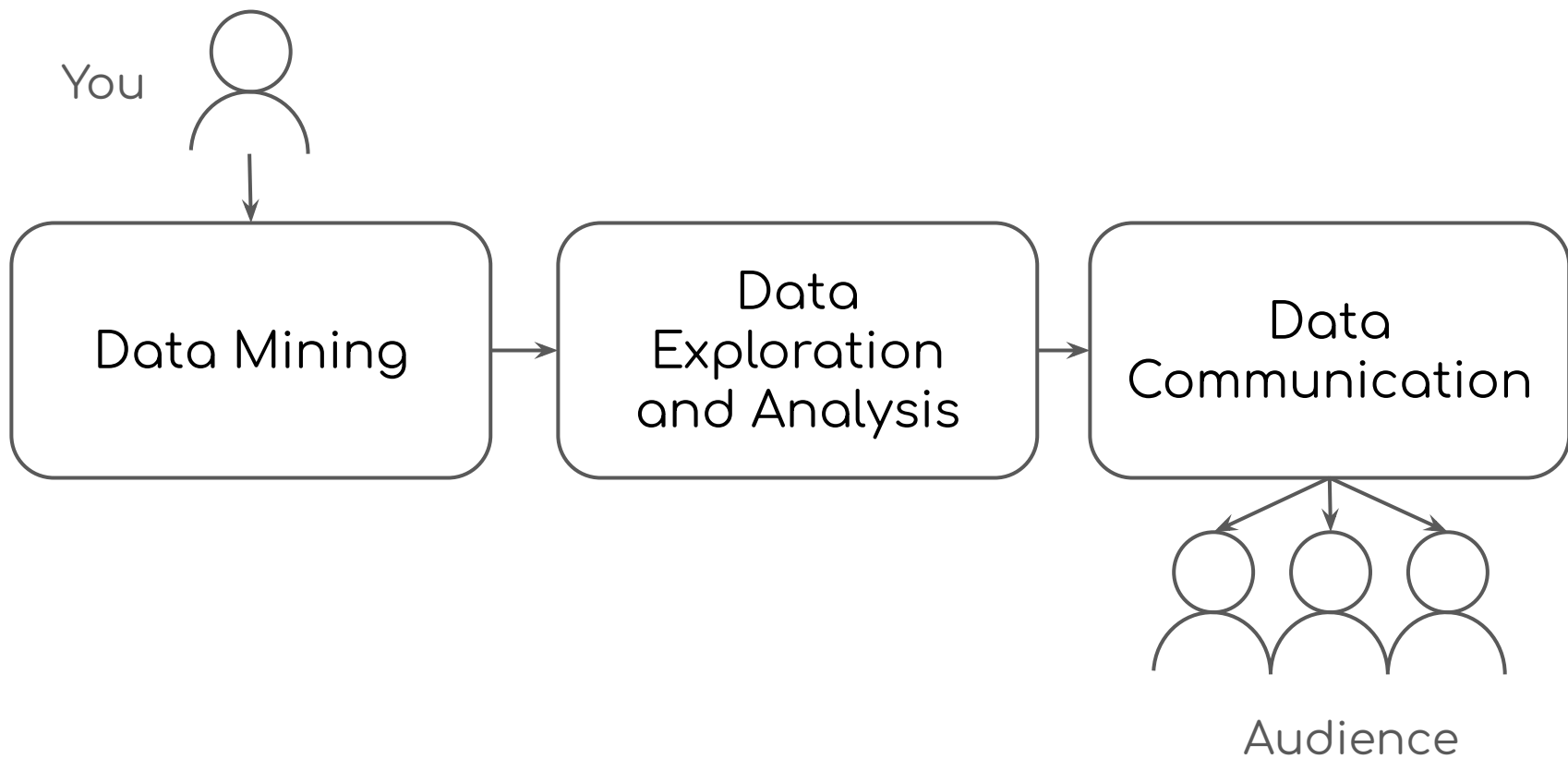
A man with a beard and short hair is shown from the chest up, looking towards the right with an open mouth as if speaking. He is in the foreground, slightly to the left. The background is a vibrant, painterly scene with warm orange and red tones, suggesting a sunset or a city at night. There are silhouettes of other people in the background, some looking towards the speaker. The overall style is artistic and expressive, with visible brushstrokes and a rich color palette.

Module 2

Introducing Data Storytelling and the S-DIKW Pyramid



Communicating Data

```
graph TD; A[Communicating Data] --> B[Data Reporting<br/>Describe all your data]; A --> C[Data Presentation<br/>Select only the relevant insights extracted from data and present them]; A --> D[Data Storytelling<br/>Select one relevant insight and present it through a story]; D --> E[Data Journalism<br/>Specific for news];
```

Data Reporting
Describe *all* your data

Data Presentation
Select only the relevant insights extracted from data and present them

