

A panoramic view of the Seattle skyline at dusk. The Space Needle is prominent on the left. The city is filled with various skyscrapers and residential buildings. In the background, Mount Rainier is visible under a clear sky. A Ferris wheel and other city structures are visible in the lower right.

# King County

Housing Price Analysis

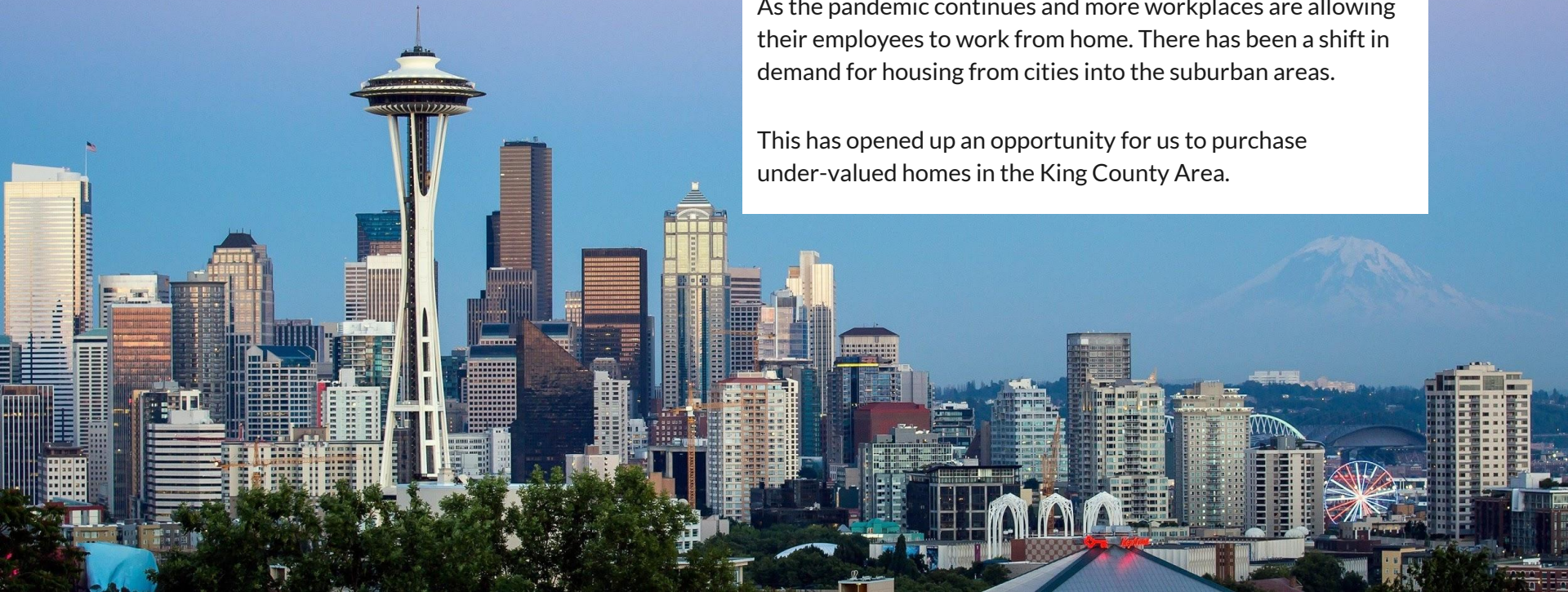




## Business Case:

As the pandemic continues and more workplaces are allowing their employees to work from home. There has been a shift in demand for housing from cities into the suburban areas.

This has opened up an opportunity for us to purchase under-valued homes in the King County Area.

