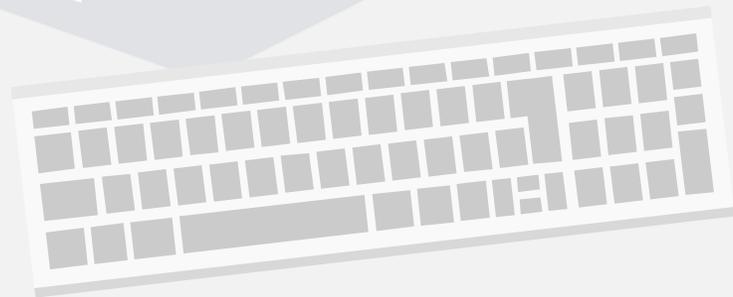# A Platform Design and Implementation for Real-time Visitor Flow Visualization

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CONTENTS

Motivation & Goals

/01

MOTIVATION

THREE MOTIVATION

01.Visitor flow visualization

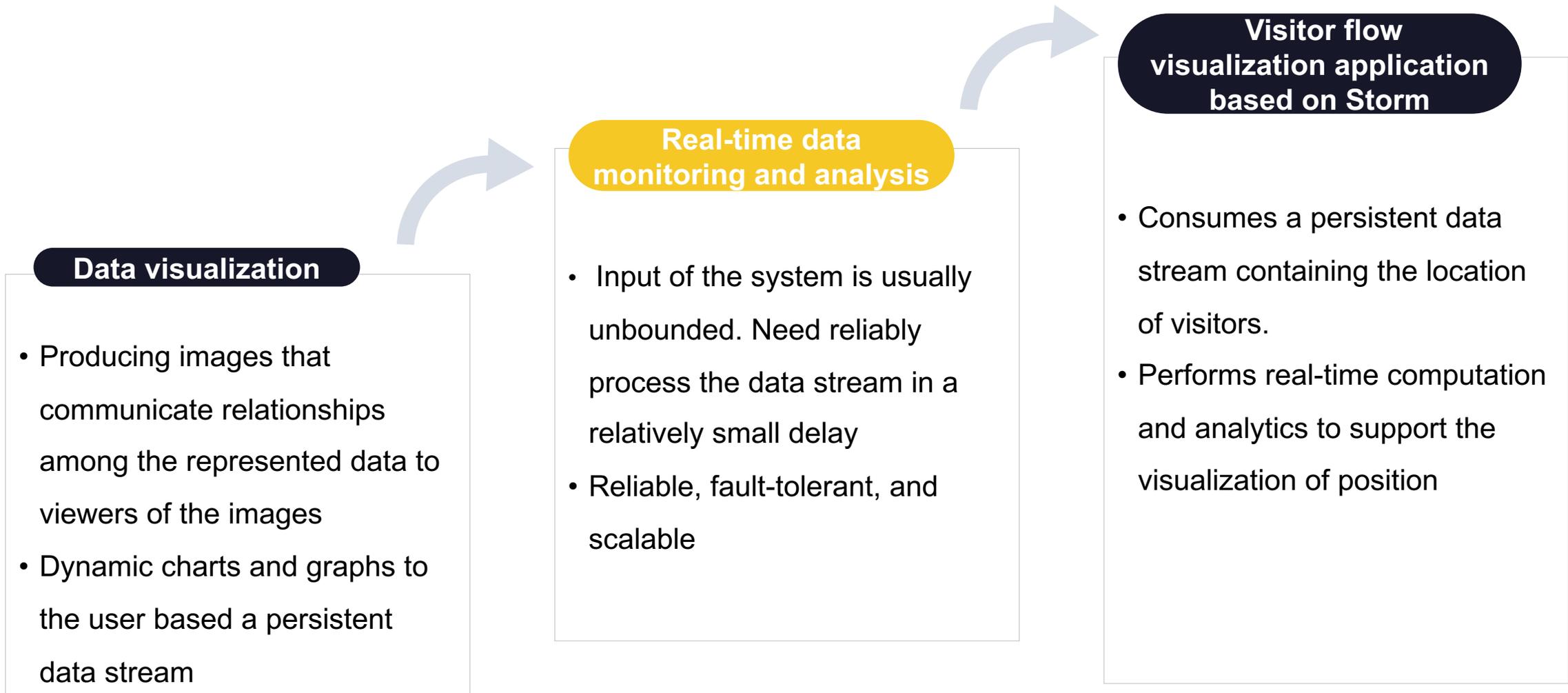intuitionistic view of the position and moving trend of crowds of people in real-time on the map

02.Useful Tool

Check amount of people in specific areas. Get prior knowledge of popularity of the area.