Data Storytelling
Select *one* relevant insight and present it through a story

Data Journalism
Specific for news

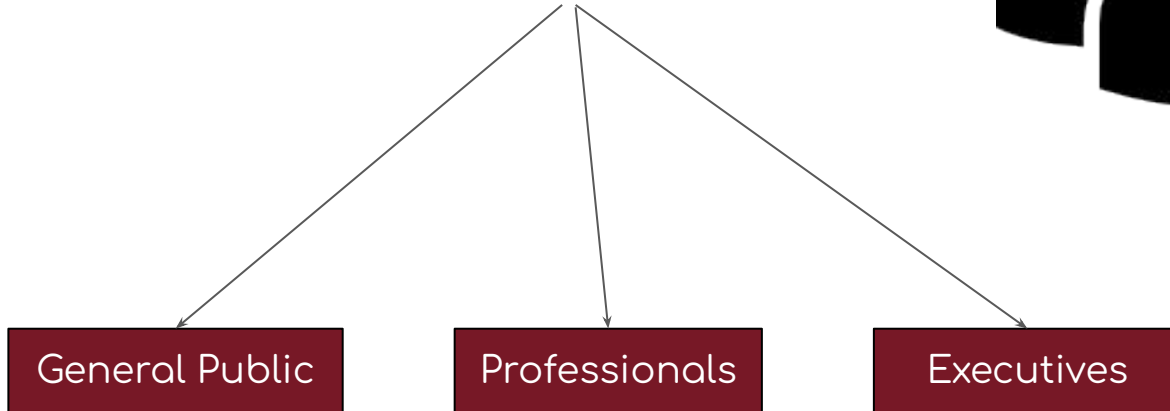
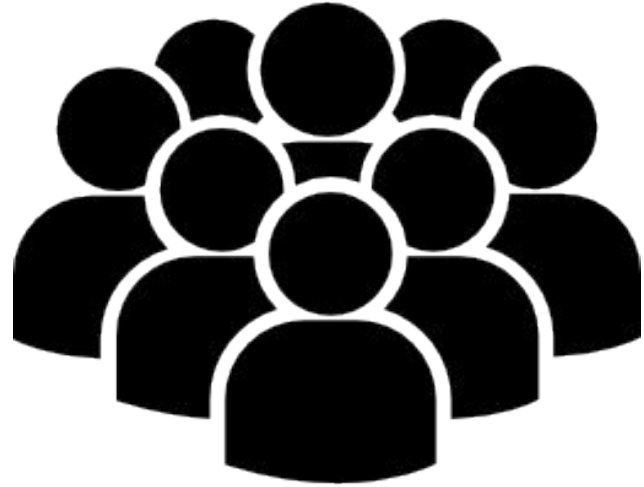
Data Storytelling is communicating the results of your data analysis process to an audience through a story.



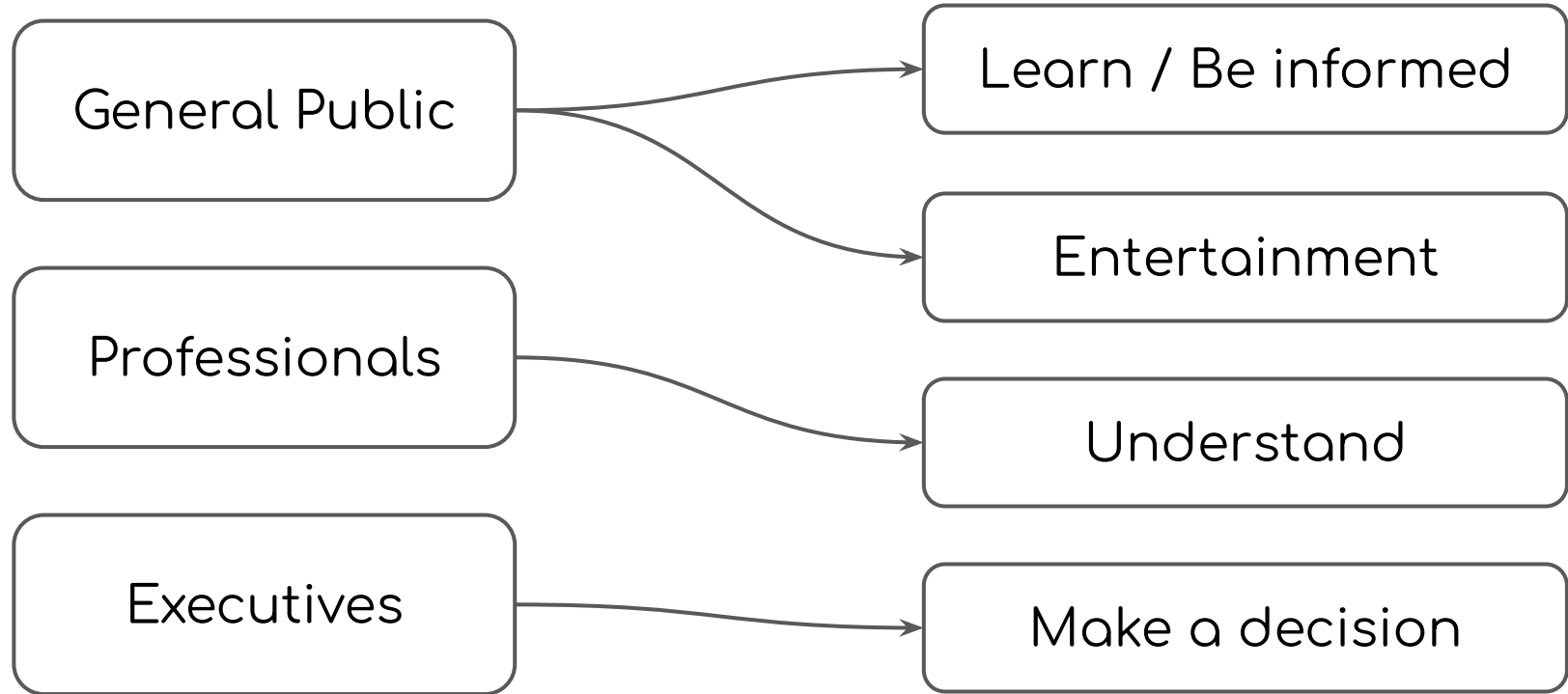
Data Storytelling is communicating the results of your data analysis process to an **audience** through a story.



