# Lift2FEUP

## IPC

L.EIC 2022

Ana Beatriz Fontão up202003574
Hugo Almeida  up202006814
Teresa Ferreira up202004852

# Table of Contents

# Project's idea description

For this project, we intend to create a platform where FEUP students can organize shared drives with colleagues.

We have two main goals:

- the first one is to help students that currently use other methods of transportation finding a way to get lifts to college;
- the second one is to provide a way to students that already drive to FEUP to split their expenses with colleagues that want a lift.

We want to make a system that is user-friendly and available for all FEUP students.
In this platform, after creating an account, students that drive and are looking for someone to share trips to college should be able to create posts about their future trips. These should include details such as cost, number of seats left in the car or average time.
Besides that, users that are looking for lifts to FEUP should be able to respond to said posts and even exchange messages with the students that drive.

At the start of this phase and in order to find the students' preferences and needs, we created a form with 13 questions addressing the most important topics of our project. Once we gathered the questionnaire's results, we concluded that students need and are interested in a platform with the goal of sharing drives to FEUP.
In the next phases, we will explore more of the platform's details and adjust them according to the users' needs.

# Related apps / services / systems

Regarding related app/services/systems we can highlight *Uber*, *Bolt*, *Cabify*, *Lift* and *Wheeli*.

The first four allow users to book a car and driver to transport them in a way similar to a taxi. They are driven from the place where they are to the place they want to go. These apps are different from Lift2FEUP since they were not specifically designed to college students that need to go to classes and share lifts with colleagues.

However, *Wheeli* is a Carpooling network for college students. It is an app whose purpose is similar to ours. However, *Lift2FEUP* aims only FEUP students and *Wheeli* is not operable in Porto

# Questionnaire – Highlights

Our questionnaire was answered by 21 L.EIC and M.EIC students between the ages of 18 and 23 years old. The most common methods of transportation used by them are public transport and car [Figure 1]. If, for some reason, the students' main method of transport fails, all of them show a backup option [Figure 2].

Out of the 21 students, around 62% say they don't usually use private transport applications.

Despite that, the most popular app among the students that use such services is Uber.

We gathered that more than half of the people who answered have a driving license [Figure 3], but only 19% of the ones that come to college by car share rides with other students.

Despite this information, almost half of the students say that they would share drives to FEUP with colleagues [Figure 4] and 85.7% would like to have a way to communicate with other students and organize lifts. Furthermore, 13 out of the 18 that answered would share their location and everyone would divide expenses.