03.COVID-19

keeping a social distance with a dense crowd according to a real-time reference

4

GOALS

Data visualization

- Producing images that communicate relationships among the represented data to viewers of the images
- Dynamic charts and graphs to the user based a persistent data stream

Real-time data monitoring and analysis

- Input of the system is usually unbounded. Need reliably process the data stream in a relatively small delay
- Reliable, fault-tolerant, and scalable

Visitor flow visualization application based on Storm

- Consumes a persistent data stream containing the location of visitors.
- Performs real-time computation and analytics to support the visualization of position

Related Works

/02

Related Works

Heat Map

Web Map

special highlight to show visitors' intented placses.

The illustration of the page area and the geographical area where the visitor is located.
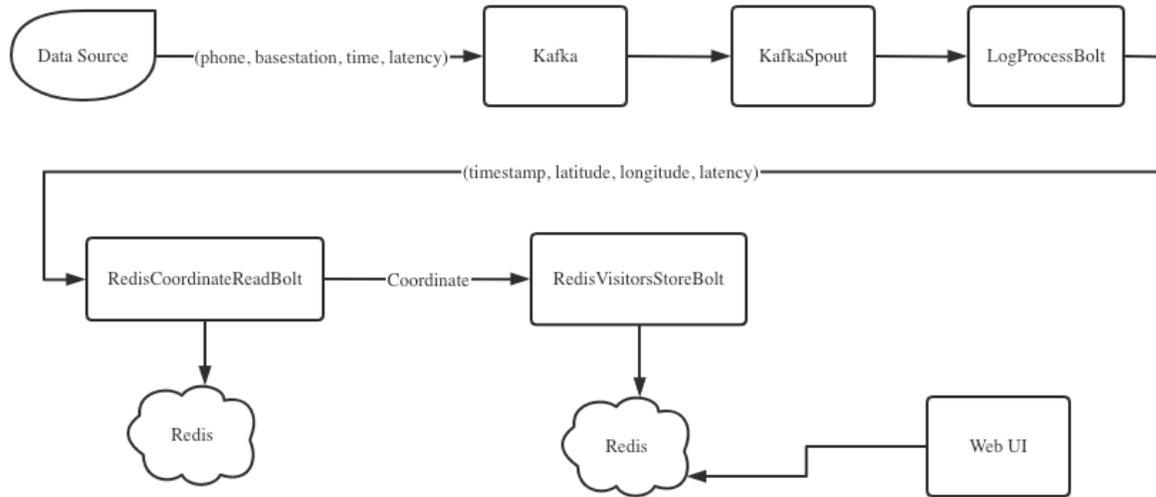
OpenLayers.

