

# Blended AIM 2019

• Sewermapper

Papadourakis Georgios, Sygkelakis Michail

BLENDED  
AIM

SCRUM

SEWERMAPPER

CONCLUSION

QA

Department of Informatics Engineering Hellenic Mediterranean University of Crete

## Blended AIM-What it is ?

- Blended Mobility is an international collaboration between 11 universities.
- The students are challenged by a company with a real-life problem.
- Different fields of study are involved such as: Business Development, Management, IT & Design.

How it works?

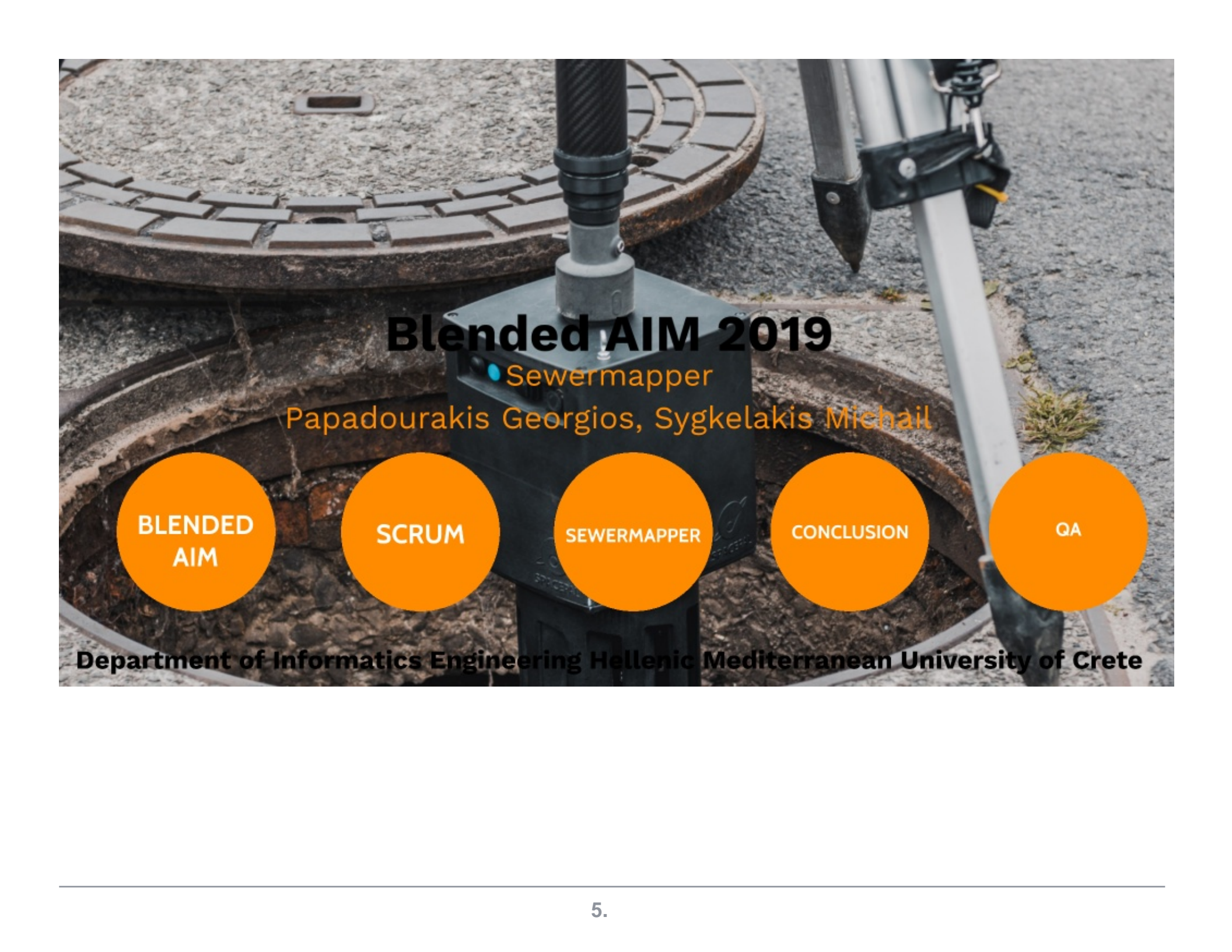
Where it helps?

## How it works?

- Students cooperate to develop a product assigned by a company.
- They meet twice during the semester of the project's acquisition.
- They use online tools for project management and team communication.
- When the product is complete it is presented to the company and gets evaluated.

## Addressing Problems

- Professional career depends on mobility.
- Optimization of communication skills at an international, cross-cultural environment
- Exposure of students in international programs.
- Empower of students employability.