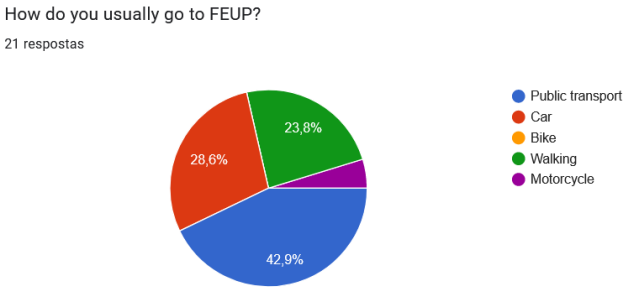



Figure 1

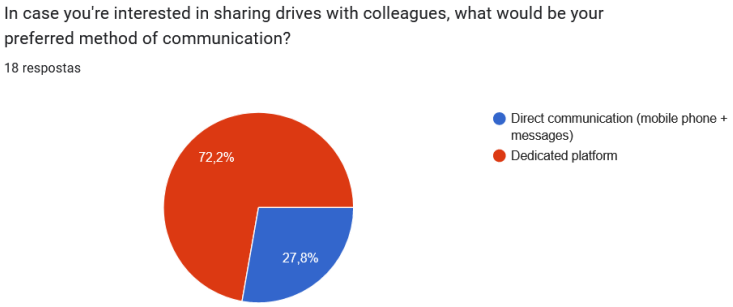



Figure 2

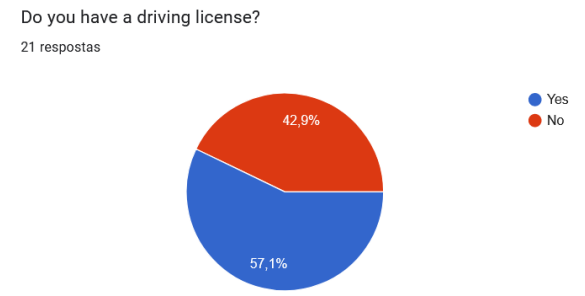



Figure 3

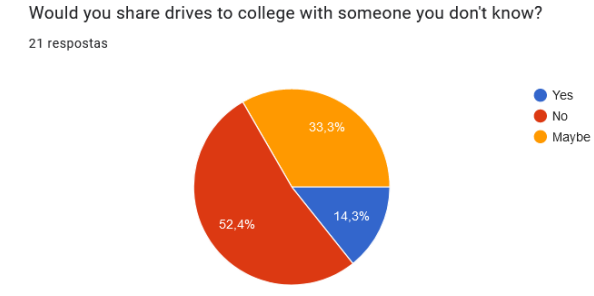



Figure 4

# 11 Questions

### 1. Who will use the system?
Our system will be used by anyone who is studying at FEUP who wants to share lifts with other students to go to college.

### 2. What tasks are currently performed?
Currently, students go to FEUP by car, foot, public transport or bike. Some students also share drives with people that they already know.

### 3. What tasks are desired?
Students want to have a platform where they can organize shared drives to go to college and divide their expenses.

### 4. How are tasks learned?
A big portion of the students that will use our system are already familiarized with private transport applications. Since the structure of our platform will be quite similar to these apps, the users should be able to intuitively know how to browse our system.
Even the ones that do not have previous experience, shouldn't have major difficulties, since we intend to make a user-friendly and practical system.

### 5. Where are the tasks performed?
The tasks of organizing lifts with colleagues are performed via mobile phone, through the platform we will create.
It will have various pages and each page will have different functionalities and sections.

### 6. What is the relation between the user and information?
The information shared on this app will be posted by students who intend to help colleagues by driving to school with them.
The ones who want to find a lift will be able to browse and filter the different posts.

### 7. What other instruments does the user have?
All users will need a cellphone, *Sigarra* credentials and a credit/debit card. If the user is a driver they need their own car and a driver's license.

### 8. How do users communicate?
They communicate via a chat on the platform or by their phone number.

### 9. How often tasks are performed?

Since the users have classes almost every business day, the tasks need to be performed on almost all of those days. Some students have exams at Saturdays so the app needs to work on weekends too.

### 10. Are there time restrictions?

The time that the user wants to go to university.

### 11. What happens if something goes wrong?

A user would lose a way to go to FEUP or arrive there later than they wanted.

# Personas

## Carlos Sousa

**Age:** 18
**Education Level:** currently in bachelor
**Location:** Paredes, Porto
**Driving License:** No
**Preferred devices:** Mobile phone

**Personality traits:** Responsible, Friendly, Funny, Tired

**Narrative/LifeStyle/Behavioural pattern:**
Carlos is a second-year L.EIC student living in Paredes who has to catch public transport to go to FEUP to have classes. He takes about 50 minutes by bus to get there, so he spends a lot of time, that could be used to study or even relax, commuting. Note that if he could go by car he would only take 20 minutes to arrive. None of his friends have driving licenses, so they can't organize rides among themselves. He doesn't know anyone from Paredes that has classes at FEUP at the same time as him, so he has no alternative other than going by bus.

**Objectives/Needs:**

- He is interested in sharing rides with students from FEUP to go to college.
- He needs to find a quicker alternative to using public transport to go to college.

**Frustrations/Pain points:**

- Doesn't like using public transport to go to college, but he doesn't have a driving license.
- Wants to share rides with others to go to college, but doesn't know anyone that has a driving license and goes to FEUP.

# Maria Pereira

**Age:** 20
**Education Level:** currently in bachelor
**Location:** Baguim do Monte, Porto
**Driving License:** Yes
**Preferred devices:** Mobile phone

**Personality traits:** Workaholic, Smart, Introvert, Shy

**Narrative/LifeStyle/Behavioural patterns**
Maria is a L.EIC student that lives in Baguim do Monte. She normally goes to FEUP by car because it would take 40 minutes if she went by bus. However, her car is very old and breaks down frequently. When that happens, she has to go by public transport, making her lose an hour every day. She tried private transport apps but, since she lives far away the trips are expensive and she can't afford that. She also tried to find people that lived near her that go to FEUP to share rides but she didn't know where to look.