High-performance, powerful library that meets all your cartographic needs, you can easily place dynamic maps on any web page.
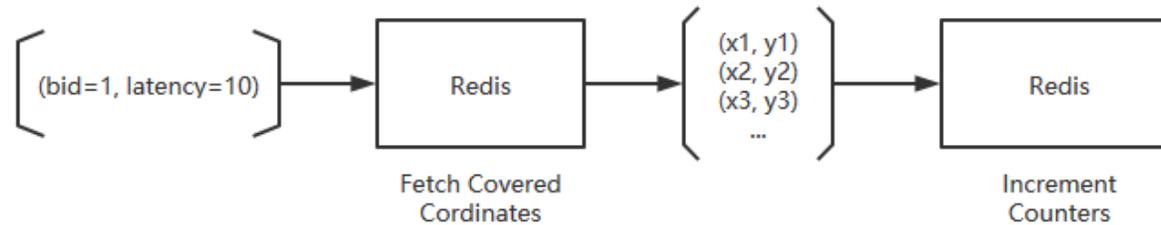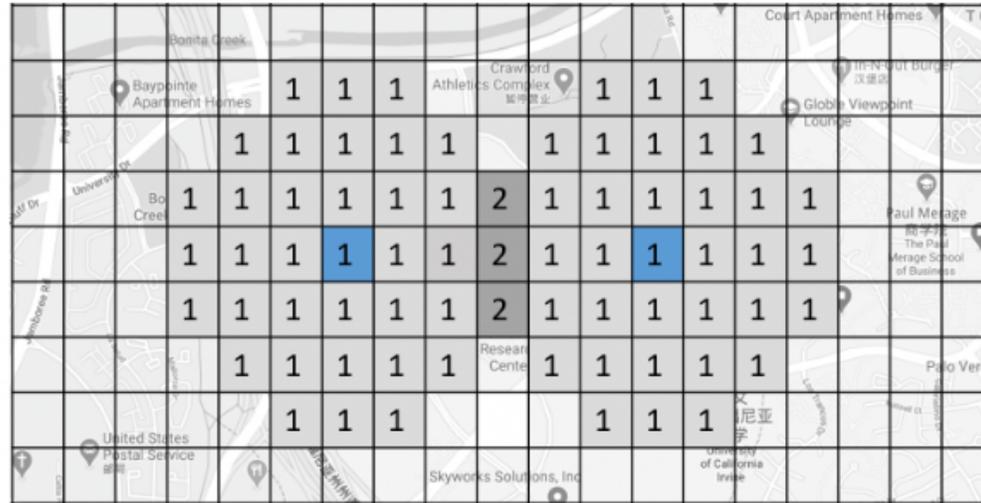
System Design

/03

System Design

Node Number	Zookeeper	Nimbus	Supervisor
0	☑	☑	☑
1	☑		☑
2	☑		☑

Coordinate Design

Test & Evaluation

/04

Click to edit Master title style
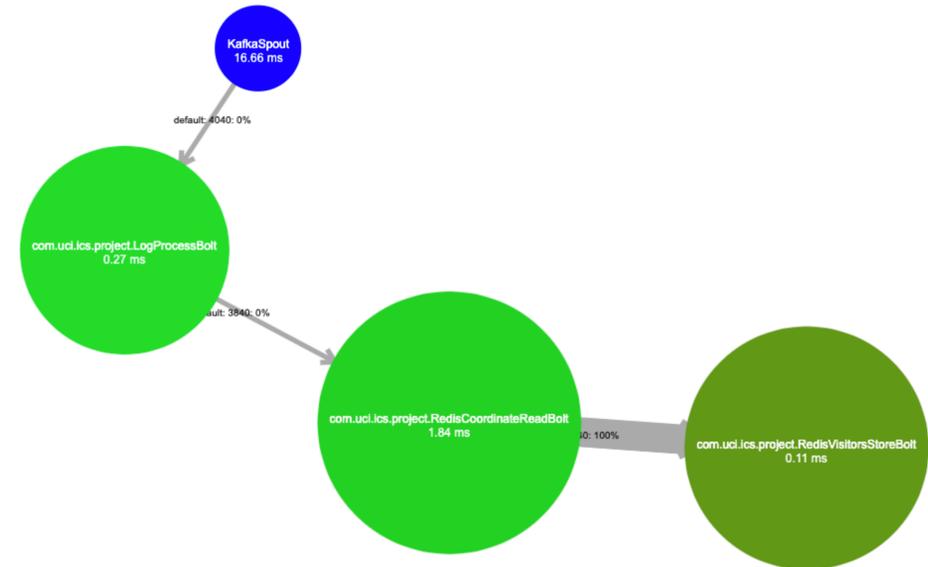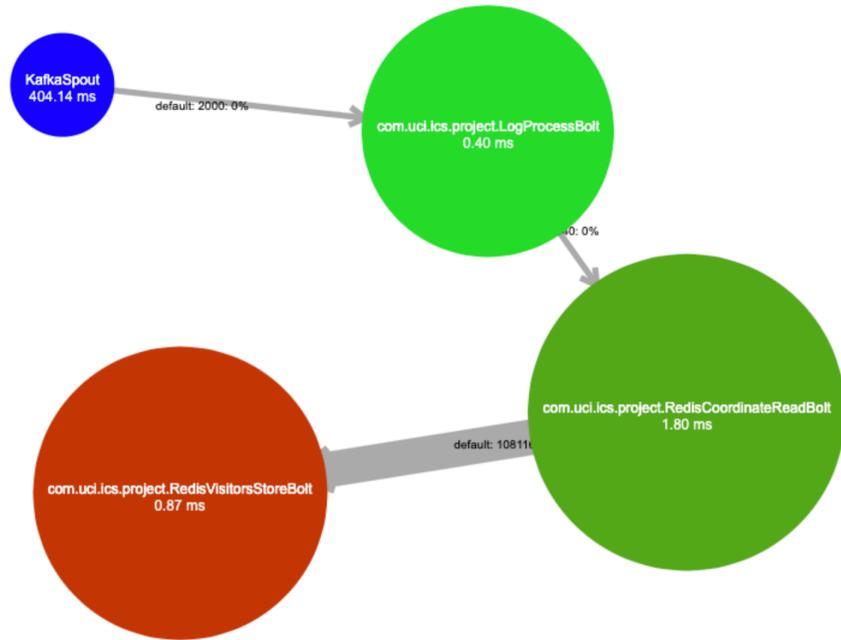
Scalability