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# What is Scrum?

- Agile is a development methodology based on iterative and incremental approach.
- Scrum is one of the implementations of Agile methodology. Incremental builds are delivered to the customer in every two to three week time.
- Scrum contains sprints. Sprint is a regular, repeatable work cycle in scrum methodology during which work is completed and made ready for review.

Roles

Artifacts

Sprints

Tools

## Roles

- Product Owner
- Scrum Master(Team coordinator)
- Scrum team(Everyone in team)

# Artifacts

- Product Backlog(Created and maintained by product owner)
- Spring backlog
  - Created and maintained by the team.
  - Update daily by the team.



## Sprints(From what it is consisted?)

- Sprint Planning meeting
  - Every 2 weeks
  - 7 Sprints totally
- Daily standup meetings
  - What have you done since last meeting?
  - What will you do before the meeting?
  - What is blocking you?
- Demo at the end of each sprint
- Sprint retrospective meeting

## Tools



**GitHub**



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# SewerMapper

A device that lowers automatically into sewer manholes, and locates, orientates, measures and inspects the manhole by the push of a button; no more workers going 'down the drain': only open the cover!

Benefits

Goal

Student's work

Used Technologies

Design

Marketing

## BENEFITS

- No need for a worker to go down the manhole anymore. This means dangers of falling, drowning and suffocation are almost nonexistent.
- The SewerMapper can scan, parametrize and map a complete manhole and sewer up to 3 times faster than a manual inventory. Results are also more accurate and complete.
- Using ESA's expertise and satellites, the SewerMapper can precisely determine the location and orientation of a sewer. Every manhole can thus be linked to an entire 3D sewer network!
- No more manual measurements and computer inputs! The SewerMapper is an exhaustive tool that only has to be placed above a manhole; measurements, parametrization & upload are easy-as-pie.

## Goal(Implement the front end that is linked with the backend)

- Working on a web-based platform with 3D data that also had to work on mobile devices.
- Visualization and storage of data, GPS location, video and photostream and usage were necessary.
- Implementation of a 3D viewer and processor with automation of tasks and image recognition.