**Objectives/Needs**
- She is interested in connecting with other people from her hometown so she can get rides when her car is not available.
- She wants a fast, cheap way to commute to university.

**Frustrations/Pain points**
- Doesn't feel safe using public transport.
- Doesn't like long commute hours.
- She tried private transport apps but they are too expensive.

# Sara Couto

**Age:** 21
**Education Level:** Currently in master's degree
**Location:** Vila Nova de Gaia, Porto
**Driving License:** Yes
**Preferred devices:** Mobile phone

**Personality traits:** Sociable, Smart, Creative, Spared

**Narrative/LifeStyle/Behavioural patterns**
Sara is a 21 years old girl that used to live and study in Coimbra, where she finished her bachelor's degree. She is starting the first year of her master's degree at FEUP, so she doesn't know many people yet. Since she's a sociable person, she would really like to make new friends that also study at the university.
She's a very good driver and owns a car, which she usually drives to college.
Typically, Sara and her sister go together since their universities are close to one another.
She would like to continue to drive to college but, unfortunately, due to the increase of fuel prices, she's considering to start taking public transport to school.

**Objectives/Needs**
- Find a way to meet FEUP students
- She would like to share the expenses of her car's fuel by sharing drives with colleagues.

**Frustrations/Pain points**
- She can't afford driving to school everyday
- It would take a lot longer to get to FEUP using public transport

# Activity Scenarios

## Scenario 1

Carla has just joined FEUP. She is from Lisbon so she had to move to Porto. As she didn't know the campus area, she rented a room in a place a little far from college. She needed to find people with whom she could share lifts and expenses, in order to be able to go to classes without having to take public transport. She found *Lift2FEUP*, an app where she can find people that also need to share drives. Every single morning, she opens the app, goes to the search page, inserts the time and the place where she wants to be picked up from and finds someone that posted a trip to FEUP! In fact, she already has some people that she has met over there so she checks the usual lifts in her “Favourites” tab and if any is available she clicks the button to show interest to ask to join the lift and waits to be accepted. When the driver clicks on the button to accept her on its “own trips” page, the location where she wants to be picked up from is shared with the driver.

## Scenario 2

João is a L.EIC student who usually drives to FEUP. However, his car broke down so he needs to find a quick solution to get to classes in time. He gets his phone and opens *Lift2FEUP* to check if there is any trip from his place at that time. He opens the “search” page and inserts his location and filtered the trips by the earliest. Luckily, there was one that was going to depart in five minutes, so he quickly showed his interest by clicking on the button and waited for a response. He was accepted, so his location was shared and he got to FEUP just in time.

## Scenario 3

Pedro is a friendly and extroverted FEUP student. He loves cars and drives a Renault CLIO, his favourite model. He hates going on public transport so he frequently goes to university by car. He used to share rides with his classmate Luís where they would split the cost of the trip, but with the increase of gas prices, it's expensive and they can't afford paying that much money. Since he still had 3 seats available in his car he decided to install *Lift2FEUP*. In the app, he registered himself as a driver and in the home page clicked on the button to create trips. In those posts, he inserted the starting location (FEUP or his home), the time when he would leave and the expected cost. Depending on where the users would be picked up from, the price would vary. Then users that wanted to go on that ride applied to it and Pedro could see them in the trip page and accept them. Then he did the ride and picked them up. When they arrived, the costs of the trip were divided by Pedro and the other riders.

# Simplified conceptual model

## Objects

- ➔ user (username, password, phone_number)
- ➔ location (name)
- ➔ message (date, text, author, receiver)
- ➔ evaluation (evaluation, receiver)
- ➔ trip (user, location, number_of_available_seets)
- ➔ favourite (user)

## Actions

- ➔ create, edit, delete trip
- ➔ add evaluation to past trip
- ➔ add and remove a user as favourite
- ➔ create user
- ➔ filter trips by location and time
- ➔ create messages

## Relations

- ➔ A message is between two users
- ➔ A trip starts in a location
- ➔ A user has favourites
- ➔ Favourites are users
- ➔ One evaluation is done by one user
- ➔ One trip has multiple evaluations
- ➔ A user has trips