You always tell a story
to an **audience**



Each audience has a different **goal**



Based on your audience, you will choose an appropriate

Language and Tone

The set of words (language) and the emotional expression conveyed through them (tone)

Context

The level of details to add to your story, based on the cultural sensitivity of the audience



Data Storytelling is communicating the results of your data analysis process to an audience through a **story**.

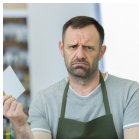


The S-DIKW Pyramid*

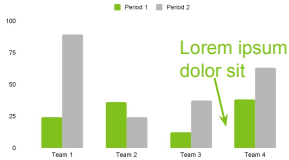


*Lo Duca, A., & McDowell, K. (2025). Using the S-DIKW framework to transform data visualization into data storytelling. *Journal of the Association for Information Science and Technology*, 76(5), 803-818.

Specific context and next steps based on the audience



Points scored



Lorem ipsum
dolor sit

Probability of success of the possible strategies



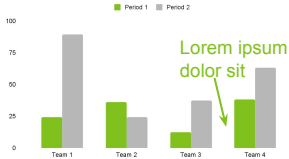
WISDOM

Tailor the story
to the audience

Context



Points scored



Lorem ipsum
dolor sit

Next Steps

Probability of success of the possible strategies



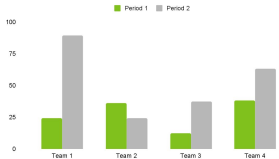
KNOWLEDGE

Reveal what happens
and what to do next

Context



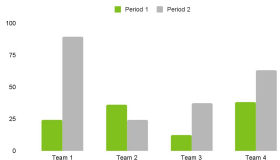
Points scored



INFORMATION

Add text or graphical context

Points scored



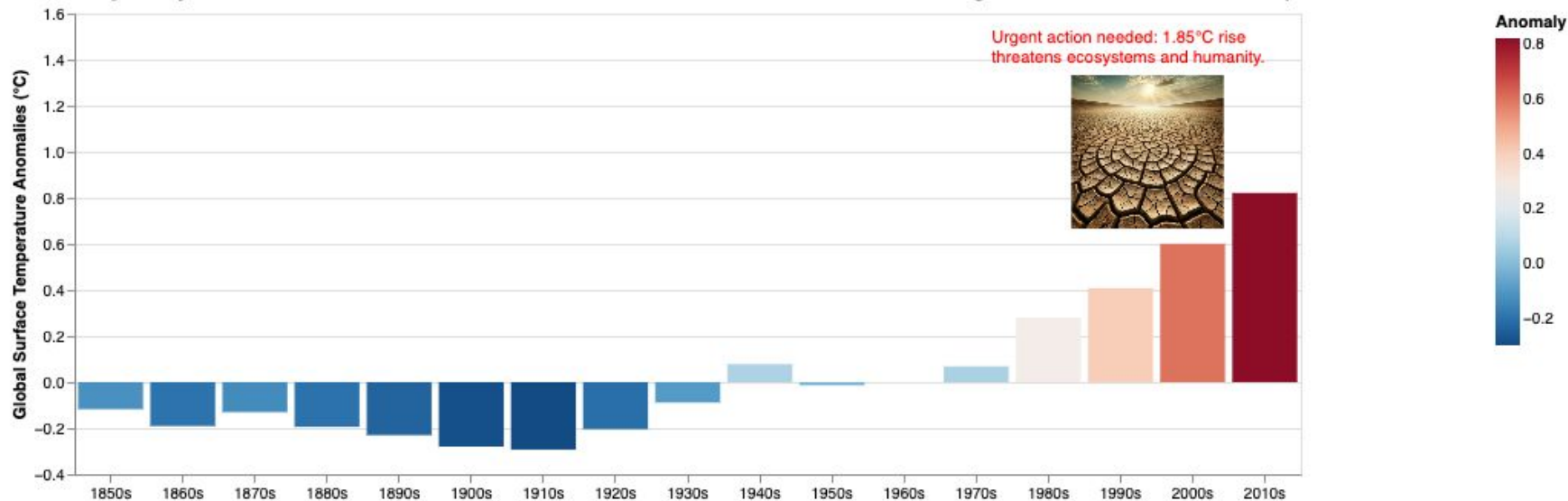
DATA

Choose the chart type

Understanding Global Temperature: A Crucial Metric for Climate Action

Global temperature is a vital indicator of climate health, calculated using surface, satellite, and ocean data.

Accurate yearly measurements are essential for informed decision-making and effective climate policies.