Fault Tolerance

Optimization

Optimization

Fixed: 3 EC2 instances (t2.medium) on AWS   6 workers in topology
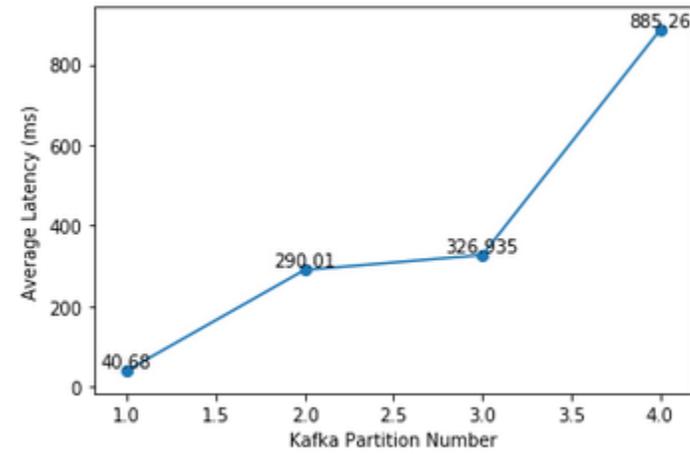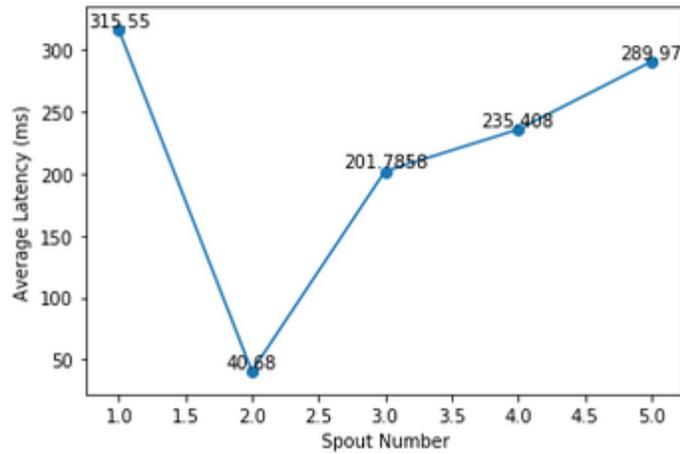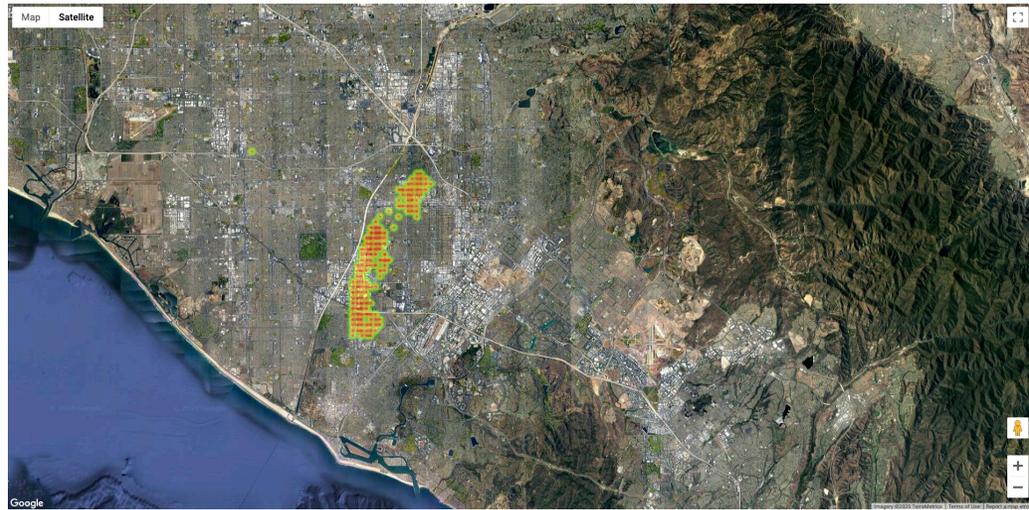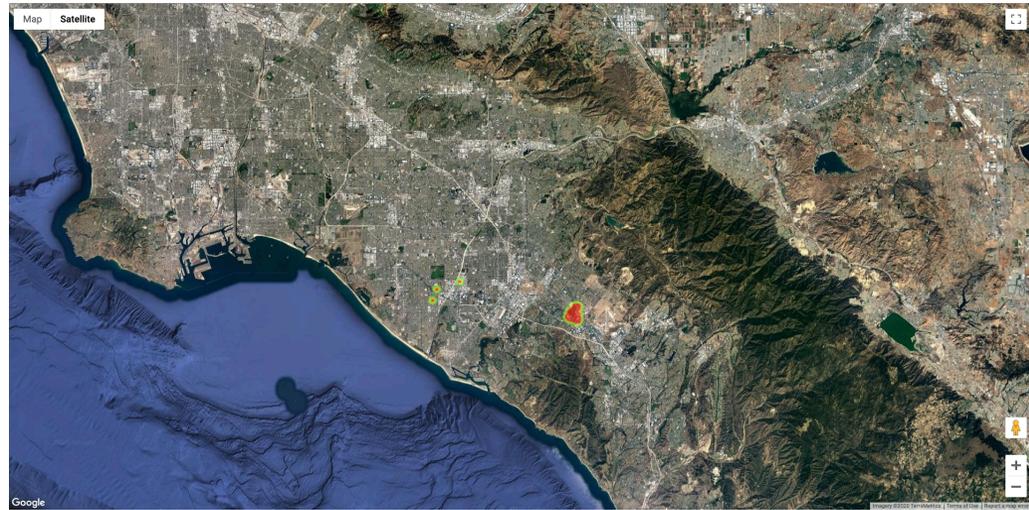