# Functionalities

- ➔ Create account
- ➔ Make a post of a trip
- ➔ Edit post (number of seats left, starting place, travel time, cost)
- ➔ Show interest in posts
- ➔ Rate drives
- ➔ Favourite other users
- ➔ Send private messages
- ➔ Accept or deny lift requests
- ➔ Search trips by time and location
- ➔ Select a post from a filtered list
- ➔ Order trips by cost

# Tasks

- ➔ Show interest in the cheapest trip that starts in Gaia on 15/11/2022 and leaves between 9:00am and 10:00am
- ➔ Create a trip from FEUP to Paredes on 15/11/2022 that starts at 2:00 pm with 3 seats available, travel time of 25 minutes and cost of 5 euros.
- ➔ Send a message to the driver Pedro Lopes that is favourited saying: ”Hi, are you going to FEUP tomorrow?”

# Usability Requirements

**Task 1 - Show interest in the cheapest trip that starts in Gaia and leaves around 9:00am**

Efficacy - 90% performed this task without any errors.
Efficiency - Average time of 3 minutes and 15 clicks.
Satisfaction - 85% of users trusted our searching algorithm.

**Task 2 - Edit the departure time to 30 minutes earlier on my most recent post**

Efficacy - 95% performed this task with less than 1 error.
Efficiency - Average time of 1 minutes and 5 clicks.
Satisfaction - 90% of drivers find this feature helpful.

**Task 3 - Send a message to the highest rated driver that is favourited asking about future trips**

Efficacy - 90% did the task without any errors.
Efficiency - Average time of 2 minutes and 10 clicks.
Satisfaction - 95% of users trusted that the information displayed was true.

# Conclusions

With the first fase of our project, we were able to get multiple information to study and design our idea. After the questionary, we came to the conclusion that students from FEUP need a platform where they can organize themselves and share drives. They need it for different reasons:

1. To have a quicker way to go to classes (compared with public transport)
2. To share expenses regarding petrol.
3. To have a solution if their main mean of transport has a problem.

With the questionary, we were also able to understand our potential users and build personas and scenarios which helped us understand their needs.

This said, we believe that Lift2FEUP is a solution for their necessity since it will offer a service to share trips, show interest in them, save drivers as favourites, etc.. Moreover, this app is being designed to be safe. Each trip will receive an evaluation and users will only be students from FEUP, so they will need *Sigarra* credentials to be able to log in, which will help control the users' reliability.

# Annexes

## Questionnaires

https://docs.google.com/forms/d/e/1FAIpQLSdJgA9vNfvI8ZRrBHxdxlQcbXPieqj5X6XRp3jSU7_hd2yHjw/viewform

## Summary of results

We learned that two thirds of people that answered our questionnaire were between 18 and 21 years old and the other third between 21 and 23.

Like the first question, two thirds of the participants are in the bachelor's degree and the other third in their master's degree.

Around half of the participants are in their 3rd year of studies, and a third are 2nd year students. The rest are students from the 1st and the 5th year.

Half of the participants identify as male and the other as female.

Two fifths go by public transport and one third by car, but if their first option to go to FEUP fails, two fifths will go by car and half by public transport.

Only two fifths have a driver's license.

Only a fifth of students share rides.

15% of students would go on rides with people that they didn't know and a third said maybe.

85% of students would like to have an app to help them share lifts to go to feup.

All participants would be willing to divide the costs of the ride and seven tenths to share their location.

More than 3 quarters of enquiries want to be able to communicate with the other users by the application and not by cell phone number.

How old are you?

21 respostas

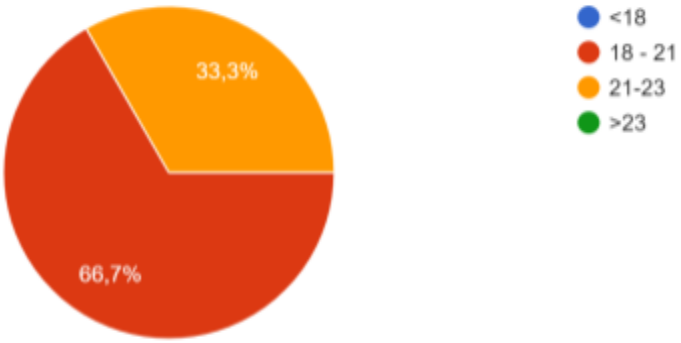



Figure 5

In what cycle of studies are you on?

