

# Innovative Mapping

## Solution through Coalition

### Micro-landmarks

Faculty Advisers:

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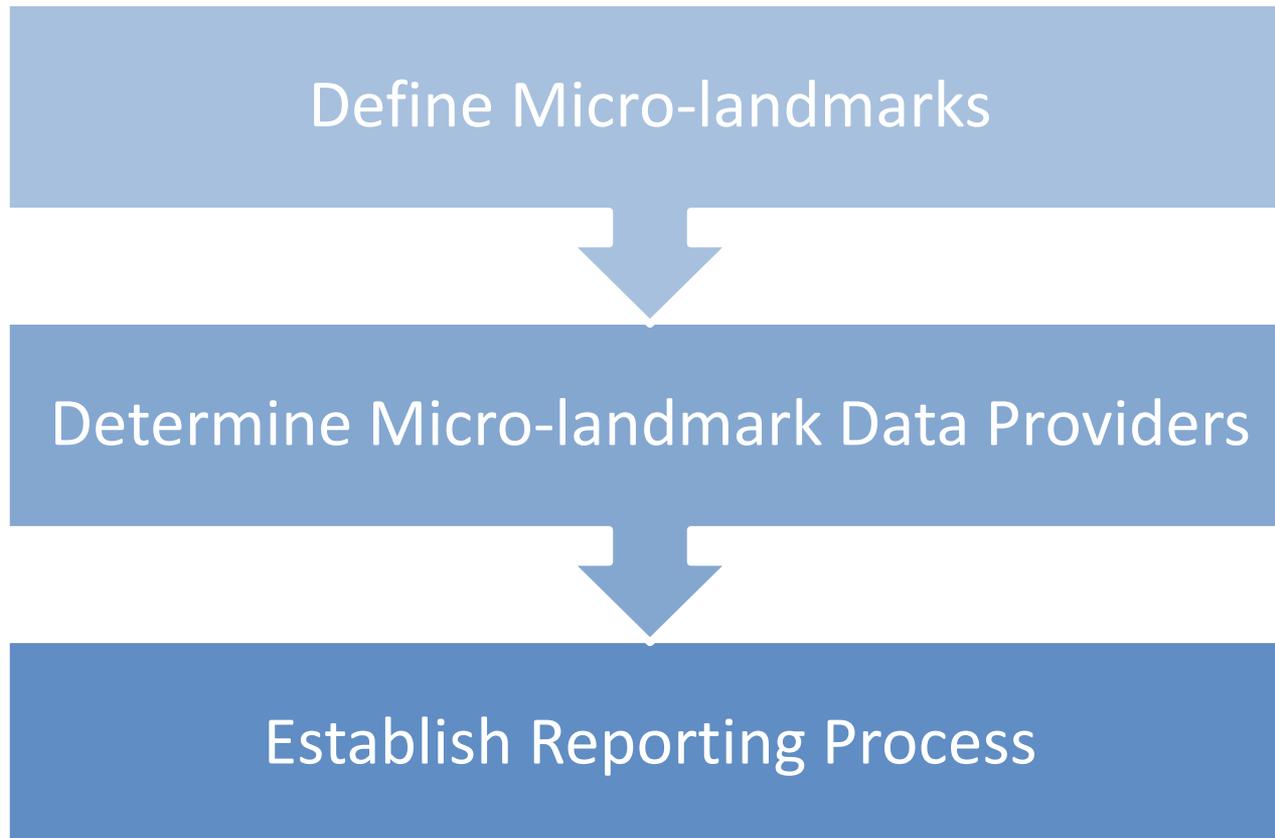
# Opportunity