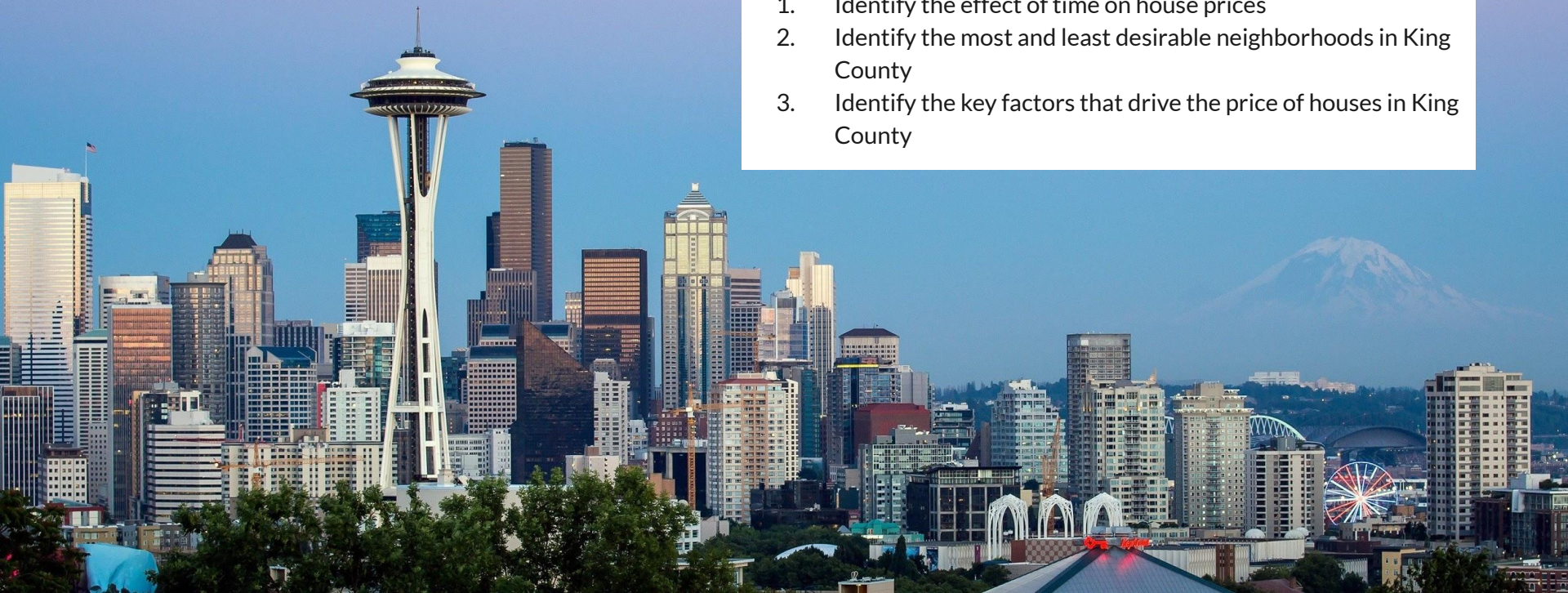






# Problems to solve

1. Identify the effect of time on house prices
2. Identify the most and least desirable neighborhoods in King County
3. Identify the key factors that drive the price of houses in King County







# Assumptions/Limitations

The proposed model only considers houses with the below features.

- House Price - less than \$1 million
- Bedrooms - 1 - 6
- Condition - 2 - 5
- Grade - 5 - 11
- Total Living Area - less than 4,000 sq ft
- Total Lot Area - less than 18,000 sq ft



# Model Prediction (Key Factors)

## Increase in Price

- Living Area + 80k (per 1000 sq ft)
- Lot Area + 10k (per 1000 sq ft)
- Condition + 25k
- Grade + 50k
- View + 35k
- Houses built before 1945 + upto 24k
- Houses built after 1996 + upto 26k
- House sold at 2015 + 19k
- Houses located in Downtown

## Decrease in Price

- Bedroom (- 16k each)
- Basement (- 21k)
- Houses built between 1946 - 1995 (- 9k - 20k)
- Houses located in 98092 and 98023 - (- 12k - 20k)