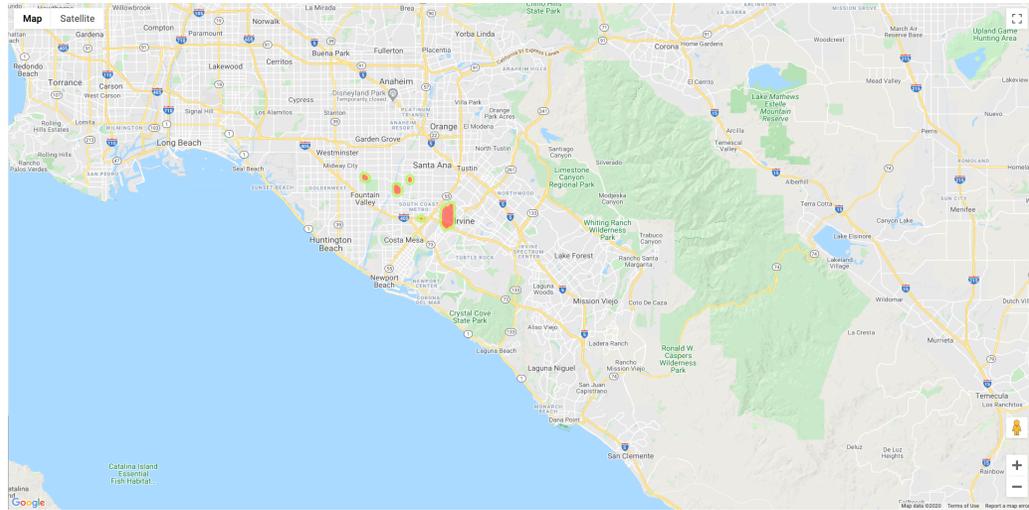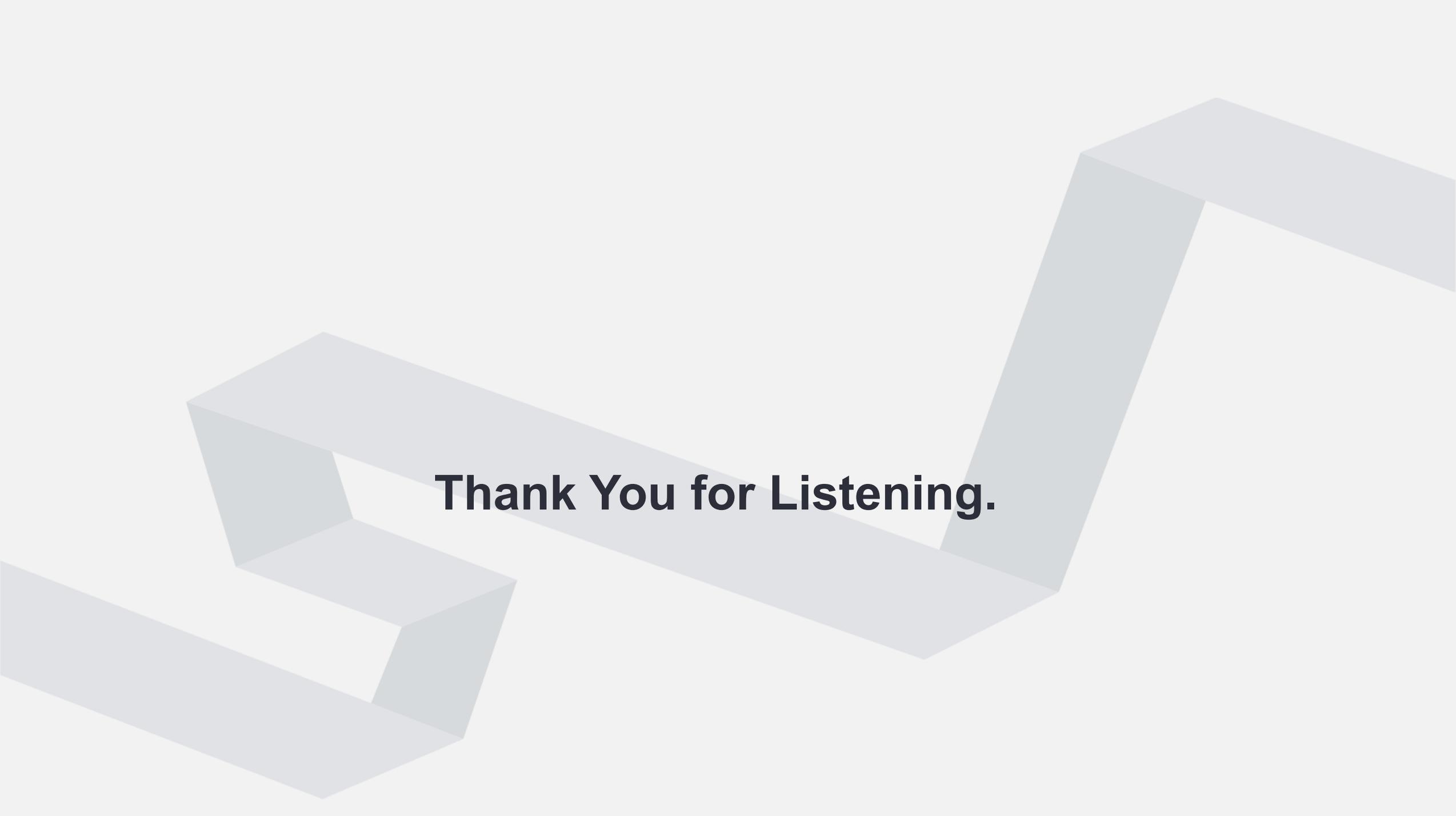
Optimization

Results

Thank You for Listening.