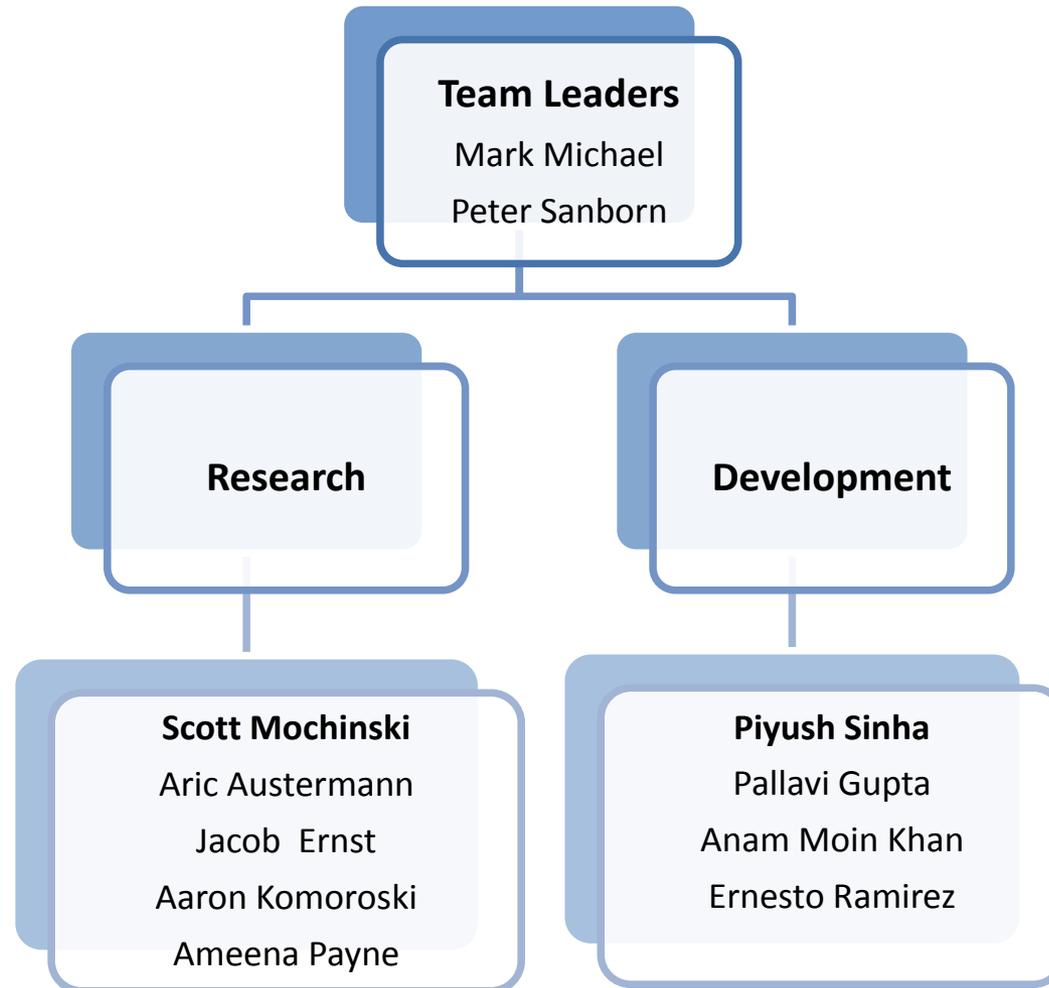


Dedication to find an easy, user-friendly way  
for pedestrians to incorporate local  
knowledge into their map data.

## Goals



## Structure



## Definition

### *Micro-landmark*

A specific site, or prominent object, of unique visual importance that a pedestrian may find useful or significant for precise navigation.



# Criteria

Permanent

Unique

Easily  
Observable

Culturally  
Unbiased



Criteria			
Permanent	Unique	Easily Observable	Culturally Unbiased



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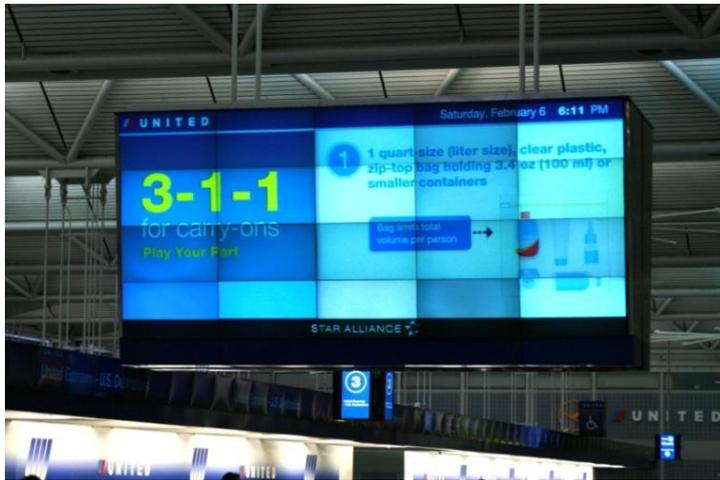


Criteria			
Permanent	Unique	Easily Observable	Culturally Unbiased



## Site Visits

### O'Hare International Airport



*Electronic Signboard at United Airlines Departure Terminal*



*Visitor Information booth in United Airlines Arrival Terminal*

## Site Visits

### Illinois Institute of Technology



*IIT Galvin Library Entrance*



*Sculpture on IIT Campus  
in front of E1 Building*

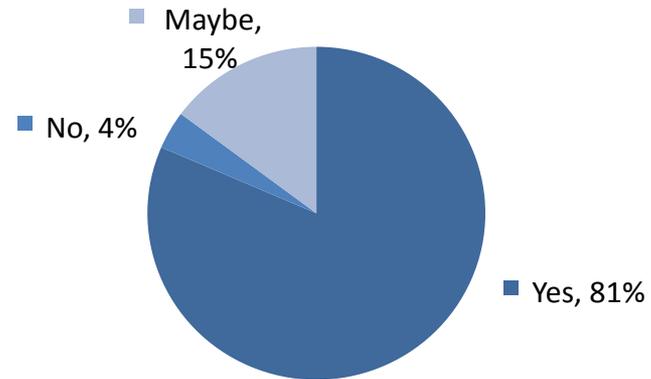
## Survey

- How do you travel to a new location within the city?
- How would you direct a friend to a new location?
- How useful do you find the Micro-landmark feature?
- Would you contribute to the feature?
- How would you contribute?
- Would you pay for it?