- Built before 1945 **+24k**
- Built between 1945 - 1995 **-20k**
- Built after 1995 **+19k**

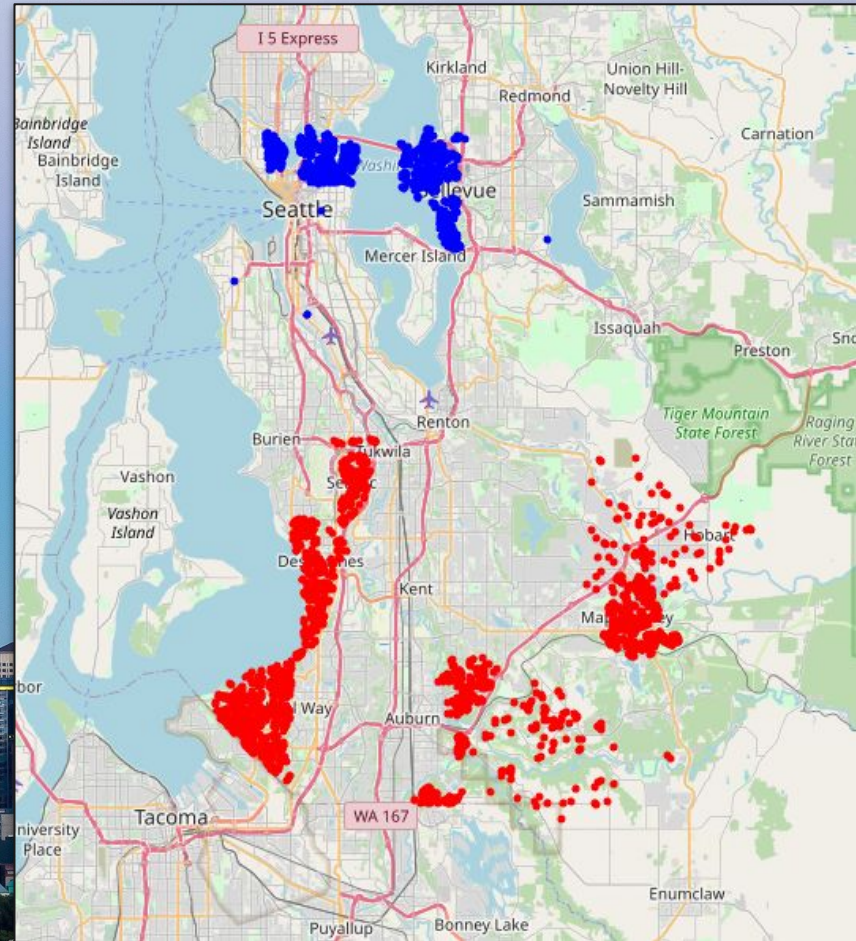


# Effect of location on House prices

- Blue marks the 5 most expensive neighborhoods in King County.
- Red marks the 5 least desirable neighborhoods in King County.

