding participants, writing the testing script and building screen simulation:

Tested with 6 participants, all of them are employees of VNG Corp

Name	Persona	Do you use social networks regularly during business hours?	Do social networks and mobile phones distract you during working hours?
Lê Việt Bắc	Graphic Designer, 23 age	Yes	No
Hoàng Văn Đạt	Developer, 24 age	No	Yes
Lương Tuấn Dũng	Developer, 23 age	No	Yes
Nguyễn Quỳnh Anh	HR, 22 age	Yes	Yes
Nguyễn Minh Anh	HR, 21 age	Yes	Yes
Phan Ngọc Lân	Developer, 24 age	Yes	Yes

The testing script mainly based on sitemap, user flow and main functions, after finished the build on Invision, there are total of 46 screens, including the one that needed for transition and interaction.

Kịch bản thử nghiệm chủ yếu dựa trên sơ đồ trang web, luồng người dùng và các chức năng chính, sau khi hoàn thành quá trình xây dựng trên Invision, có tổng cộng 46 màn hình, bao gồm cả màn hình cần thiết cho quá trình chuyển đổi và tương tác.

### 3.1.3: Test and conclusion

#### 3.1.3.1: Testing

During the test, our team assigned a person ask and monitoring, one person write down the result and one take photos.

![](_page_42_Picture_5.jpeg)

![](_page_43_Picture_0.jpeg)

### 3.1.3.2: Test result

What we need to know	What we got
General feeling about the structure	Quite welll, everything is arranged clearly and eye-catching
What people think is the signature function	People think the most useful function is to work Pomodoro cycle and focus on work - isolated from social networks.
Do the participants see the connection and usefulness between the app and their problem?	Most of them think that they like to access social networks anytime, anywhere, even during working hours.

Are the participant satisfied with all of the delivered functions	Most participants are satisfied and excited because the Kiosk Mode application creates barriers for them if they want to access applications that distract during business hours.
When doing the tasks, can the participants find and use the functions easily?	Everyone has the main functions that are located in the main screen and they can be easily found. Additional functions are displayed with easy-to-guess icons, making it easy for them to understand. However, the Pomodoro method is new to some people, so it takes some time for them to understand how it works and what it means.
Does the movement through app feel logical? Is there any point that the user have to backtrack? Did they encountered any bug with the navigation?	Repeatedly asking for confirmation or canceling actions makes the user feel a little bothered. Having too many steps to take to get to the beginning of a session makes it more difficult to create a session. The rest of the app makes the participants feel reasonable.
Are the button easy to interact and recognize, visually?	There are no buttons that mislead users. There are some buttons its size is slightly larger than normal.
Does the information enough, meaningful and easy to look at?	The information is quite complete, there is no redundancy. In this demo, the information is quite easy to see and the distance between them is quite reasonable. There is a participant who needs to find a team connection history and wants to do a session with old clock settings and team connections but does not find that function.
Feedback and suggestion	<ul> <li>Smaller button sizes.</li> <li>Save the history of "task settings" in the Diary, allowing to perform an additional task similar to the hour setting and the player mode like the currently selected task.</li> </ul>
What is the emotion when they use the app, will it attract people to come back and use?	Most people are excited and want to explore. In general, people want to come back and experience more.

# **3.2. Building second Prototype:**

![](_page_46_Figure_0.jpeg)

# 3.4. User Interface Design

After testing and gathering enough results, start building the Figma version based on the Balsamiq prototype and the changes from the feedback of the participants.

![](_page_47_Figure_1.jpeg)

![](_page_48_Figure_0.jpeg)

![](_page_49_Figure_0.jpeg)

![](_page_50_Picture_0.jpeg)

![](_page_50_Picture_1.jpeg)

![](_page_51_Figure_0.jpeg)

![](_page_52_Figure_0.jpeg)

![](_page_53_Picture_0.jpeg)

![](_page_53_Picture_1.jpeg)

![](_page_54_Picture_0.jpeg)

![](_page_54_Picture_1.jpeg)

# 4.1: Design Overview

### 4.1.1: Design Overview

Based on what we have studied in user interface design, we want to bring a color that brings the feel of a meteorite, light, modernity, technology, advancement and lots of energy. And the neon blue is there to solve that. Select the dark background and the remaining details in the range of neon green gradient - dark blue - purple - pink. Besides, there is a highlight by yellow - orange creates a strong feeling, full of energy and enthusiasm. Long mystical gradient color but also easy to make viewers suffer from eye pain if they look for a long time, so we adjusted the opacity to make users more satisfied.

