



Data Analytics

Lecture Series: Part 1

Research

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Overview

In this section, we will:



Overview

In this section, we will:

- Review research practices



Overview

In this section, we will:

- Review research practices
- Develop a research project



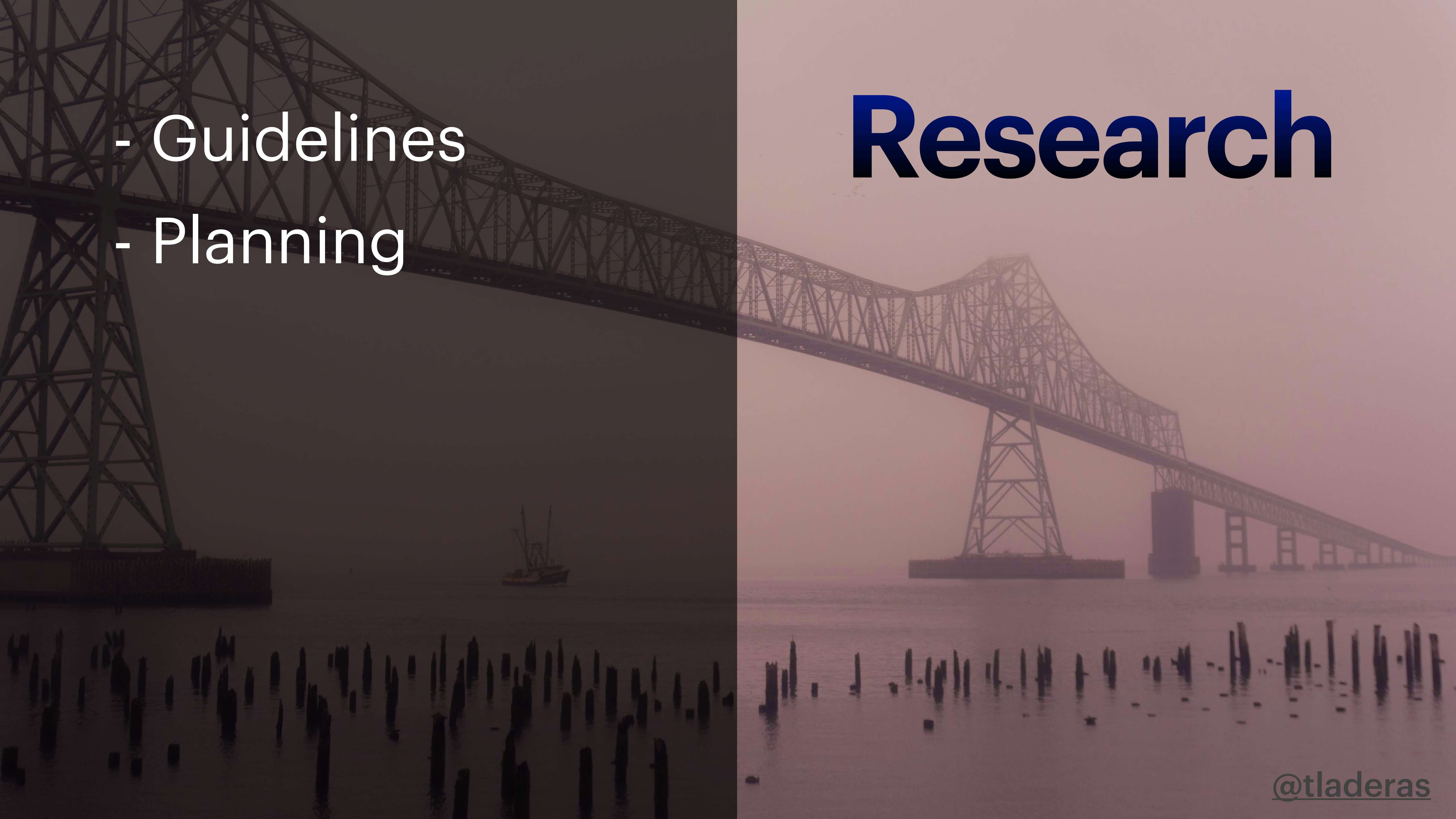


Research



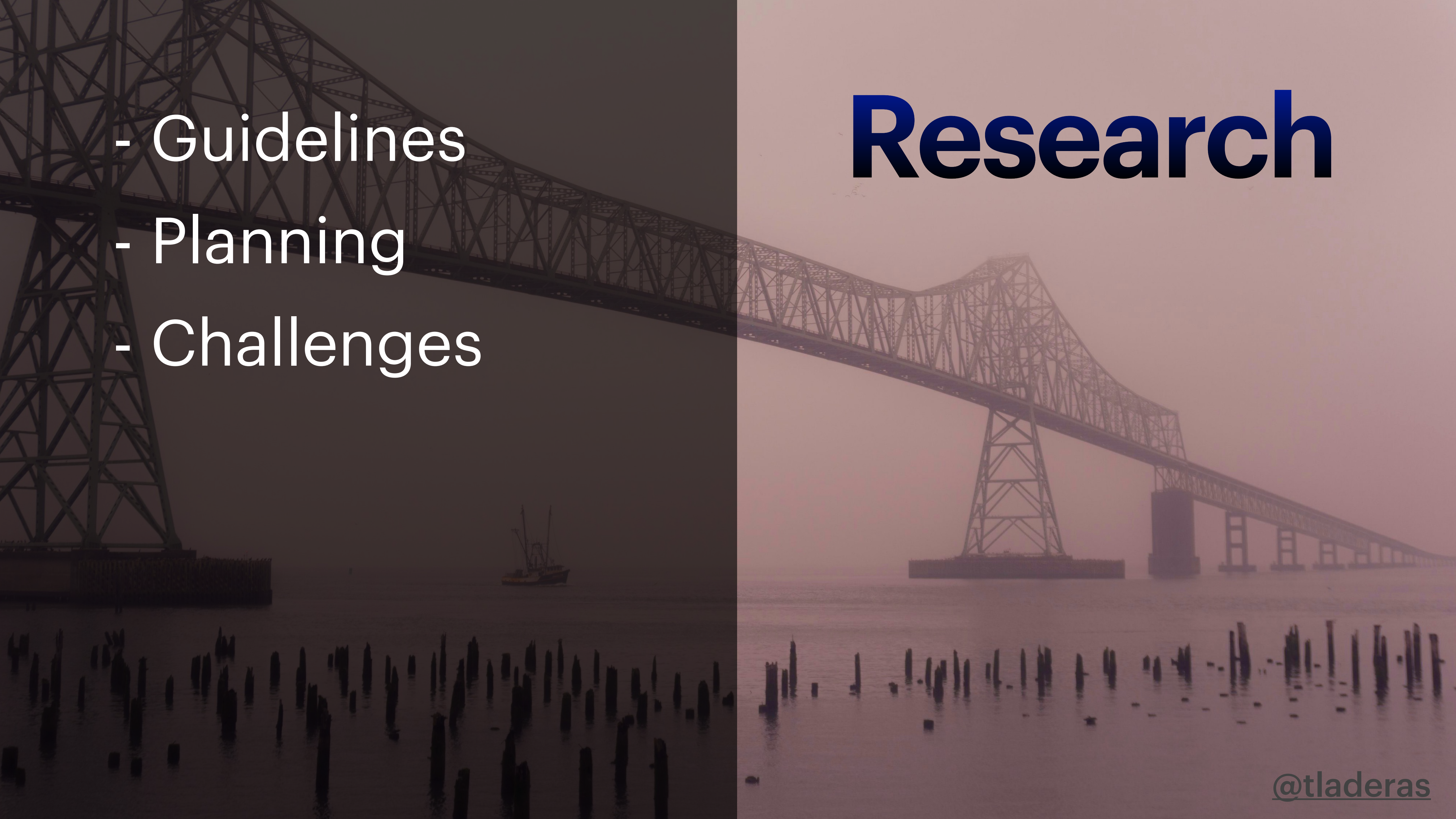
- Guidelines

Research




- Guidelines
- Planning

Research

- 
- Guidelines
 - Planning
 - Challenges

Research

- 
- Guidelines
 - Planning
 - Challenges
 - Indicators

Research

Guidelines

Guidelines

Three main guidelines :

Guidelines

Three main guidelines :

- Describe something

Guidelines

Three main guidelines :

- Describe something
- Understand an association

Guidelines

Three main guidelines :

- Describe something
- Understand an association
- Predict an effect

Planning

Planning

Scientific method :

Planning

Scientific method :

- Hypothesis with strong theoretical motivation

Planning

Scientific method :

- Hypothesis with strong theoretical motivation
- Collect and analyze data

Planning

Scientific method :

- Hypothesis with strong theoretical motivation
- Collect and analyze data
- Draw conclusion(s)

Challenges



Challenges

Potential setbacks :

Challenges

Potential setbacks :

- Method, design, and procedure

Challenges

Potential setbacks :

- Method, design, and procedure
- Social phenomena

Challenges

Potential setbacks :

- Method, design, and procedure
- Social phenomena
- Justification

Indicators



Indicators

SMART:

Indicators

SMART:

- S - Specific
- M - Measurable
- A - Attributable
- R - Realistic
- T - Targeted

Indicators

S M A R T :

- S - Specific
- M - Measurable
- A - Attributable
- R - Realistic
- T - Targeted

Indicators

Specific :

- Clearly, directly relates to the intended outcome

Indicators

Specific :

- Clearly, directly relates to the intended outcome
housing supply

Indicators

Specific :