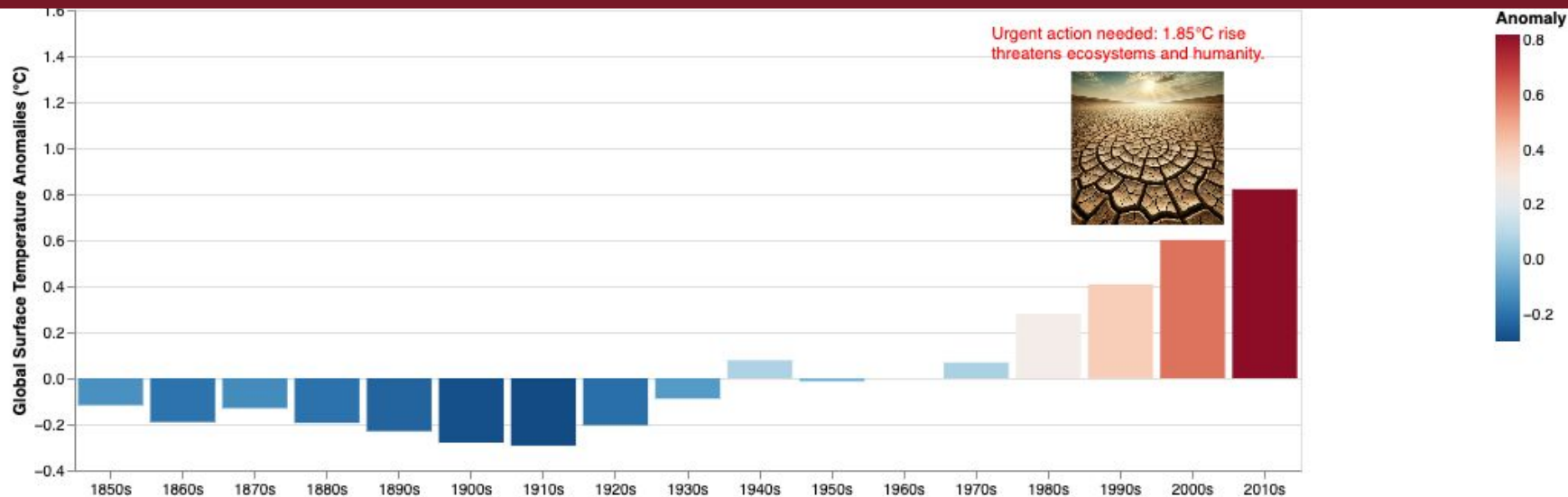
Expand solar, wind, and geothermal energy!

Data

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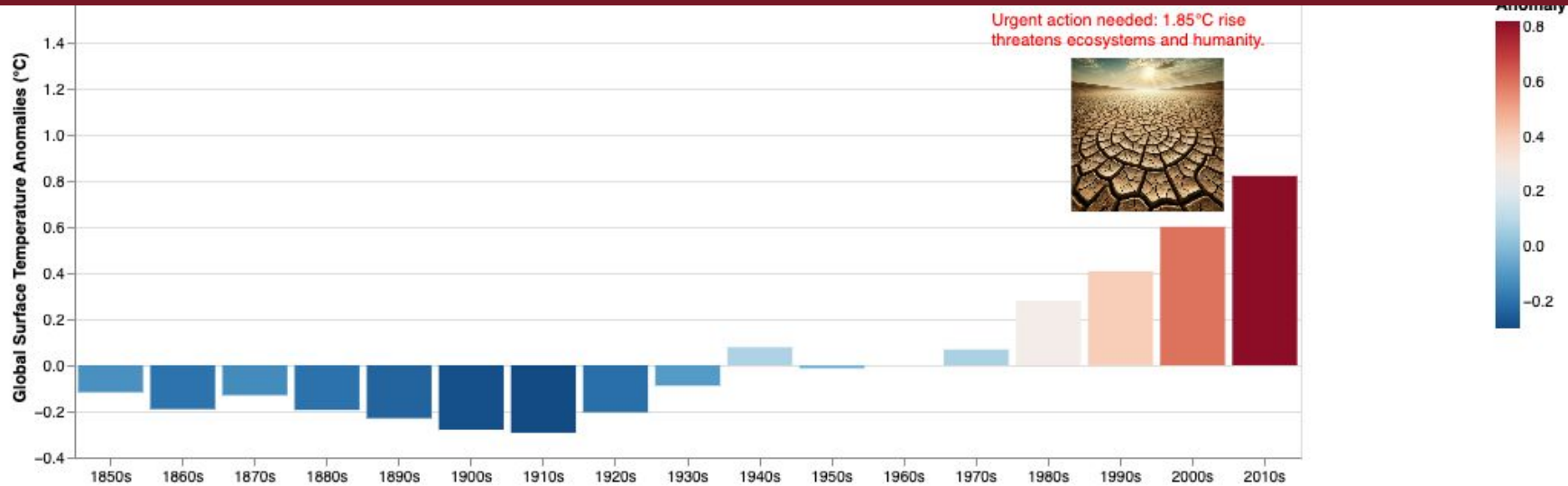
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The data **does not** depend
on the audience.
But the chart type does.