### 4.1.2: Usability testing

Just like we did the first test, this time we used Figma version to have a more realistic representation of hardware and interface design. What we want is that users have a deeper insight and feel about our application.

![](_page_55_Picture_5.jpeg)

Testing interactive high-fidelity prototype on mobile device

#### 4.1.2.1: System Usability Scale

We tested with 6 participants, the result showing in SUS (system usability scale) form for better overall evaluation. SUS use 10 statements, related to the usability of an app, then each participant answer by saying how agree they are with each statement. The results will show how good your system is with an average score from all participants.

 $\cdot$  For every odd-numbered question, subtract 1 from the score (X-1)

• For every even-numbered question, subtract the score from 5 (5-X)

 $\cdot$  Sum the scores from even and odd-numbered questions.

. Then multiply the total with 2.5

Note that the highest score for each question is 4 and 0 is the lowest. After summing scores from all 10 questions, the next step is multiplying the total with 2.5 and that would be the final SUS Score for your product or feature.

	Lê Việt Bắc	Thùy Dung	Phùng Huyền	Thanh Loan	Đức Tâm	Nhật Minh	Đỗ Hiền
I think that I would like to use this system frequently:	Strongly Agree	Neutral	Neutral	Agree	Strongly Agree	Agree	Neutral
I found the system unnecessarily complex:	Disagree	Neutral	Neutral	Neutral	Disagree	Disagree	Disagree
I thought the system was easy to use:	Agree	Agree	Neutral	Agree	Agree	Agree	Agree
I think that I would need the support			Agr	Agree	Disagree	Agree	Disagree
of a technical person to be able to use this system:	Disagree	Agree	ee				
I found the various functions in this system were well integrated:	Strongly Agree	Agree	Neutral	Neutral	Strongly Agree		Agree
I thought there was too much inconsistency in this system:	Disagree	Disagree	Neutral	Disagree	Disagree	Disagree	Disagree
I would imagine that most people would learn to use this system very quickly:	Agree	Neutral	Agree	Agree	Agree	Agree	Agree
I found the system very	Disagree	Disagree	Disagree	Neutral	Disagree	Disagree	Neutral

cumbersome to use:							
I felt very confident using the system:	Strongly Agree	Disagree	Disagree	Agree	Agree	Neutral	Agree
I needed to learn a lot of things before I could get going with this system:	Neutral	Neutral	Agree	Strongly Agree	Agree	Agree	Strongly Agree

	Lê Việt Bắc	Thùy Dung	Phùng Huyền	Thanh Loan	Đức Tâm	Nhật Minh	Đỗ Hiền
I think that I would like to use this system frequently:	0	2	2	1	0	1	2
I found the system unnecessarily complex:	1	2	2	2	1	1	1
I thought the system was easy to use:	1	1	2	1	1	1	1
I think that I would need the support of a technical person to be able to use this system:	1	3	3	3	1	3	1
I found the various functions in this system were well integrated:	0	1	2	2	0	2	1
I thought there was too much inconsistency in this system:	1	1	2	1	1	1	1
I would imagine that most people would learn to use this system very quickly:	0	2	0	0	0	0	0
I found the system very	1	1	1	2	1	1	2

cumbersome to use:							
I felt very confident using the system:	0	3	3	1	1	2	1
I needed to learn a lot of things before I could get going with this system:	2	2	3	4	3	3	4

From the result of our SUS score is around 72.5, Good rank equivalent and can be further developed.

#### 4.1.2.2: Feedback and improvement

During the test we noticed some minor flaws still exist in the design such as:

- It is hard for the participants to notice some plain-text button in the sign in and sign up screen.
- The search function for bus company created a lot of confusion for the participants when being a seperated tab.
- Zoom button for QR code doesn't represent a close meaning for the user.

In order to fix remaining issues we changed a few things like:

- Increase the size of plain-text button in the sign in and sign up screen.
- Merge both search function into one with more option for filtering and sorting.
- Change the text for scanning QR code button.

# 4.2: Design Finalization