- Clearly, directly relates to the intended outcome

housing supply

versus

active listings

Indicators

S M A R T :

- S - Specific
- M - Measurable
- A - Attributable
- R - Realistic
- T - Targeted

Indicators

Measurable :

- Progress can be observed, counted, or tested

Indicators

Measurable :

- Progress can be observed, counted, or tested
housing market + labor force

Indicators

Measurable :

- Progress can be observed, counted, or tested

housing market + labor force

versus

home price index + employment rate

Indicators

SMART:

- S - Specific
- M - Measurable
- A - Attributable
- R - Realistic
- T - Targeted

Indicators

Attributable :

- Achievable, accurate, and realistic

Indicators

Attributable :

- Achievable, accurate, and realistic
home price index + employment rate

Indicators

Attributable :

- Achievable, accurate, and realistic

home price index + employment rate

versus

home price index + employment rate

pre/during pandemic

Indicators

S M A R T :

- S - Specific
- M - Measurable
- A - Attributable
- R - Realistic
- T - Targeted

Indicators

Realistic :

- Relevant, valid measure

Indicators

Realistic :

- Relevant, valid measure

home price index + employment rate

pre/during pandemic

Indicators

Realistic :

- Relevant, valid measure

home price index + employment rate

pre/during pandemic

in large cities

Indicators

S M A R T :

- S - Specific
- M - Measurable
- A - Attributable
- R - Realistic
- T - Targeted

Indicators

Targeted :

- Designated, identifiable

Indicators

Targeted :