Information

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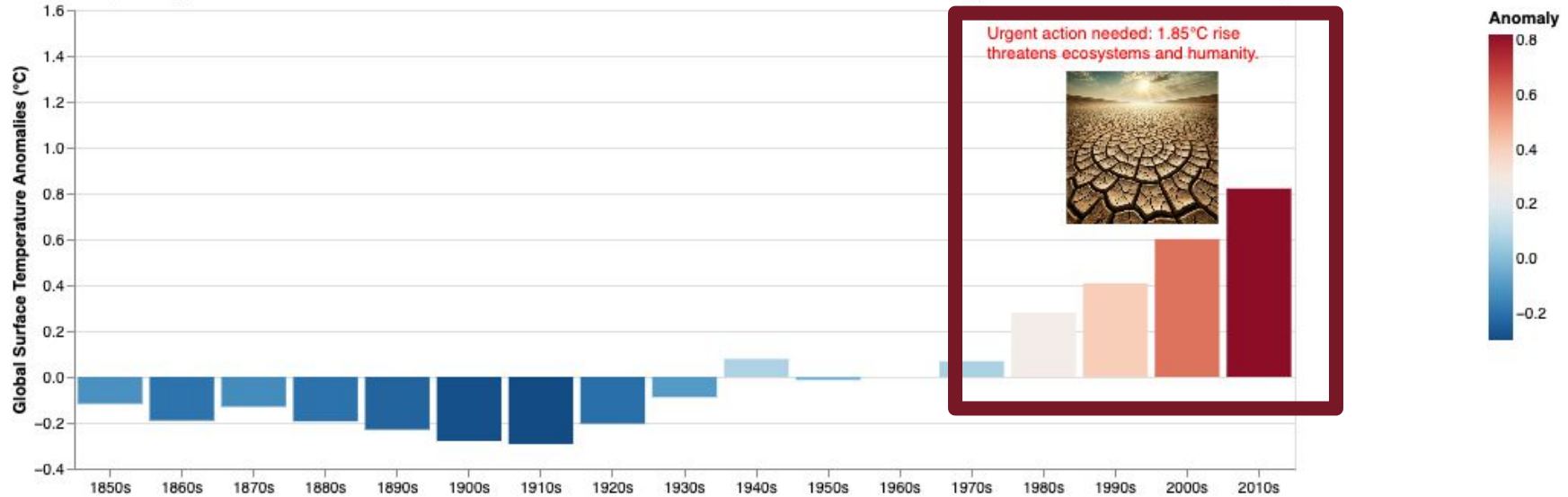
Expand solar, wind, and geothermal energy!

Information depends on the audience.

Knowledge

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Expand solar, wind, and geothermal energy!

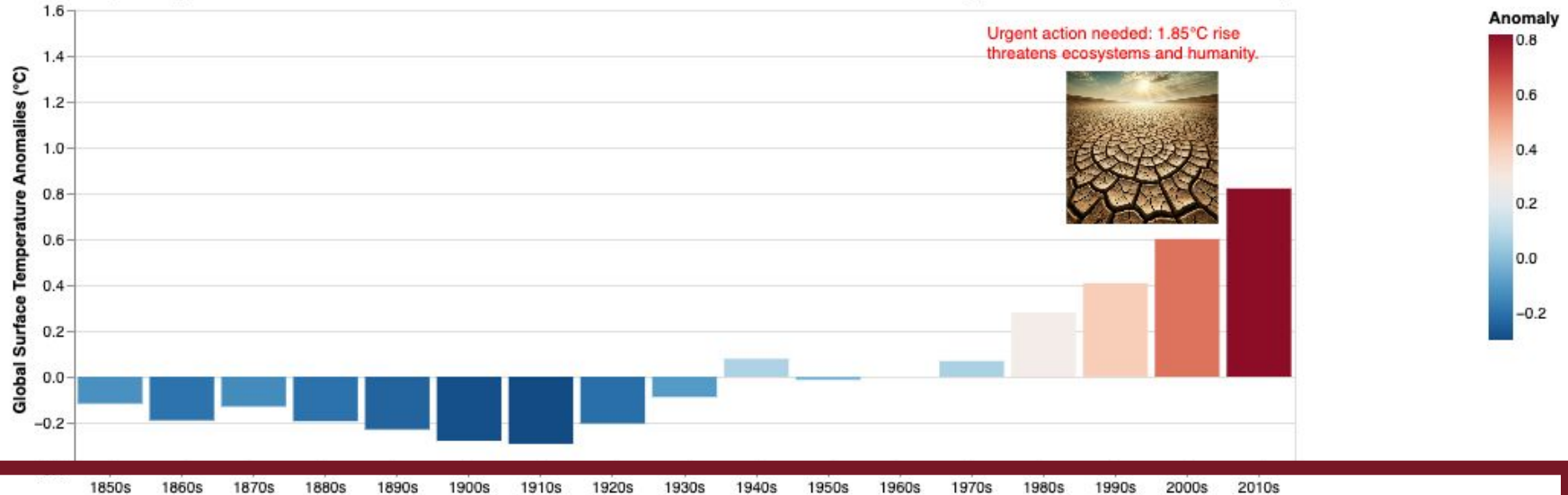
Knowledge **does not** depend on the
audience.

But what they can gain from
knowledge does.

