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University of Idaho  
College of Engineering

Park My Ride!

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# What's the Problem?

## Parking in Coeur d'Alene

- Fast growing metropolitan area
- Limited parking near hot spots

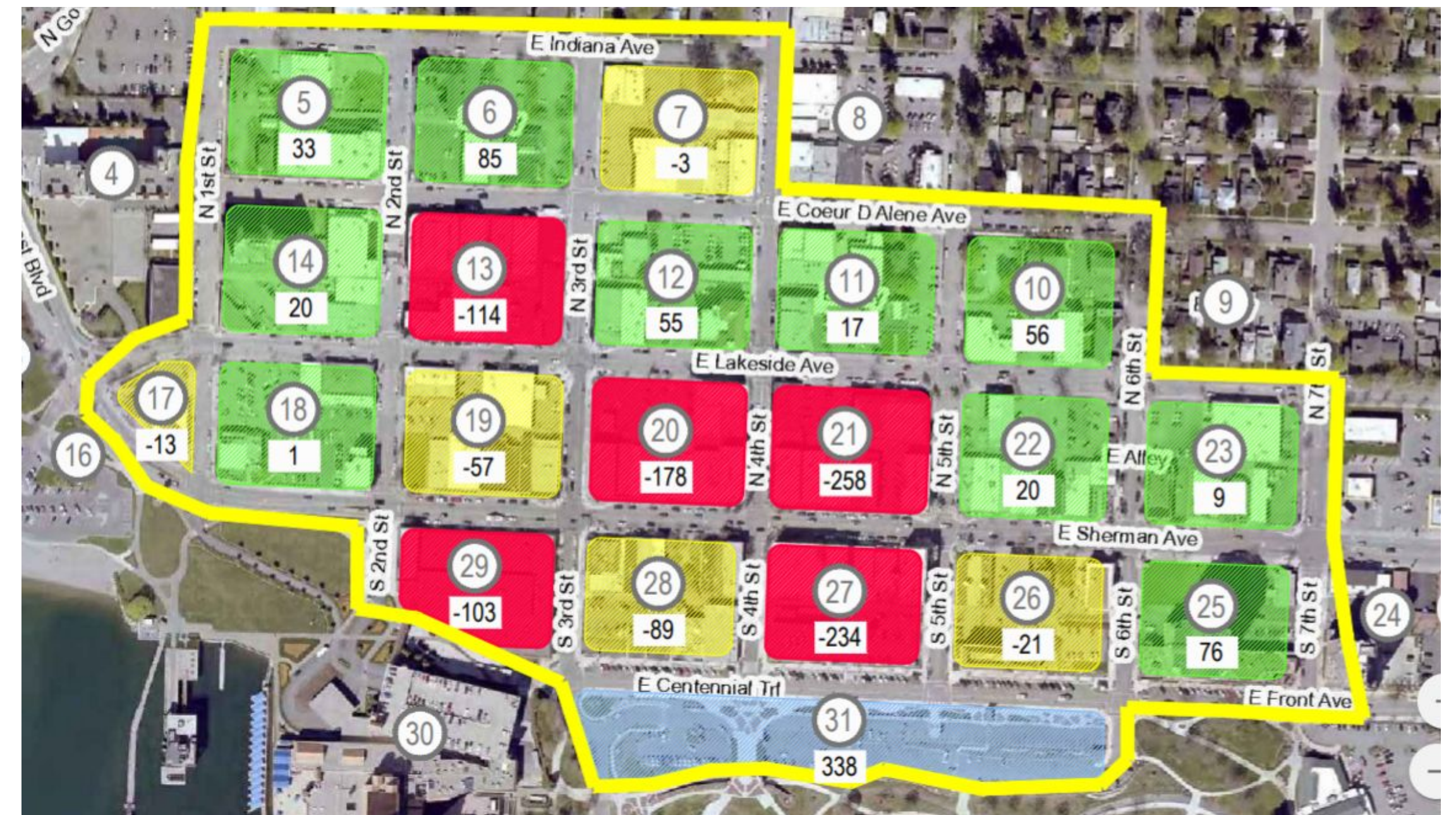


Image from 2016 Coeur d'Alene parking study