- Designated, identifiable

home price index + employment rate

pre/during pandemic

in large cities

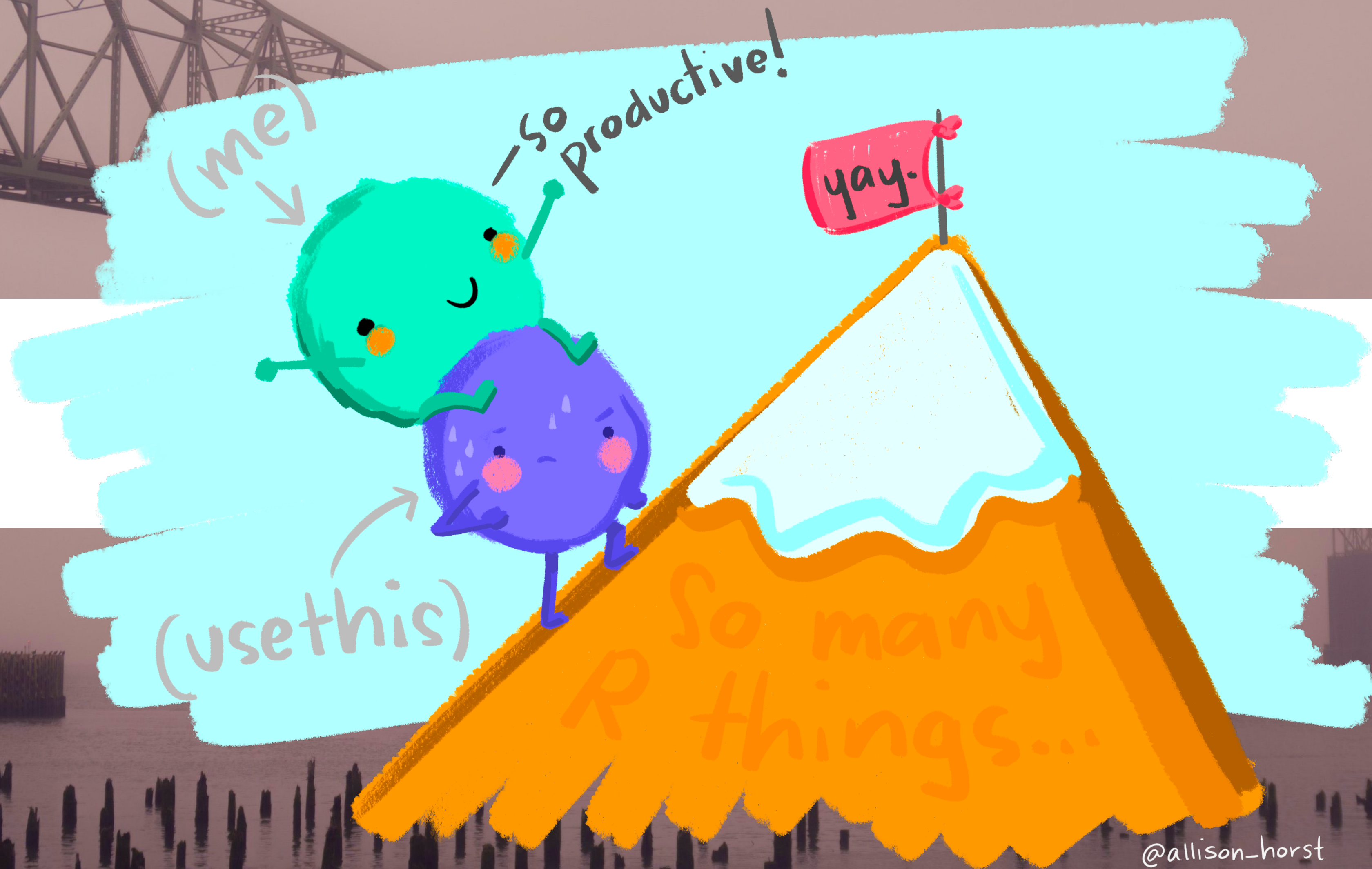
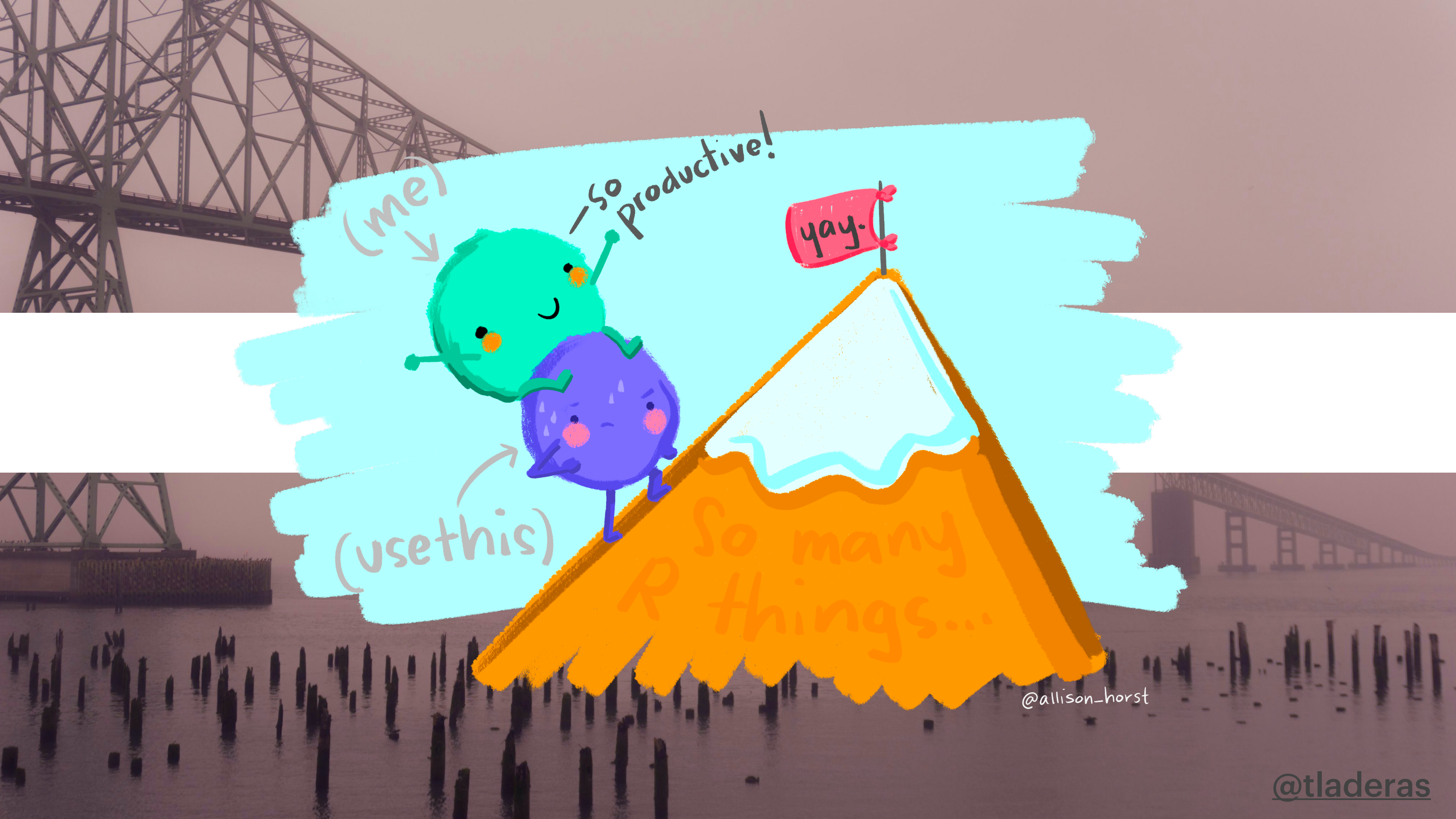
Indicators

Targeted :

- Designated, identifiable

home price index + employment rate
pre/during pandemic
in Boston-Cambridge-Newton (MA-NH)





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