Wisdom

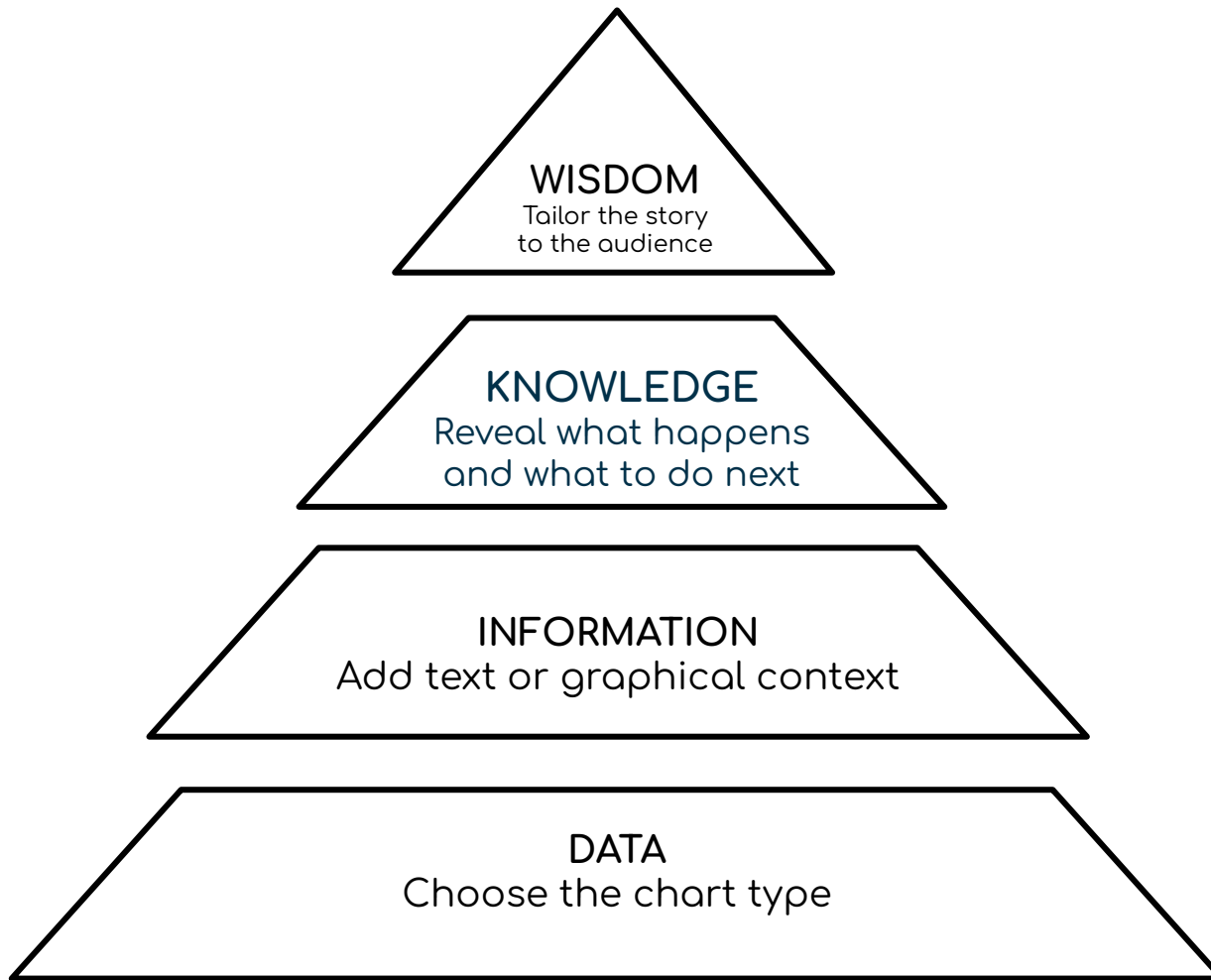
Understanding Global Temperature: A Crucial Metric for Climate Action

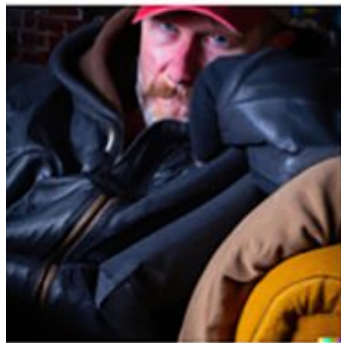
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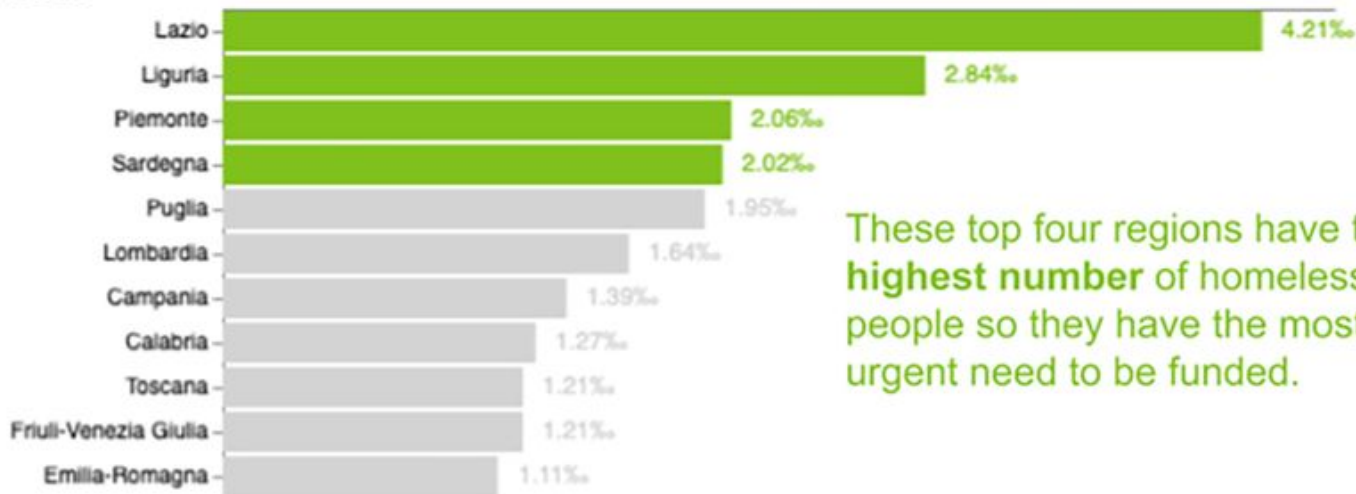
Wisdom depends on the audience.