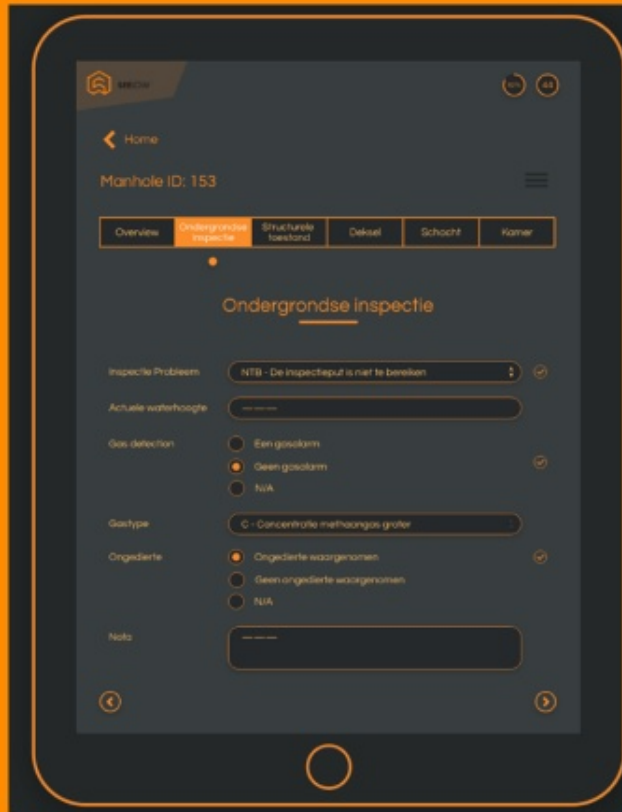
## Student's work

Login

Link  
capture  
Calls

FrontEnd

# Front-end (Some examples)

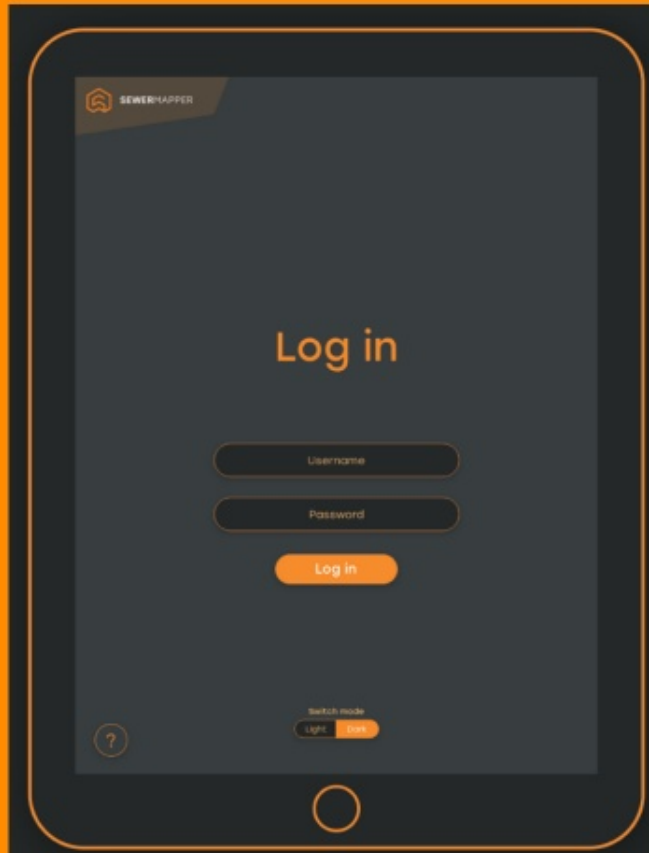




# Link Capture calls

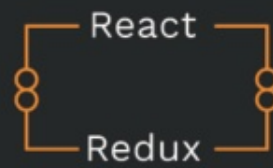
- process call
- capture\_stop call
- capture\_depth\_list
- capture\_start

# Log in-functionalities

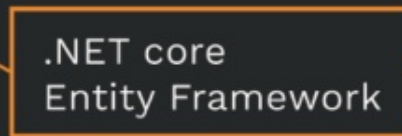
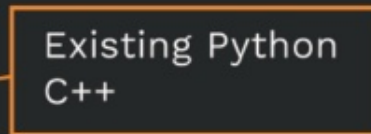


## Used technologies

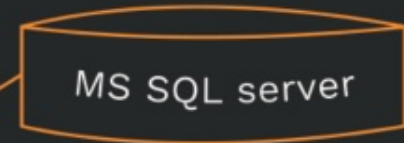
### Frontend



### Backend



### Database



# Design

Photo-  
shooting

Info-graphic

Leaflet

# Leaflet



**SEWERMAPPER**

**Introducing SEWERMAPPER**

The product, how it works, and its benefits.

sewermapper.eu

**Disclaimer**  
©2019 SpacePal EU. All rights reserved.

**Warning:** The product is often used close to traffic and we recommend you to be cautious of the surrounding circumstances.

**Disclaimer:** The product is currently in development and is considered an MVP - Minimum Viable Product.

**Interested?** We are always looking for investors or companies interested in our product. Contact details are on the back of this flyer if you are interested. We look forward to hearing from you.

**The product**  
The product is a combination of a scanner, a tripod, and a laptop or tablet. You can use it to scan the area of a pipe, a sewer, or a trench.

The combination allows you to work fast and smoothly, and save important information that is easy to retrieve.

The scanner is located in the middle of the tripod and is easily attached when the tripod has been set up.

The tripod is easy to fold and unfold to make the set-up quick and easy.

The computer is based on the top of the tripod. The scanner can be turned on/off with the switch. The scanner can also be run manually with the up/down buttons.

The tripod is easy to fold and unfold to make the set-up quick and easy.

**Work flow - onsite**

1. Click power on to start the scanner.
2. Open the mobile.
3. Some data is collected.
4. Set up the tripod aligned with the pipe.
5. Attach scanner.
6. On the top of the tripod.
7. Start capturing.
8. Start your scan automatically or manually.
9. Stop capture.
10. Fold and take the scanner.

The scanner and tripod is only to measure per manhole.



**What we do**

**What:** Create a 3D model of the product to deliver accurate knowledge and solutions in the form of a mobile handheld scanner.

**How:** It is a mobile technology and the most of an automatic will have created a scanner that is ready to use up to 50 manholes a day.