21 respostas

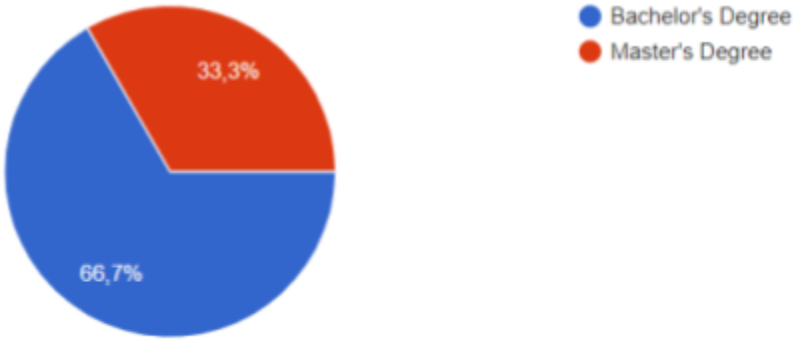



Figure 6

In what year of your studies are you?

21 respostas

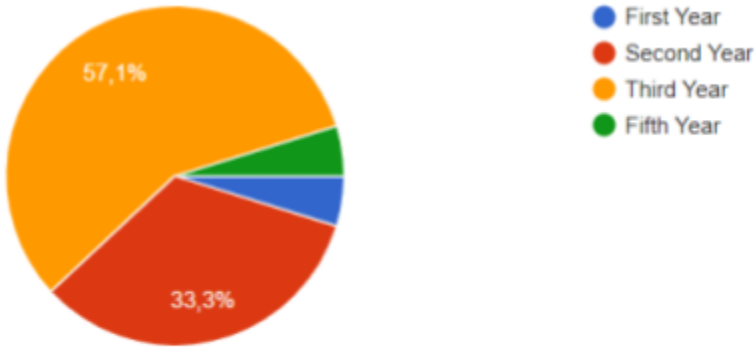



Figure 7

What is your gender?

21 respostas

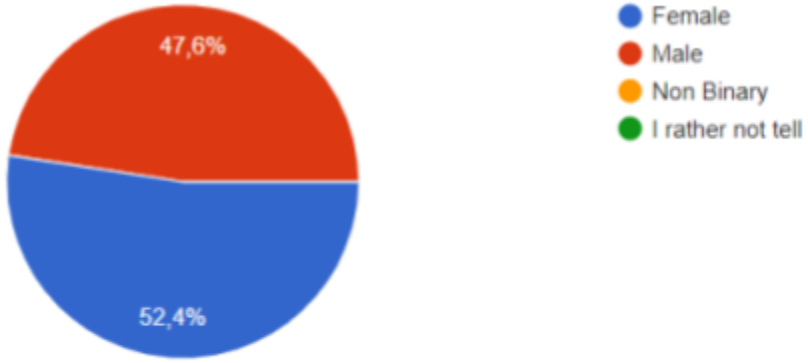



Figure 8

How do you usually come to the university?

21 respostas

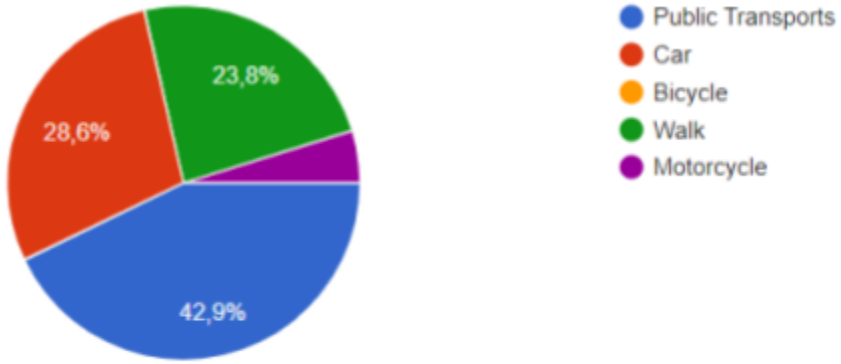
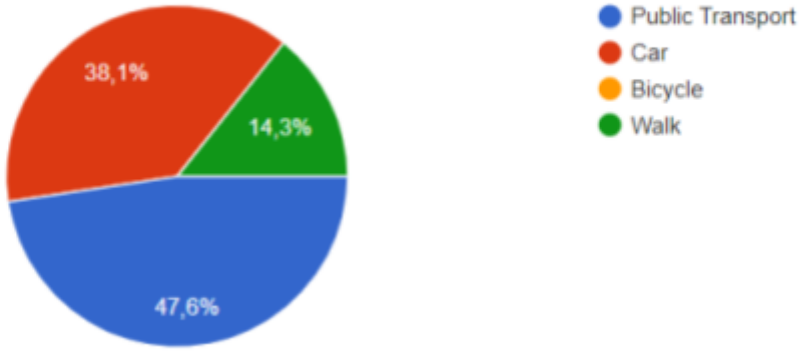