Together Let's Make a Difference: Support Our Project to Reduce Homelessness!

Homelessness is a **heartbreaking reality** that leaves individuals and families vulnerable leading to **devastating consequences** such as poor health and social isolation. The chart shows the number of homeless people in the Italian regions in a population of 1000.



These top four regions have the **highest number** of homeless people so they have the most urgent need to be funded.

Our plan to harness the funds

Following the example of **region X in Country Y** ([Policy Document](#)), we plan to allocate the funds as follows:

Shelter and Housing



Job Training



Education

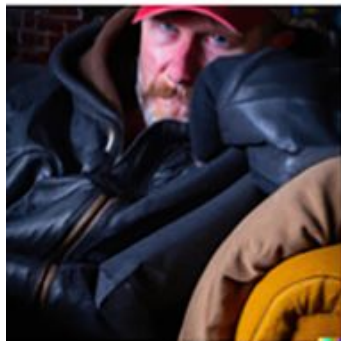


Healthcare



Basic Necessities

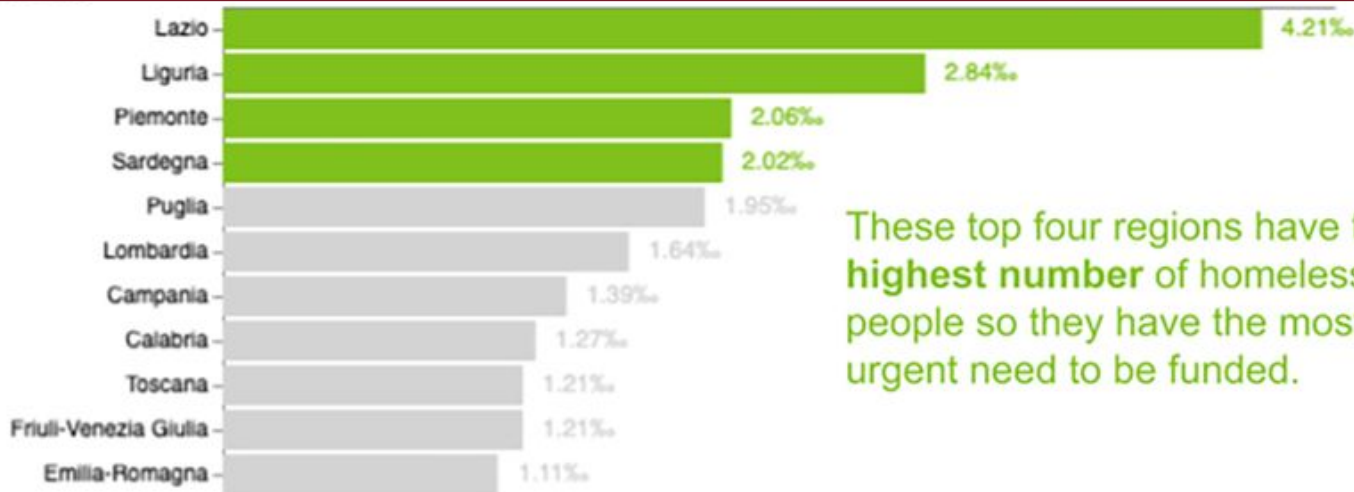




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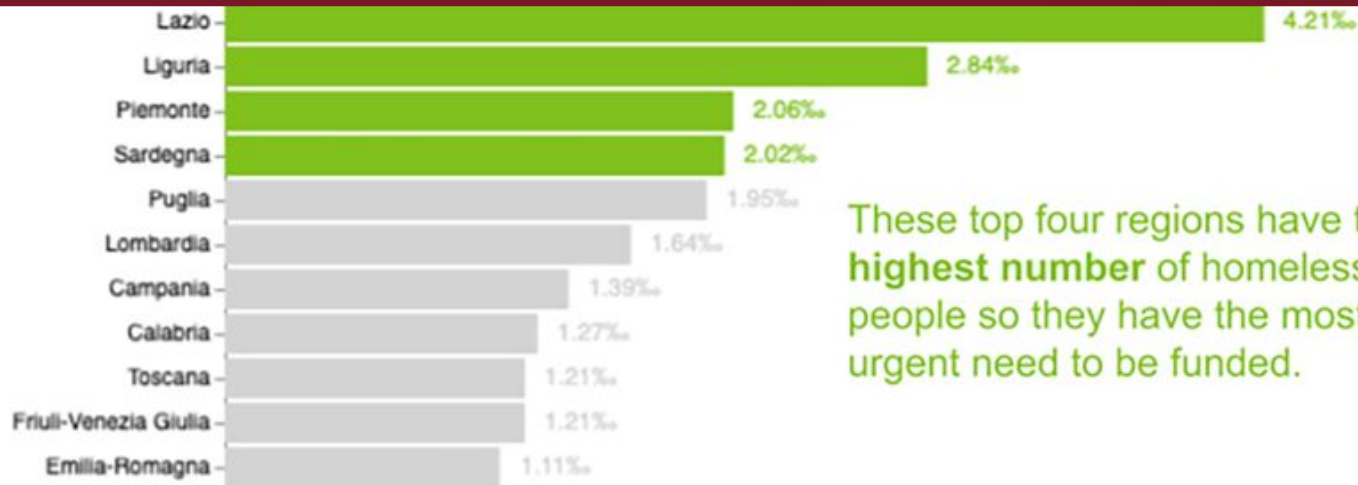
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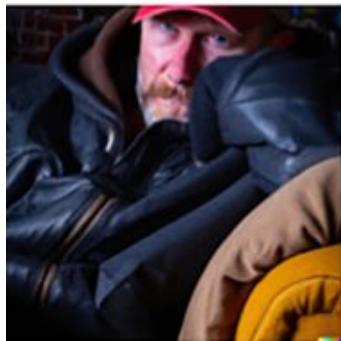