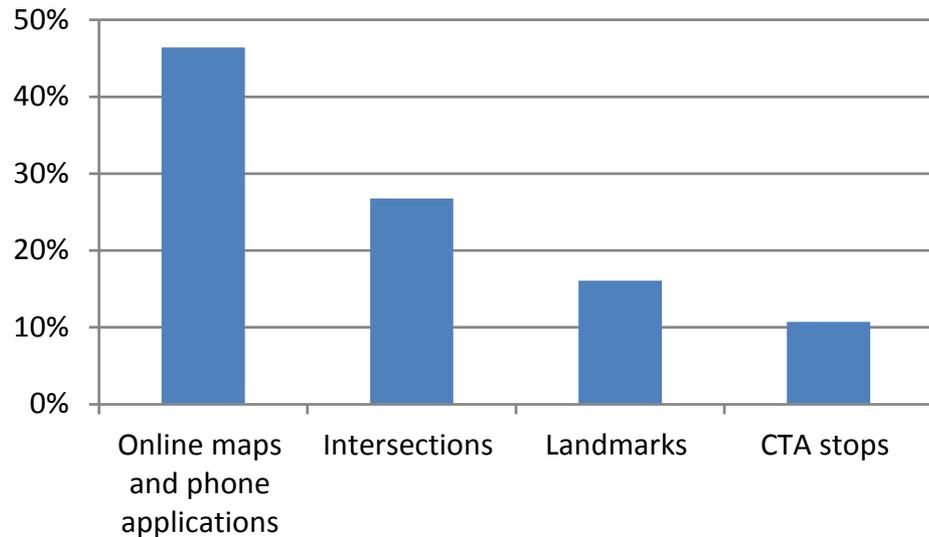
*Most people find  
Micro-landmarks  
useful*