Figure 9

If your main option of transportation fails how do you go to university?

21 respostas

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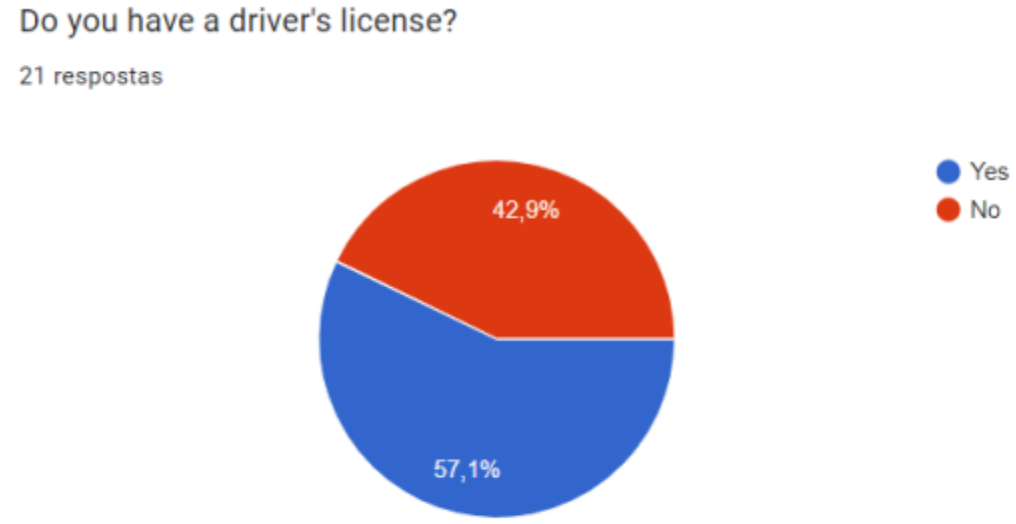


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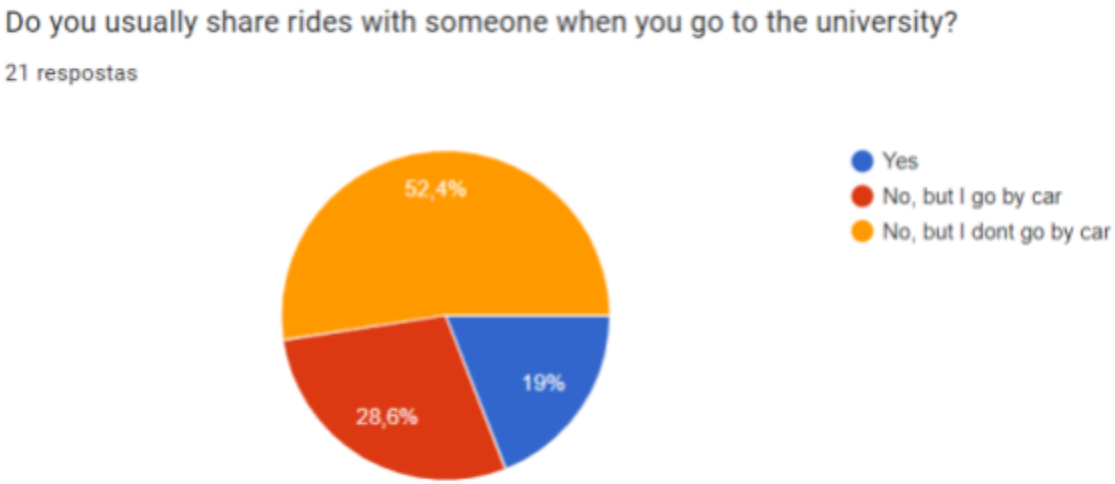