Healthcare



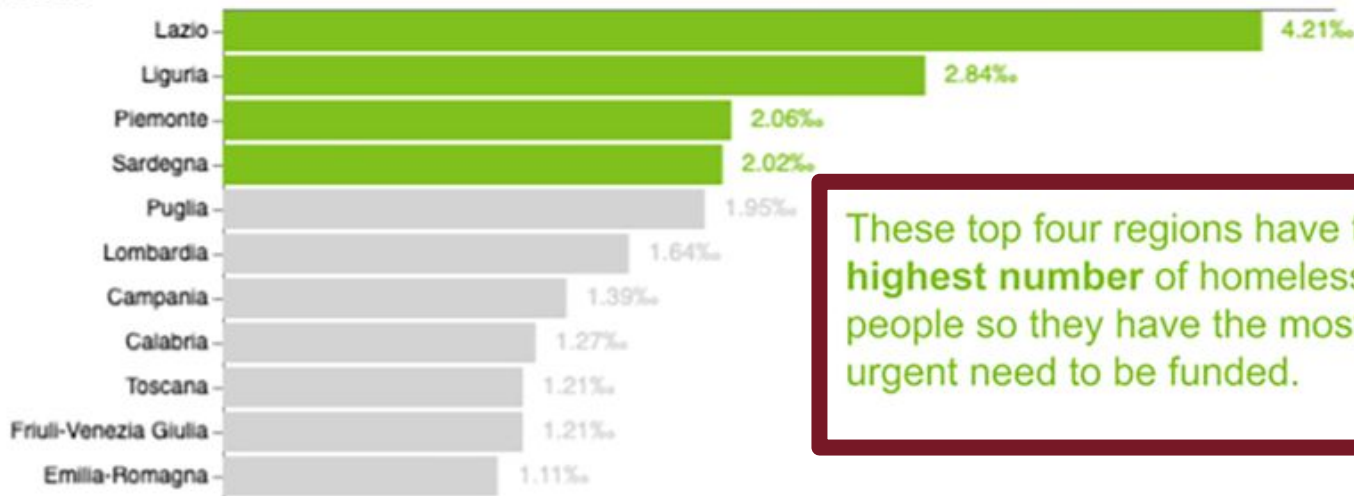
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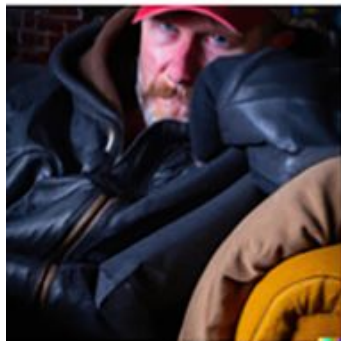


Healthcare



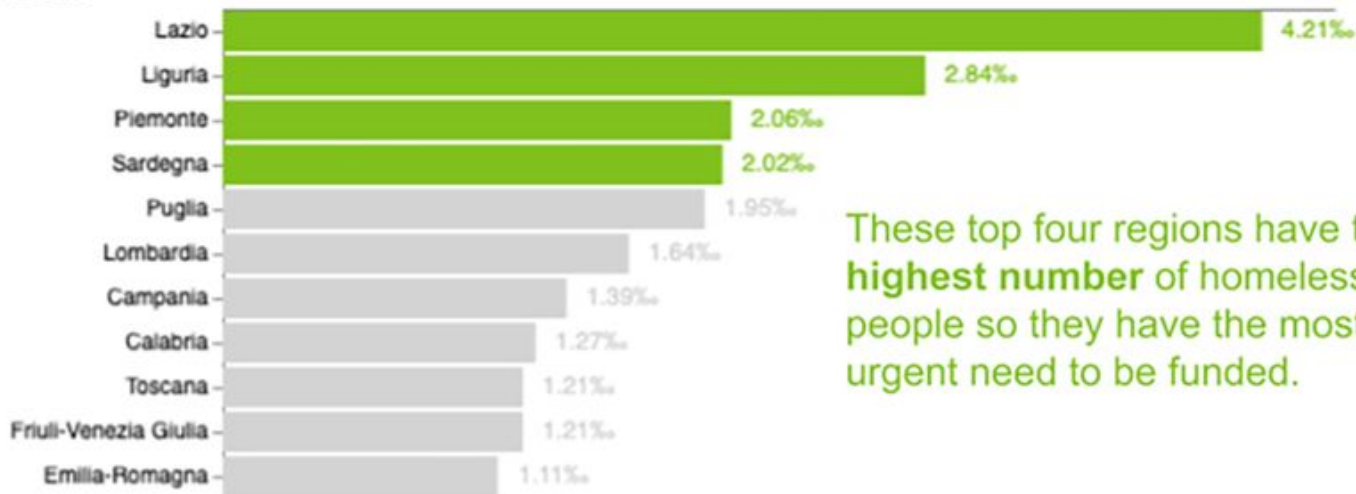
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- Lo Duca, A. (2024). *Data Storytelling with Altair and AI*. Manning Publications.
- Lo Duca, A. (2025). *Become a Great Data Storyteller*. John Wiley & Sons.