## Usefulness of Micro-landmarks

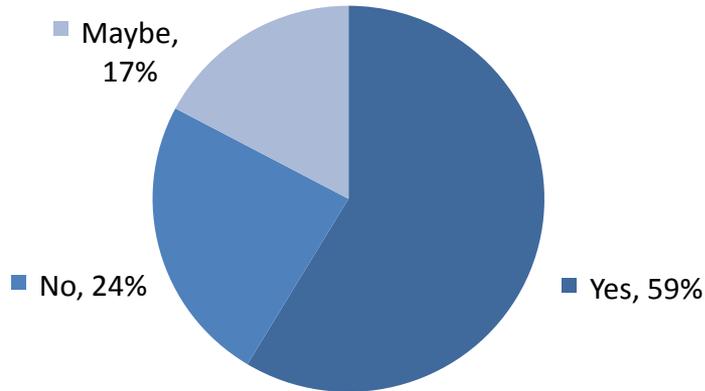


*Most people use online  
maps or phone GPS to  
navigate*

## Methods of navigation

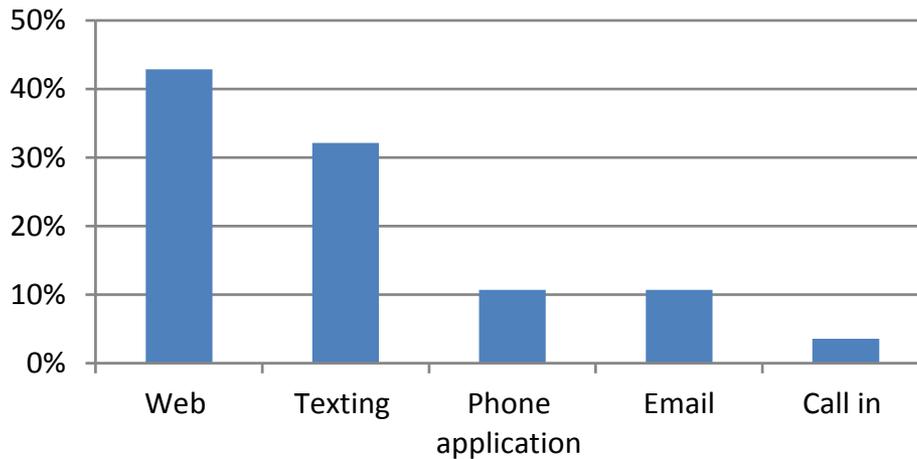


## Willingness to contribute to Micro-landmarks



*≈ 60% of survey takers would contribute to the feature*

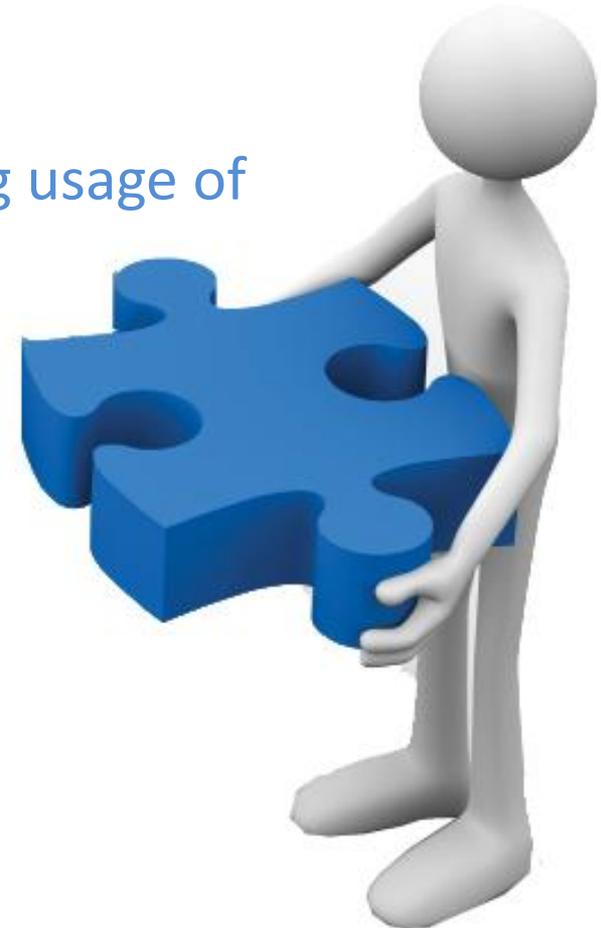
## Methods of contribution



*Web application or texting are the most popular contribution methods*

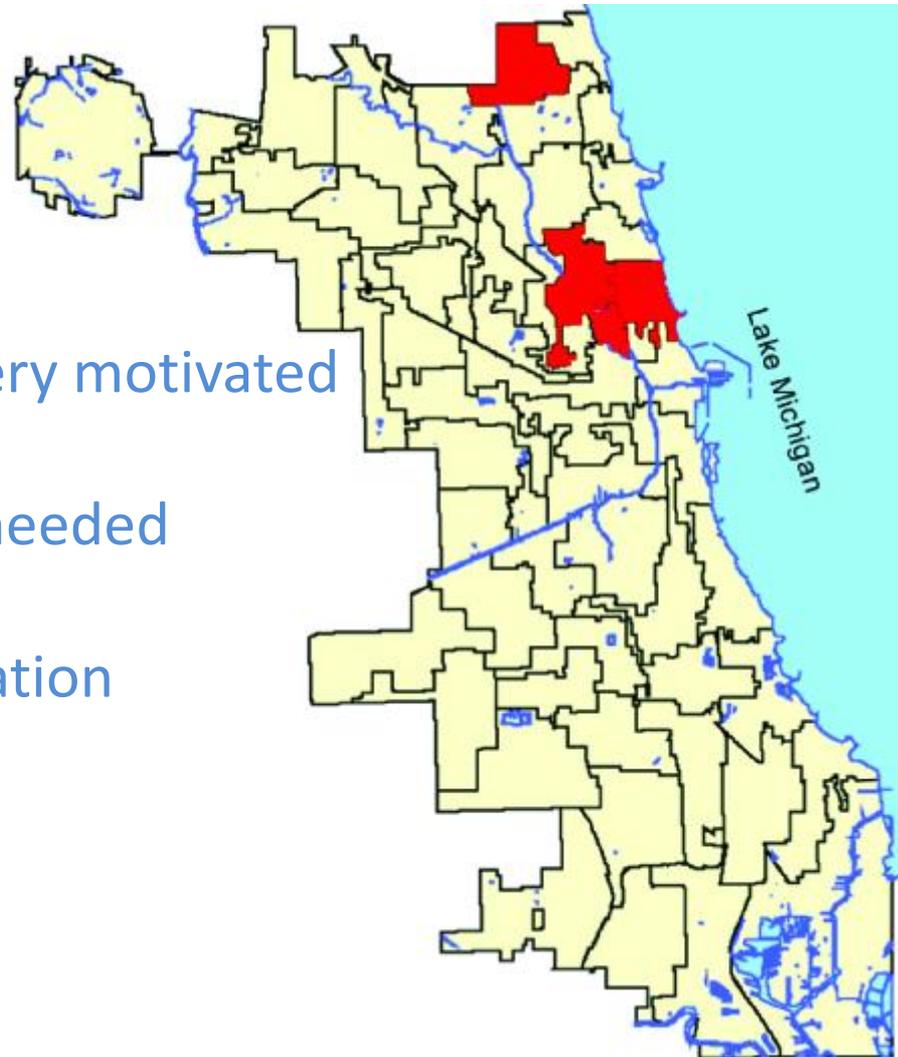
## Challenges

- Finding Micro-landmark data providers
- Authenticating the data provided
- Determining ethical issues regarding usage of  
Micro-landmarks