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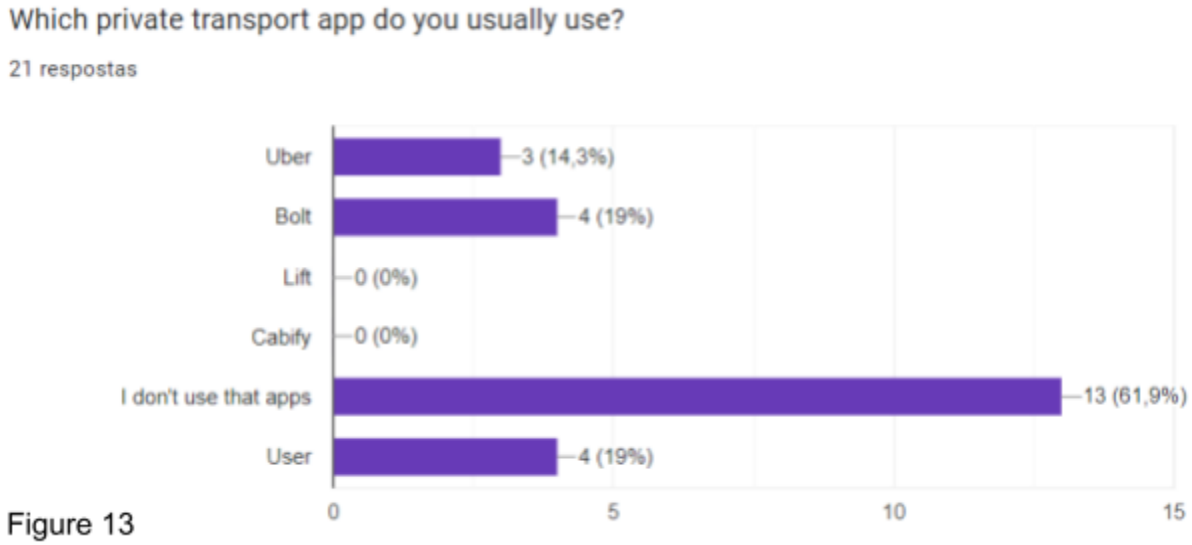


Figure 13


Figure 14


Figure 15

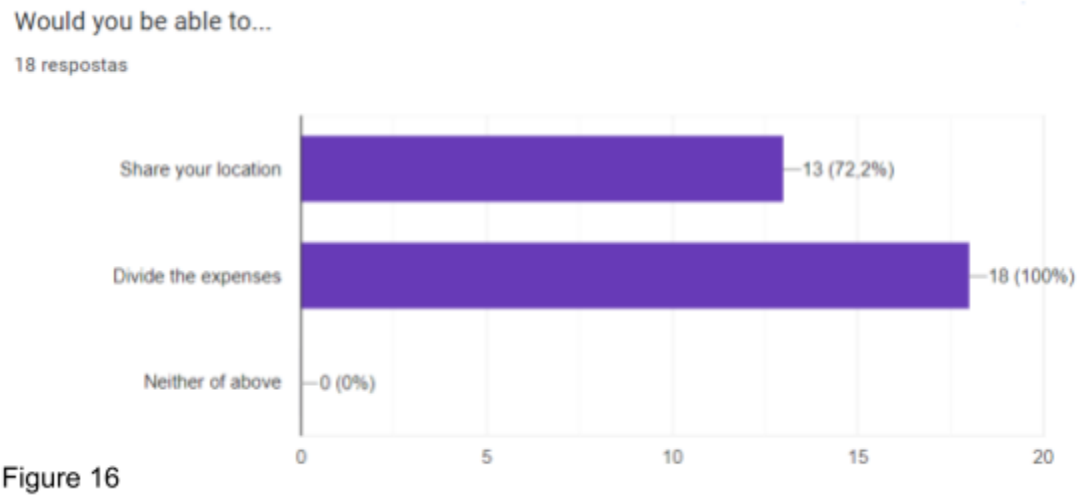


Figure 16


How would you preffer to communicate with your classmates?
18 respostas
72,2%
27,8%
Direct communication (cellphone or messages)
Via the platform

Figure 17