CICERONE

Explore with a knowledgeable friend

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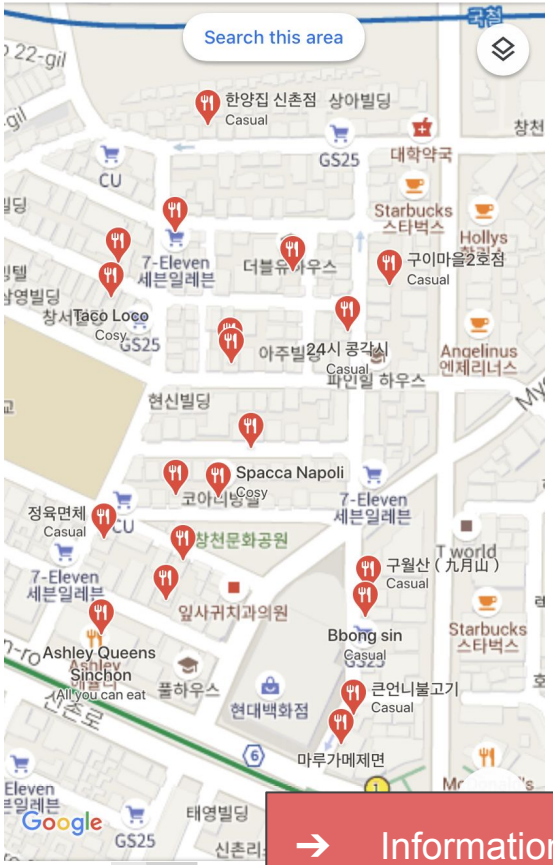
Motivation & Problem

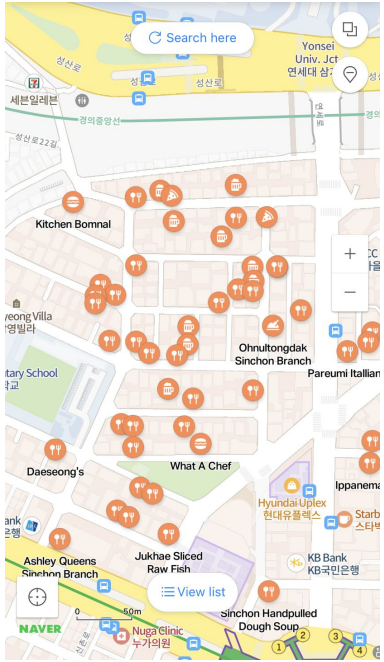
TARGET GROUP Tourists, people who are new in a city (e.g. expats)

SETTING

You are in a new city and want to meaningfully explore without planning every detail in advance.

- Very time-consuming
- Can forget interesting info by the time you get there





➔ Information overload

- ➔ You might miss out on good places because there is too much choice!
- ➔ You might not think to look up places that you walk past!
- ➔ Have too look up history/interesting points about places on your own (which you are likely not to do on the go)

This is not the way in which you would be recommended a city by a friend!

They would show you around as you go, not the bird's eye view.

➔ How to provide this automatically without having to look up yourself?

Key solution

We want to provide key information to the user *as they go,* based on the **user context *right now*** (exploration vs. planned out itinerary).

This solution can give you specific information (such as history, etc.) about POIs as your walking by. You'll have the option to hear a voice clip/read a short text or save the place to your places to visit.

POIs could be anything: Restaurants, shopping malls, historical places etc.

Discover new places as you explore the city!

Existing solutions: Maps

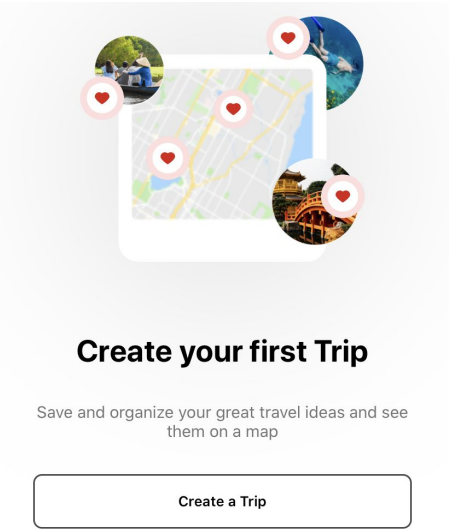
Maps are great for finding specific things, however:

- As a tourist you might not know what you are looking for specifically
- Good places might get lost in the noise
- Difficult to compare and decide (especially if you are not familiar or new to the place)

Existing solutions: Tripadvisor

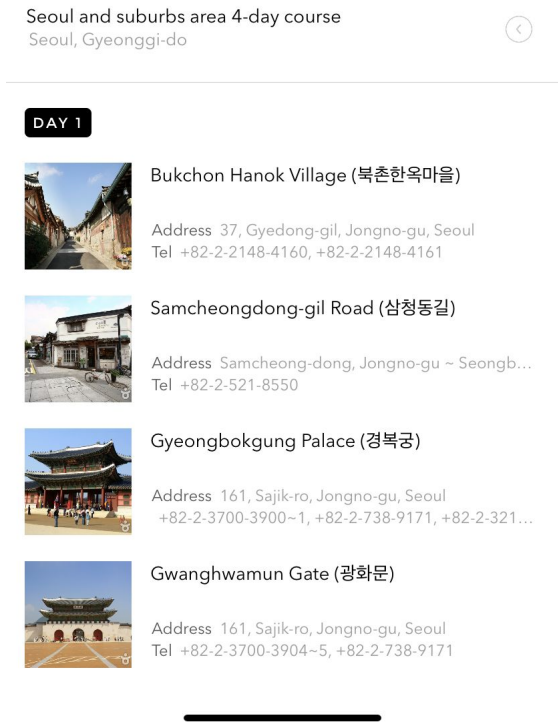
Tripadvisor:

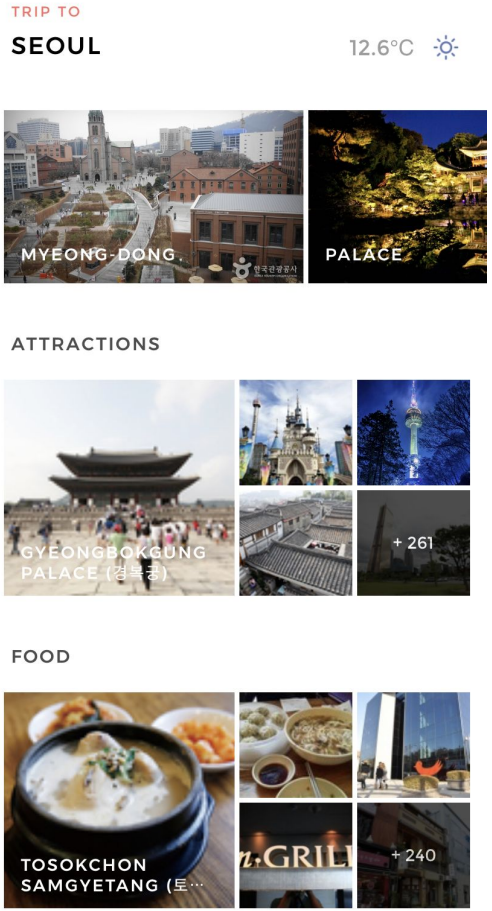
- Similar information overload, attempts t
  give all information at once
- Aids in finding and planning
- Helps you organize your trip
- Mostly focused around user reviews



Existing solutions: VisitKorea

- Provides only very general information about shopping, festivals, events, restaurants (i.e. list of popular places)
- Offers recommended tour courses that are pre-planned





Issues with existing solutions

Existing solutions help you plan ahead - but we want to help you experience as you go!

They are **too general** and you might miss out on interesting stuff nearby.

Other apps do not into account user context and do not provide a seamless experience.