**Why:** Software is creating faster, safer and mobile solutions.

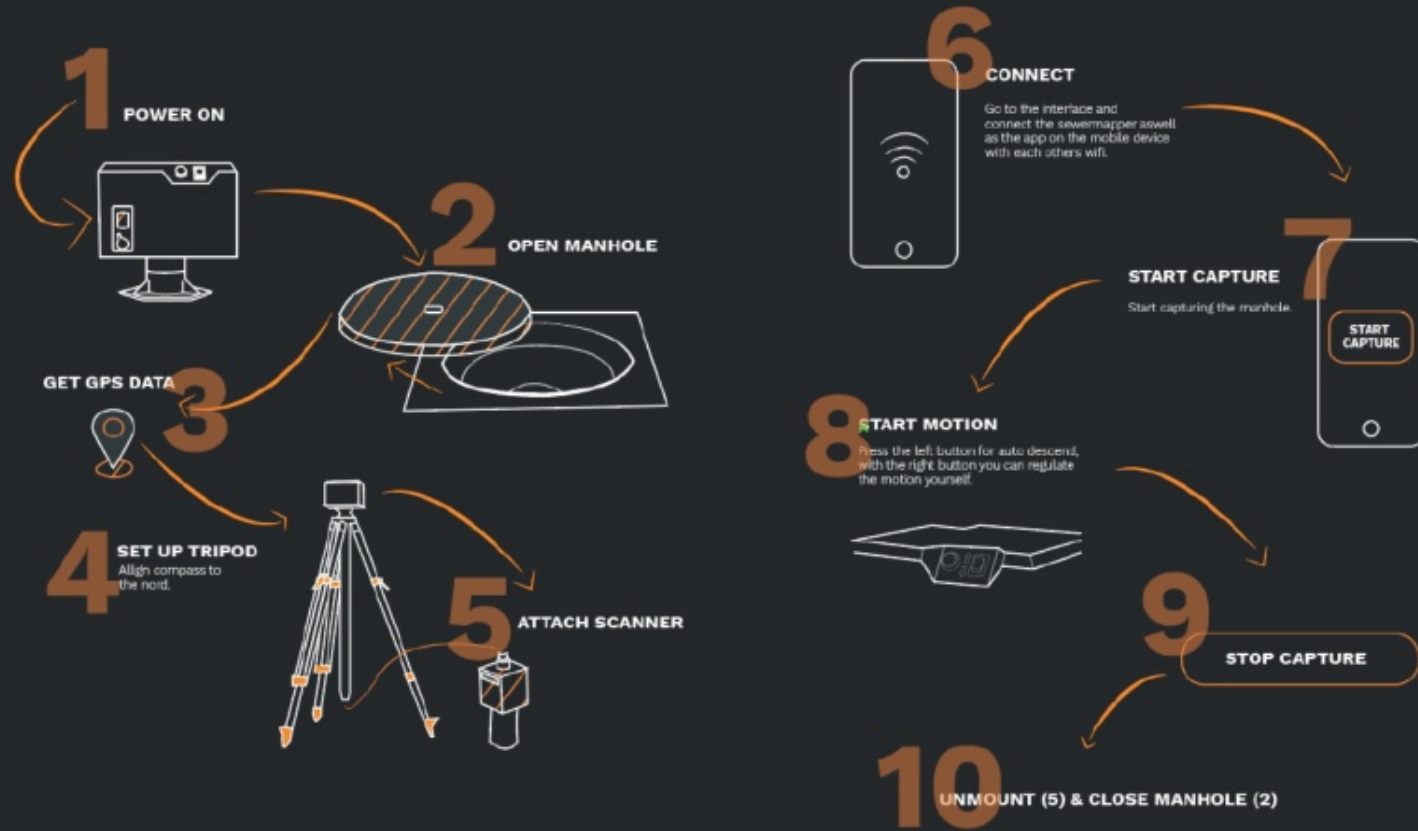
**Work flow - at the office**  
is a way for us to provide you with the measurements and 3D model of the manhole, you simply follow this:

<b>Sync online</b>	Power on	Scanner connected to wifi.
<b>Follow opening</b>	No history screen	My power off when ready.
<b>Follow post process</b>	No history screen	Ready to view report back.
<b>Get email notice</b>		
<b>Check results</b>	Go to platform	Log in via browser e.g. company.sewermapper.eu
<b>Follow opening</b>	View or Download	Use Factory screen

**The web application**  
The web app currently does through a link from the user attached to it and at your mobile.

With the app, users can view their data. The data can be made into a 3D model. It is easy to use and it is easy to use. It is easy to use and it is easy to use.

# Info-graphic



# Photo-shooting



## Marketing

### PRICE

Device: € 10.000 -40.000  
License: € 5 -15 Ppu

### PLACE

Direct sale mainly  
to private companies


### PROMOTION

Online: website  
offline: flyer

**Research in  
Portugal**

**Research in  
the Middle East**





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# Conclusion

Future

Would my team  
recommend  
others to do the  
project?

Porto

# Future(Nice to have)

## In IT

- Online syncing
- Code commercial website

## In design

- User testing
- Social media marketing
- Print

Would my team recommend  
others to do the project?

### Positive

- Opportunity to meet people from different cultures
- Working with people from different departments
- Opportunity to work on a real life project with a lot of teamwork

# Final meeting in Porto





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QUESTIONS?



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