## Alderman Visits

- Community leaders very motivated
- Little to no incentive needed
- Different local information



## Assumptions

- Mobile Phone Application
- Phone has GPS and a compass
- Phone has data capabilities enabled
- Phone has a Geo-Tag enabled camera



## Designed Solution

- Two separate interfaces
  - Provider
  - User
- Designed for different users
- User's interface limited



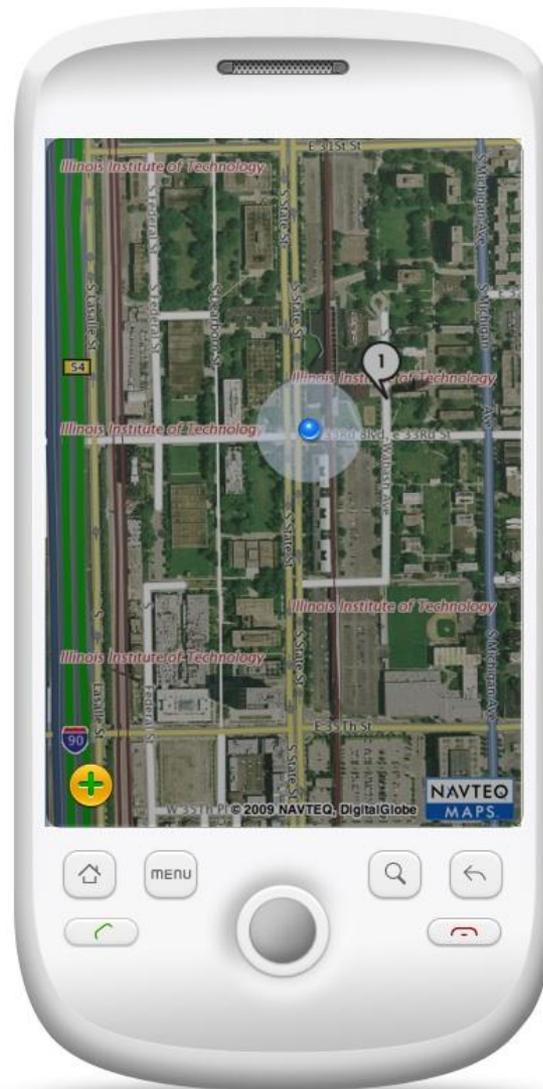