+500k

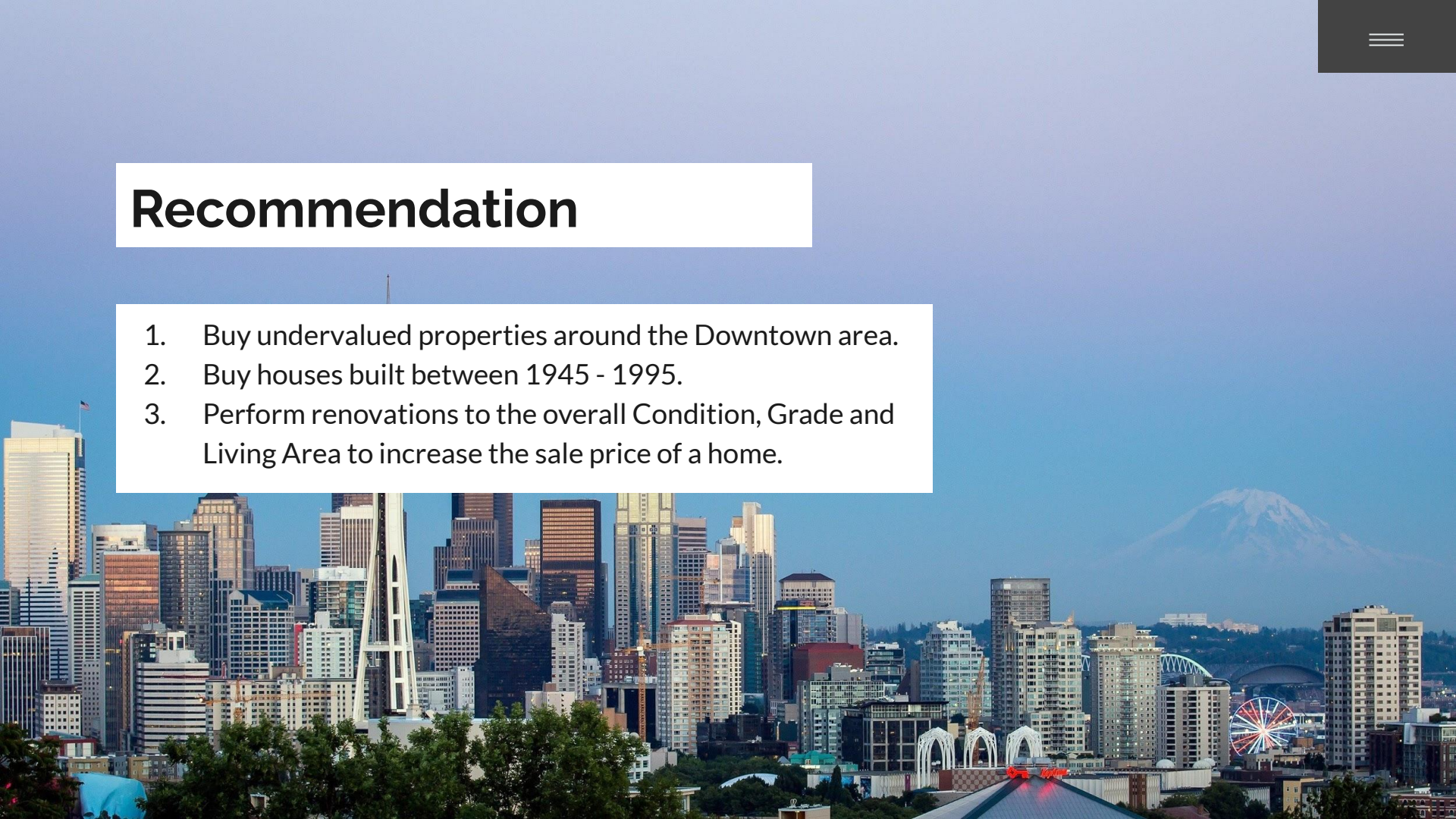
-20k





# Recommendation

1. Buy undervalued properties around the Downtown area.
2. Buy houses built between 1945 - 1995.
3. Perform renovations to the overall Condition, Grade and Living Area to increase the sale price of a home.





# Modelling Sample:

## Actual House

House Id: 2720000120

Sqft\_Lot: 7,575  
Sqft\_Living: 1,380  
Grade: 7.0  
Condition: 5.0  
Bedrooms: 3.0  
Bathrooms: 1.0  
Zip code: 98056

Actual Price: \$ 295,000

Predicted Price: \$ 334,813



## Renovated House

Id: 2720000120

Sqft\_Lot: 7,575  
Sqft\_Living: 2,000  
Grade: 8.0  
Condition: 6.0  
Bedrooms: 4.0  
Bathrooms: 2.0  
Zip code: 98056

Projected Price: \$471,421



Estimated Gross  
Profit = \$136,608



# Thank you.