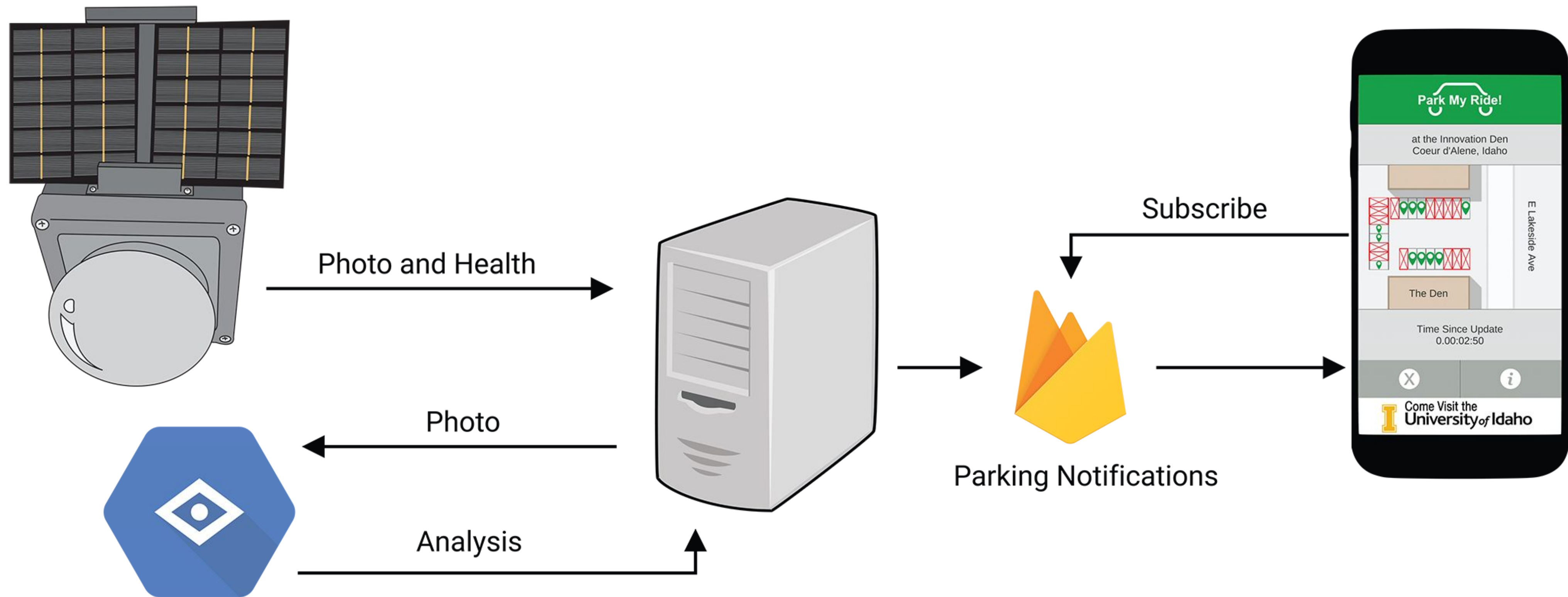
# Our Solution

## Park My Ride

- Cameras
- Photo Analysis
- Push Notifications

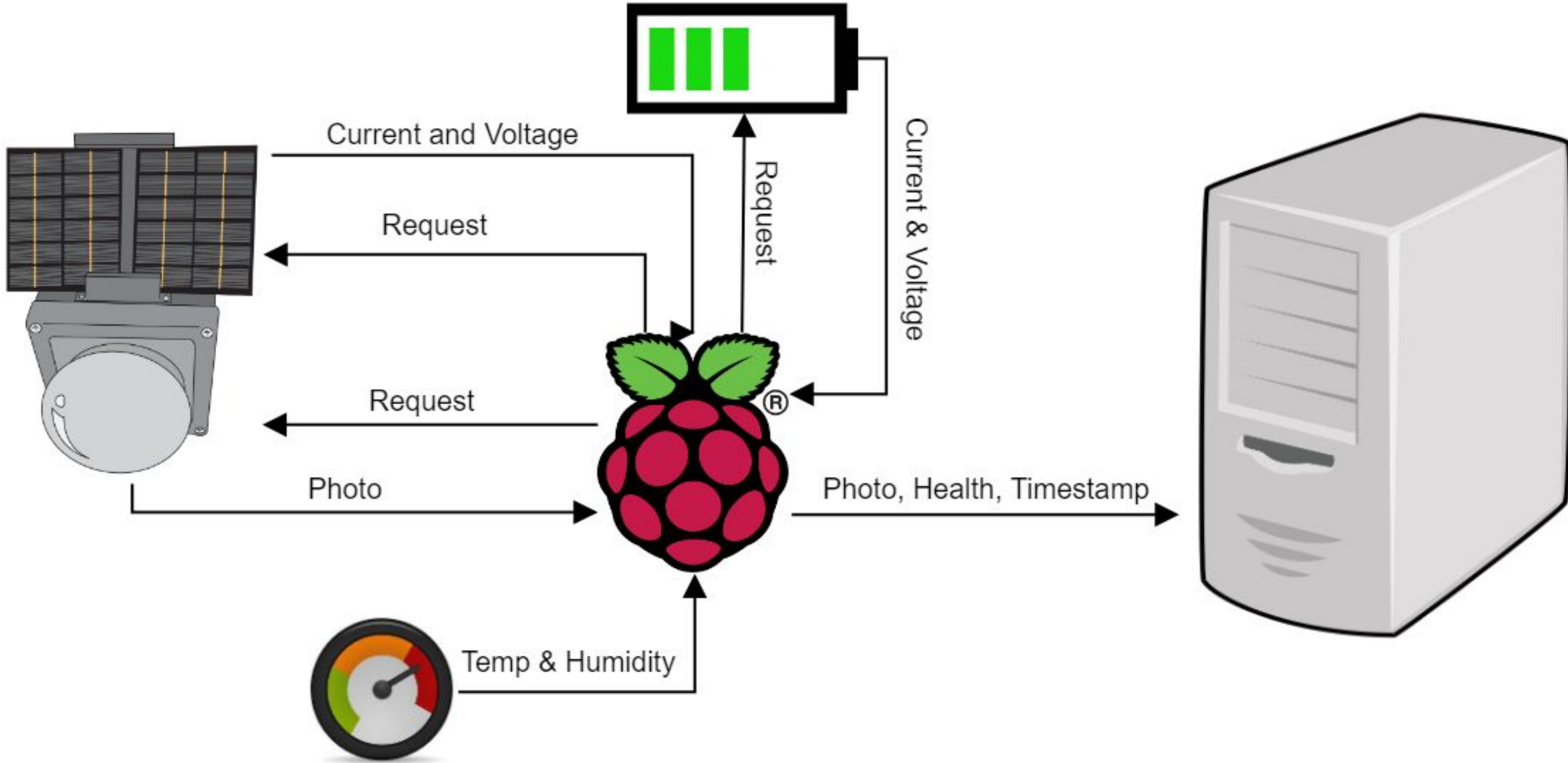


# Design Overview



- Parallel Development
- Expandability
- Monetization

# Camera Units



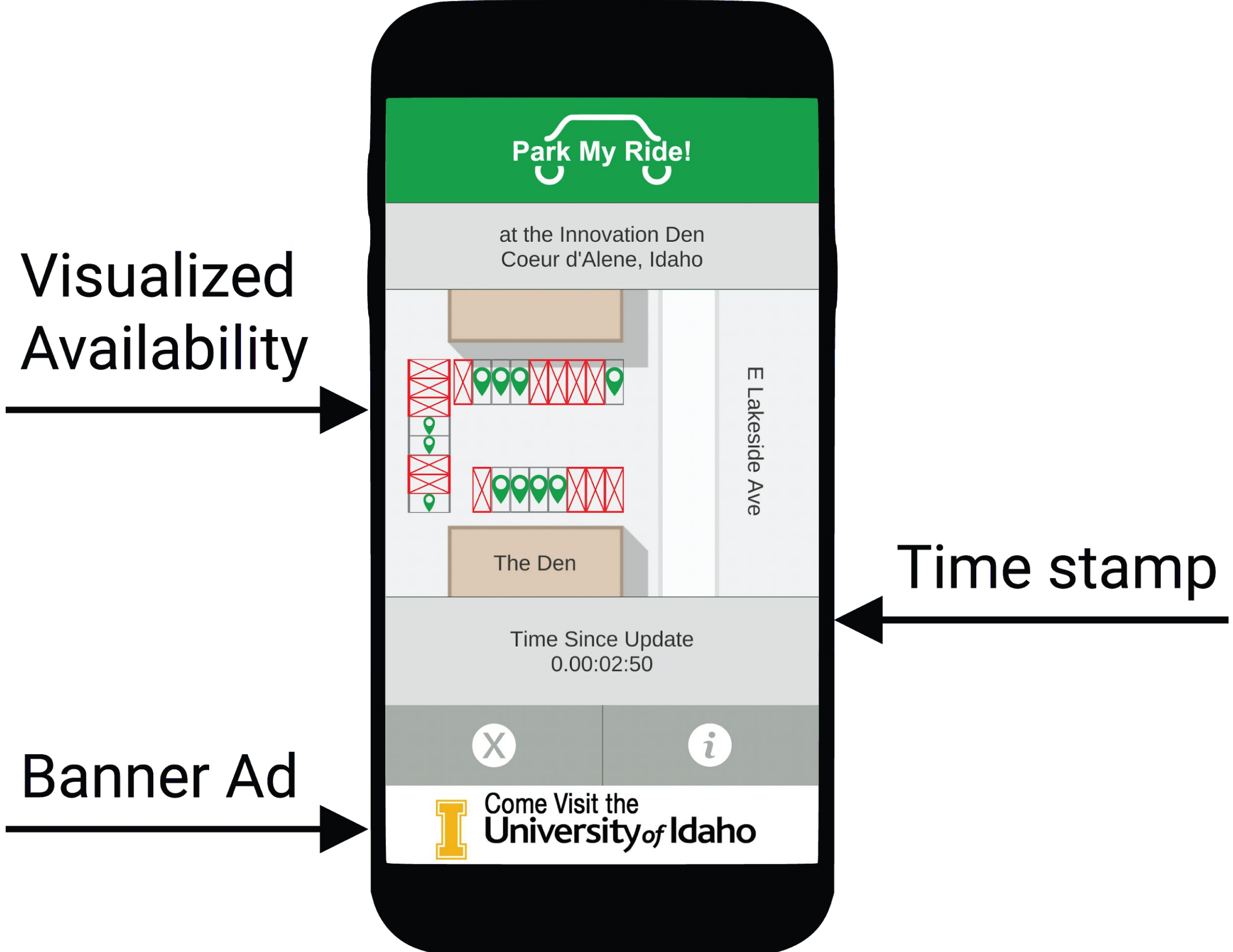
# Parking Analysis Algorithm

- Partition photo into spaces
- Analyze each photo
- Is a car in this space?





# Mobile App



Visualized Availability



Banner Ad



Time stamp



# Cost

## Prototype and Production Cost Projections

- Prototype Cost: \$550/camera unit
- Production Cost: \$20/camera unit
- Google Vision Cost: \$300/month
- Production Vision Cost: ~\$5/month
- Firebase Notification Cost: grows with user base





# Future

## Expandability and monetization

- Reduce cost of camera boxes
- In-house computer photo analysis
- Parking zone agnostic implementation
- In-App ads
- Parking analytics for businesses
- City Parking Regulation and Planning
- Optional Surveillance of Public Spaces



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Thank you!