## End-User Feedback

- One-Click
- Collective Voting
- Innovative Map Reporter



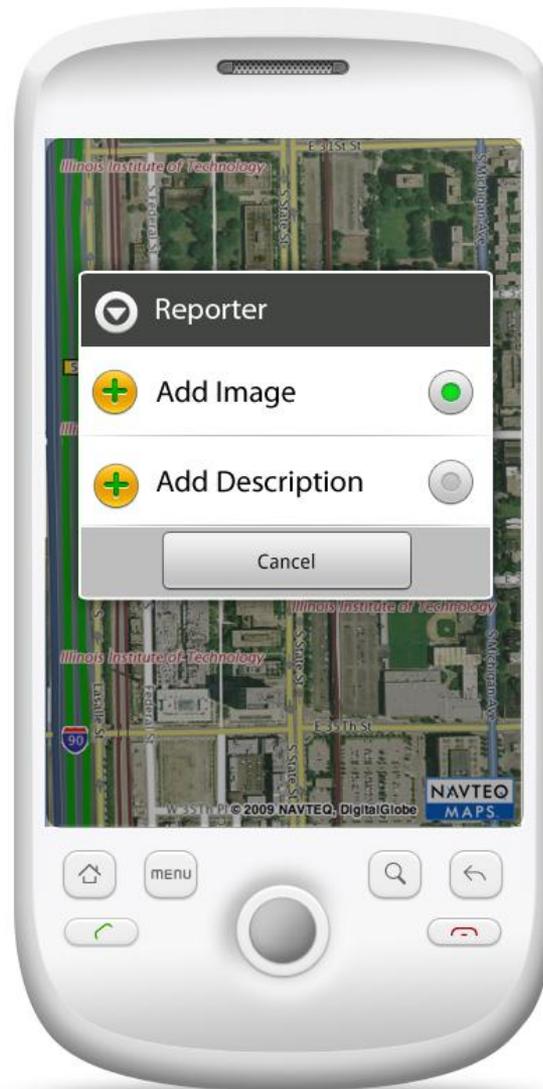
## Micro-landmark Provider Interface

*Simple one  
touch solution*



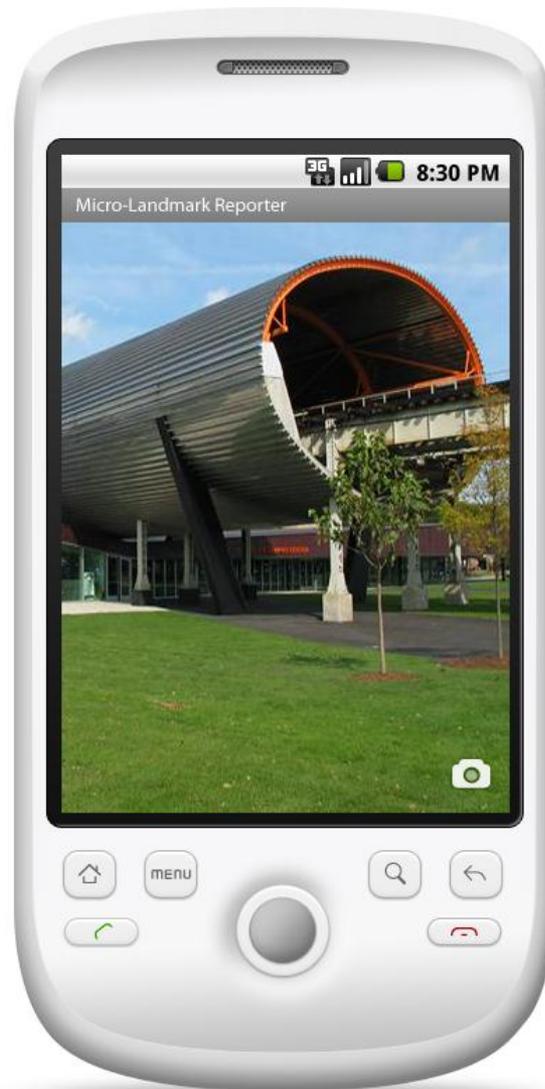
## Micro-landmark Provider Interface

*Effortlessly add  
Micro-landmarks*



## Micro-landmark Provider Interface

*Simply snap a  
picture*



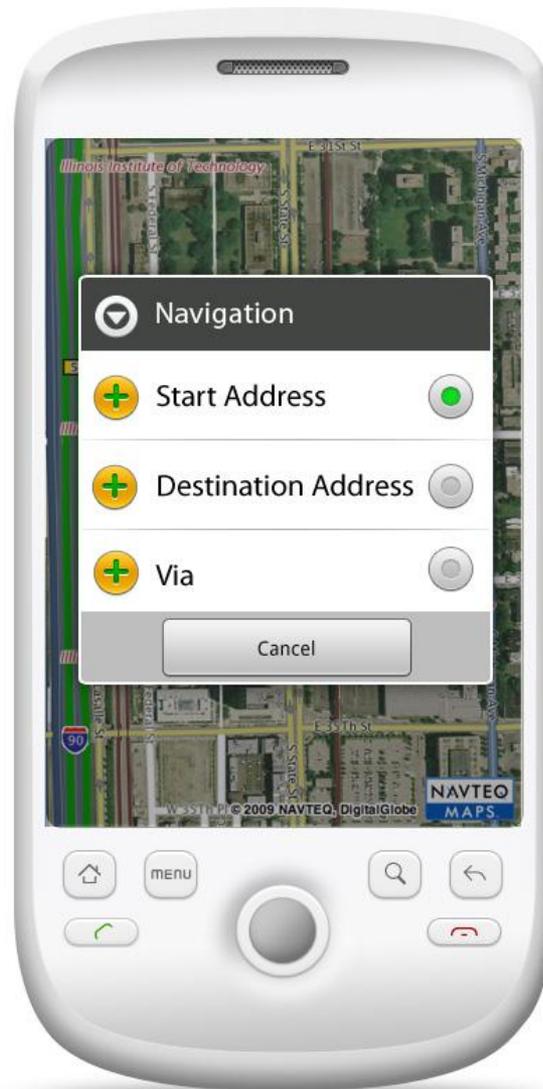
## Micro-landmark Provider Interface

*Add a short  