Distinguishing features

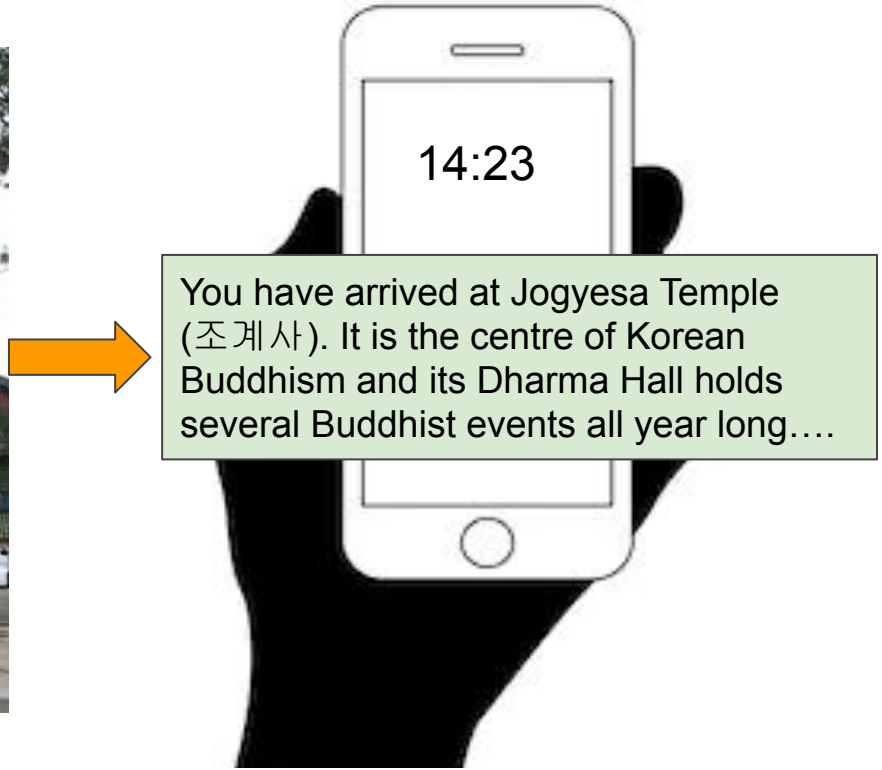
We aim to use **user context**: e.g. location, time, season, how busy a place is to provide you with the information you didn't know you wanted

Much like audio guides in museums, we can provide **location-specific context information** as you go, e.g. historical information, closing time, ratings.

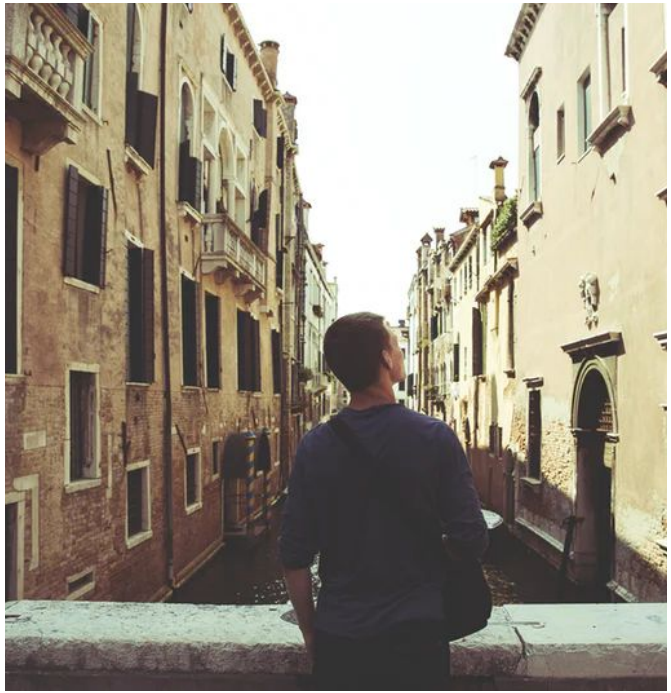
Seamless and no need to look it up yourself:

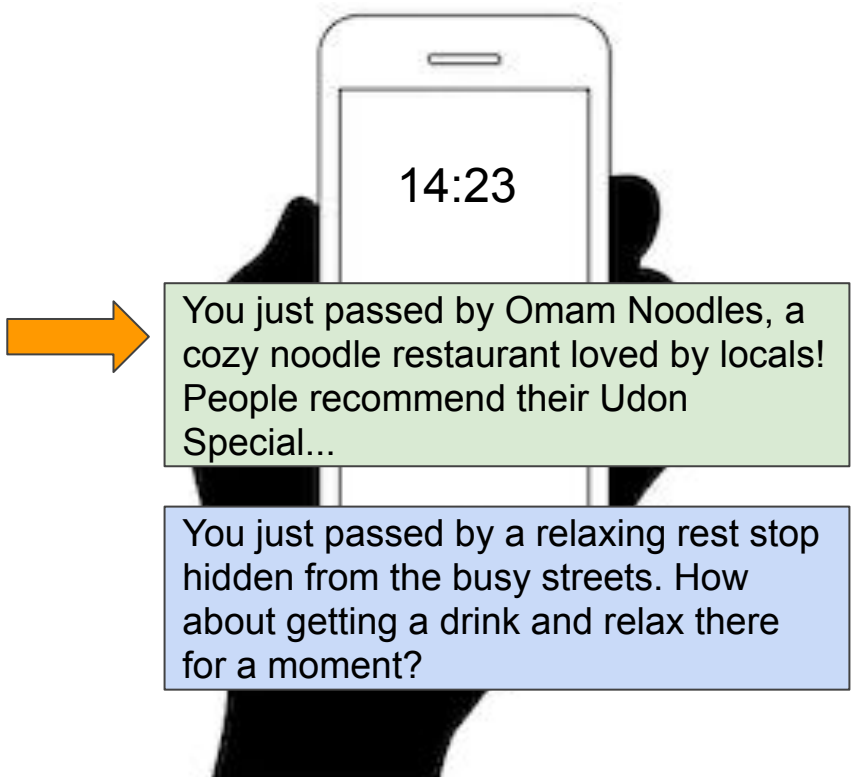
Receive information you didn't know you wanted while passing by.