description*



## Micro-landmark User Interface

*Easy to use  
navigation*





## Micro-landmark User Interface

*Micro-landmarks  
along route get  
highlighted*

### Legend



User

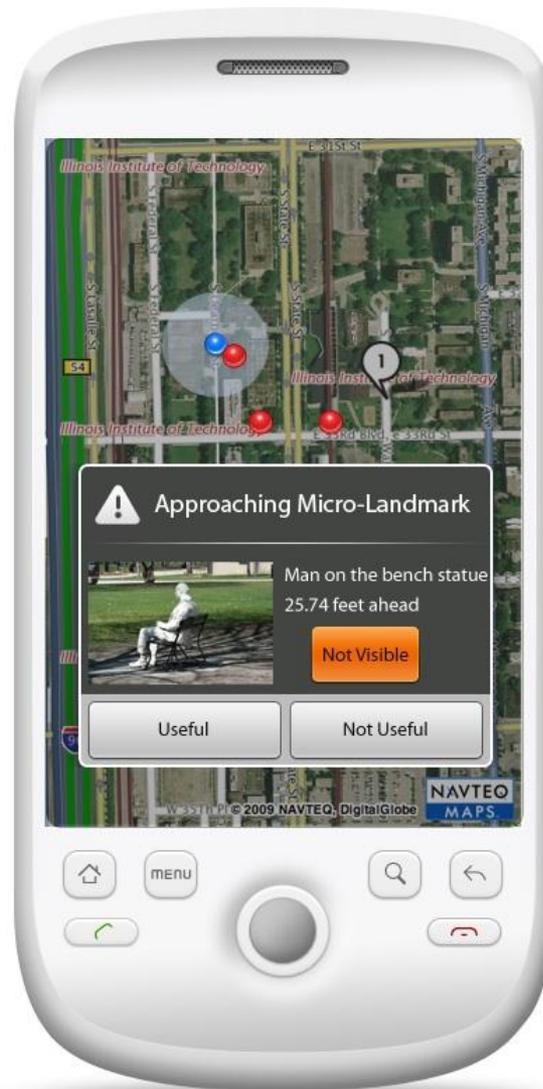


Micro-landmark



Destination

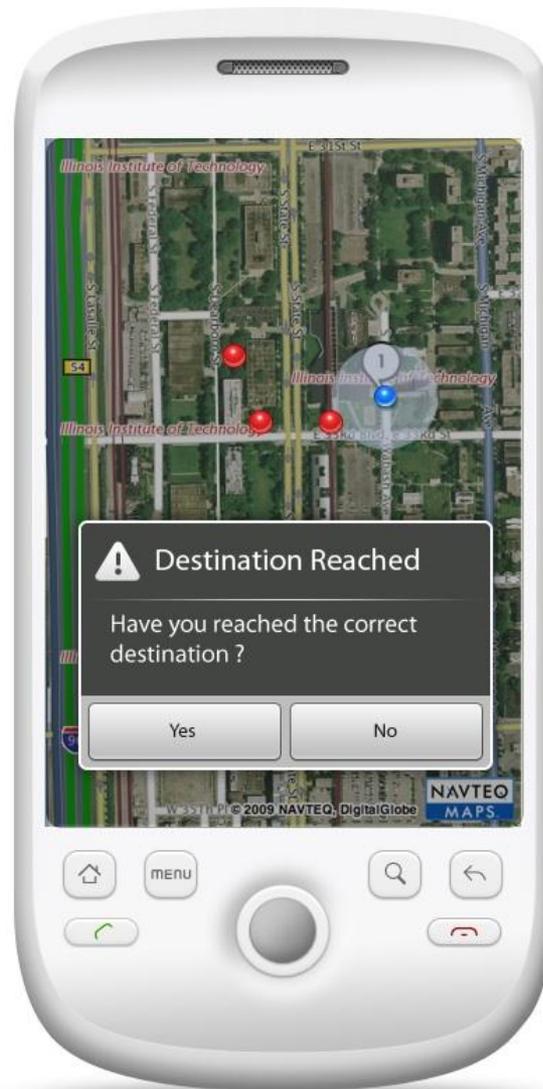
## Micro-landmark User Interface



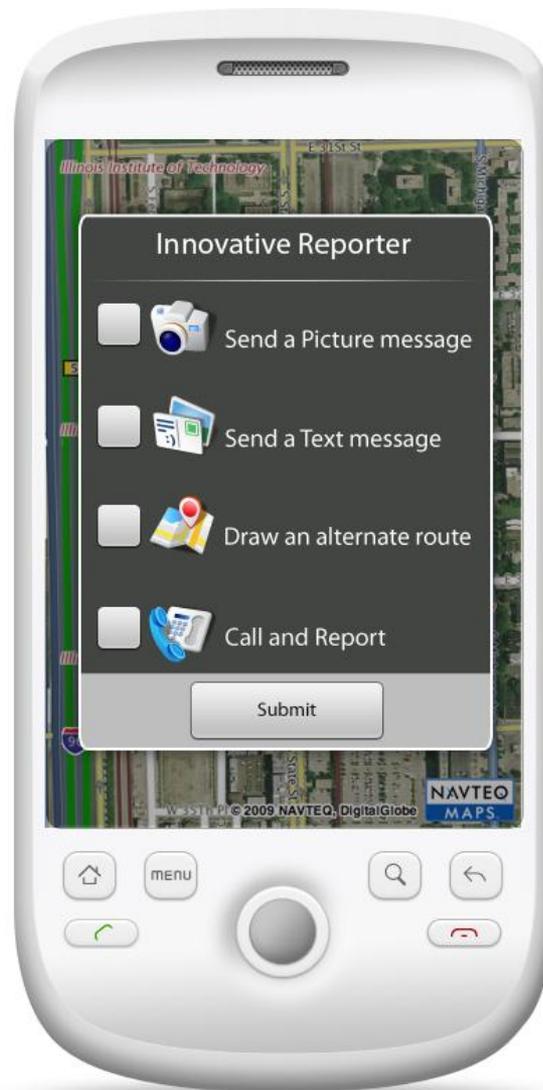
*Simple,  
intuitive  
navigation  
prompts*

## Micro-landmark User Interface

*Verifies if you  
reached your  
destination*



## Micro-landmark User Interface



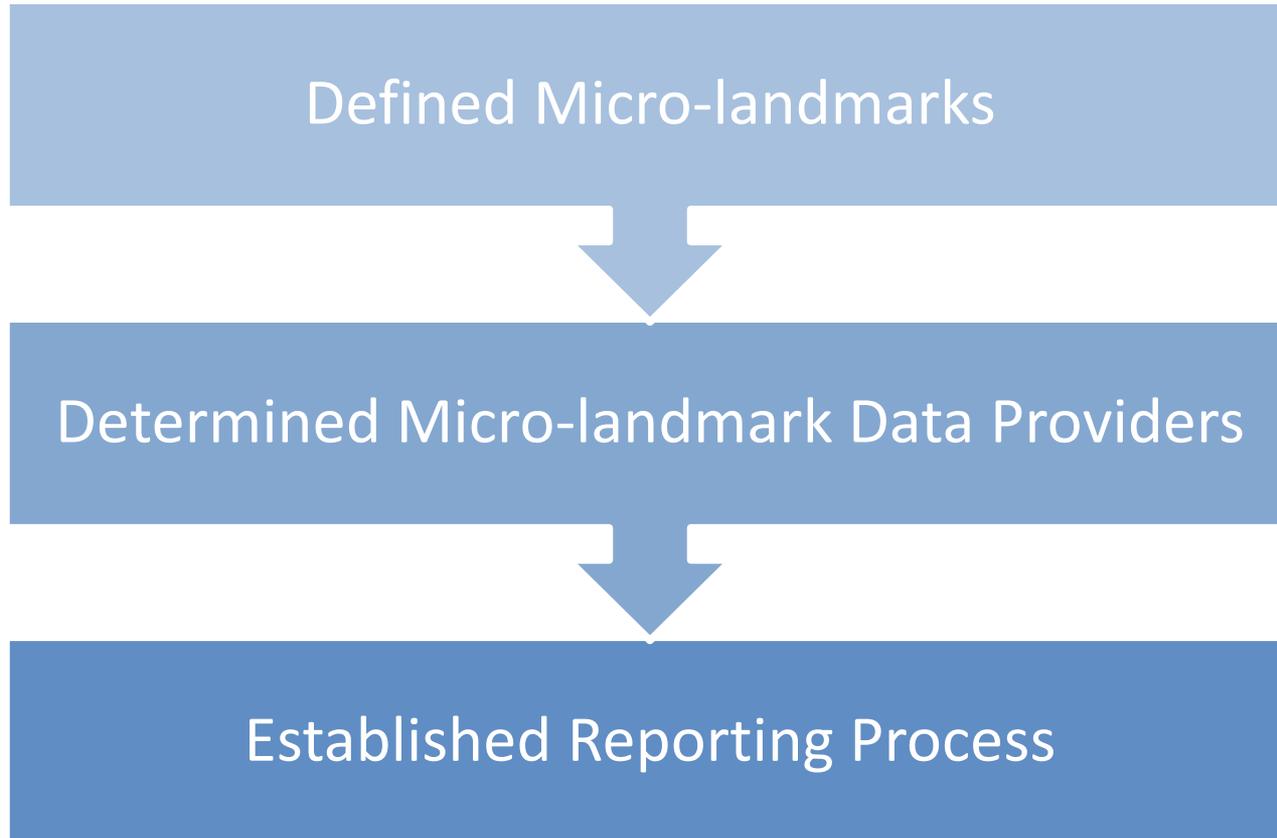
*Report errors  
using simple  
one-touch  
solution*

## Solution Advantages

- User authenticated
- Automatic reporting option
- Expandable with newer technology
- Pedestrian oriented mapping
- Visual feedback system



## Accomplishments



## Future Work

Determine the optimal methods to encourage data reporters to provide high-quality map content



# Acknowledgements



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