Usage scenarios



Usage scenarios



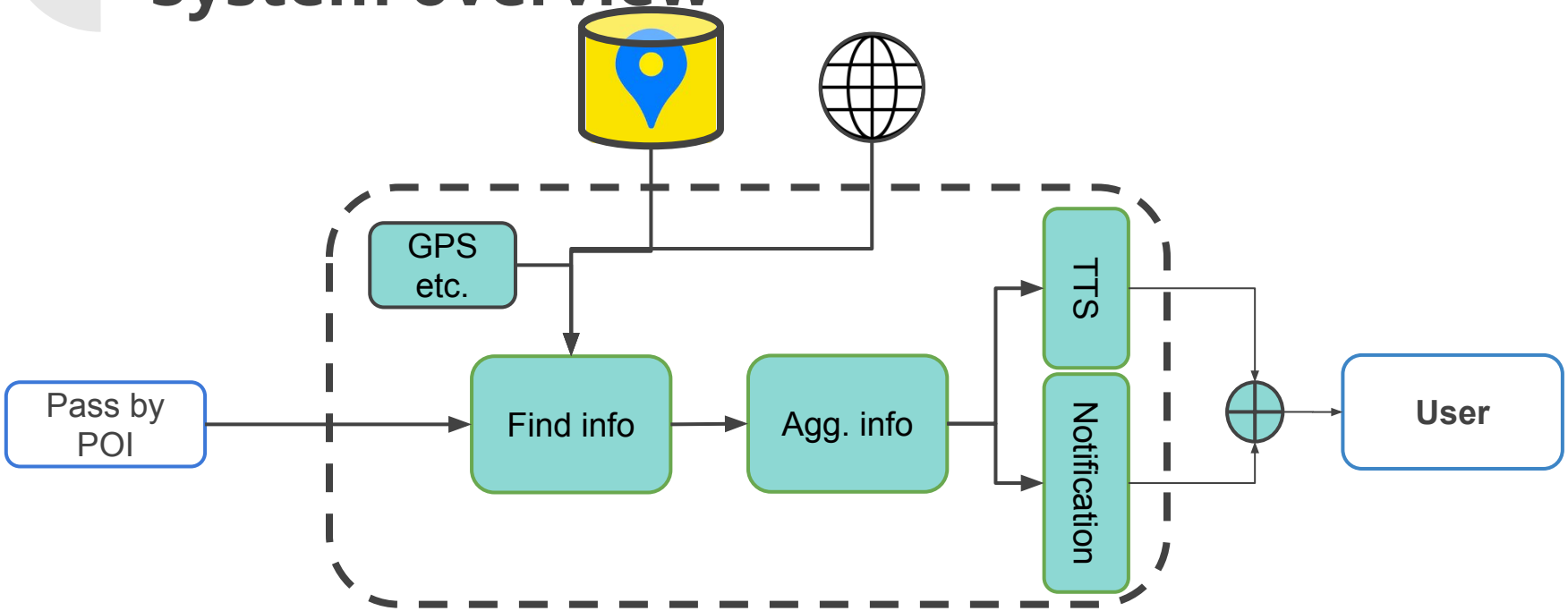


Proposed system overview

A mobile application that based on **user context** (e.g. location)

1. Queries Kakao Maps and the Web to **find POI information**, ratings etc.
2. **Aggregate information** into a short digestible tidbit
3. **Present it to the user** as a text notification and possibly a voice clip

System overview



Trigger

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Output

Technical challenges

- ➔ **Retrieving** information from other services: API limits? Cache the data?
- ➔ **Aggregating** information: Create information texts from data sources
- ➔ **Filtering** information: Recommend only top-rated place in a small distance
- ➔ **Designing an API** for the app to retrieve the information from the server
- ➔ Preloading data for nearby POIs while considering battery and data impact
- ➔ Using text-to-speech to **generate audio tracks**

Design challenges

- How frequently do we recommend things?
- If there are multiple places nearby, which one do we recommend?
- In what way do we present them so that the user can easily digest the information?
  - E.g. how do we formulate the aggregated texts?
  - How can the user get more information?

Technical strong points

- ➔ Aggregate and **produce content** from multiple sources
- ➔ Use **user context** to decide which place to recommend
- ➔ Present information to user in a **natural and friendly way** (coherent text / TTS)

Project plan

Iteration		1	2		3	4		5		6
Task	Worker	4				5			6	
		6	13	20	27	4	11	18	25	1	8
		6/4-12/4	13/4-19/4	20/4-26/4	27/4-3/5	4/5-10/5	11/5-17/5	18/5-24/5	25/5-31/5	1/6-7/6	8/6-14/6
		W15(4)	W16(5)	W17(6)	W18(7)	W19(8)	W20(9)	W21(10)	W22(11)	W23(12)	W24(13)
Setting up development environment (git)	All										
Set up base application (basic GUI)	All										
Setup retrieval of GPS position	SMK, EL										
Send notification based on location	SMK, EL										
Decide on data sources (maps, restaurants) and APIs	BB, KJW										
Set up system to retrieve data via data source APIs	BB, KJW										
Setup basic content generation	All, TBD										
Prepare for mid-term presentation	All						11/5				
Construct notification to send to user with content (MVP)	SMK										
Add functionality to save POIs	SMK, KJW										
Add TTS functionality	EL, BB										
Revision of content generation	TBD										
Develop smarter recommendation/scoring system	TBD										
Refining user interface	TBD										
Buffer time	All										
Prepare for final presentation	All										
Project due	All										8/6

Full schedule:
https://docs.google.com/spreadsheets/d/1mL5yhuGn5g0Rd8uT927GOU4tvzUW-SXN7fr32s-0OY8/edit

Final deliverable

An Android **app** with the following **core functionality**

- **Extract** nearby POI:
  - At least use GPS
- **Find information** on POI
  - At least one of the following: name, history, rating
- **Aggregate** information
  - Should be a coherent piece of text/content
- **Present** text to user
  - At least in the form of a push notification, possibly TTS.

Final deliverable

Success criteria - the criteria are considered fulfilled if:

1. User gets notification with information on POI within reasonable time of passing it, information is accurate
2. The system is seamless and easy to use while on-the-go
3. The solution consumes a reasonable amount of the phone resources

Thank you for your attention!

Questions, comments?