

Introduction to the Analysis and Use of Data

*Implementing the ROMA Cycle in the
“Next Generation” Performance Management Framework*



ROMA Next Generation Video Series

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ROMA Next Generation Video Series



What is “Data”?

Facts

or a set of well defined distinct objects
(such as numbers or responses)
that can be used for some practical
purpose.



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"That's weird. 'VERB' is a noun."

Raw Data

- “Raw” or “Unprocessed” data is a list of facts, numbers or other qualitative or quantitative “elements”.
- The raw data have some basic meaning but need to be analyzed to turn them into information.

Data, Information, and Knowledge

- Data is facts that are observed, measured, collected and can be aggregated.
- Data only becomes information for decision making once it has been analyzed in some fashion.
- Knowledge is derived from the interaction of information and experience with a topic.

For Example

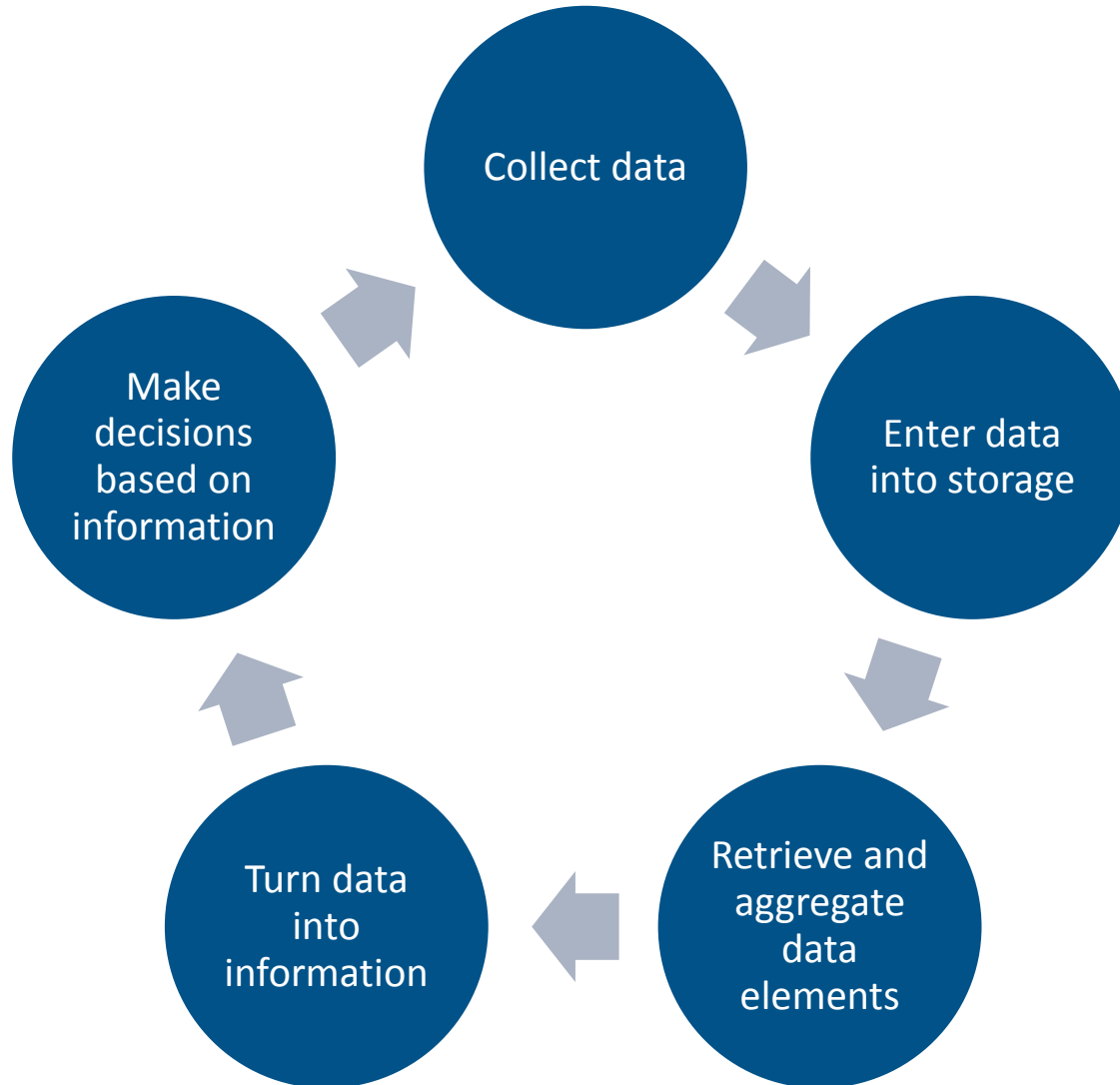


Data: 29,029 feet, location, climate, terrain.

Information: Using the combination of data elements to understand the conditions on the mountain.

Knowledge: Understanding how the information is related to the task of climbing and survival of the climber.

Basic Collection and Analysis Cycle



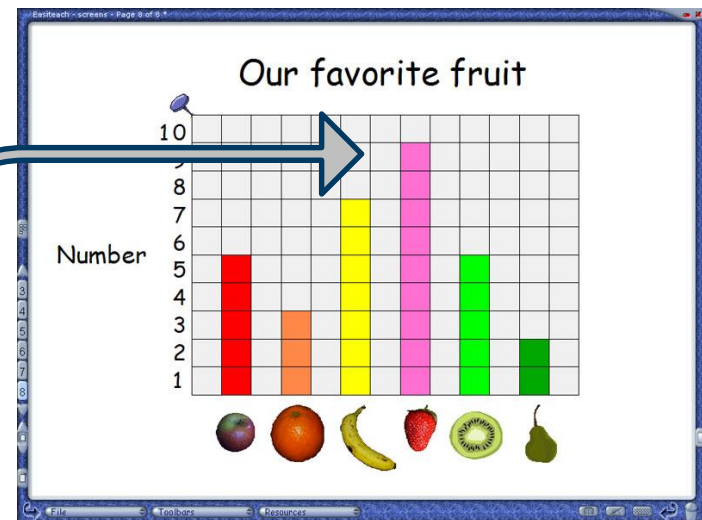
Once you have collected and stored your data

- You want to inspect and “clean” the data elements
 - Remove outliers
 - Identify obvious errors
 - Question missing data

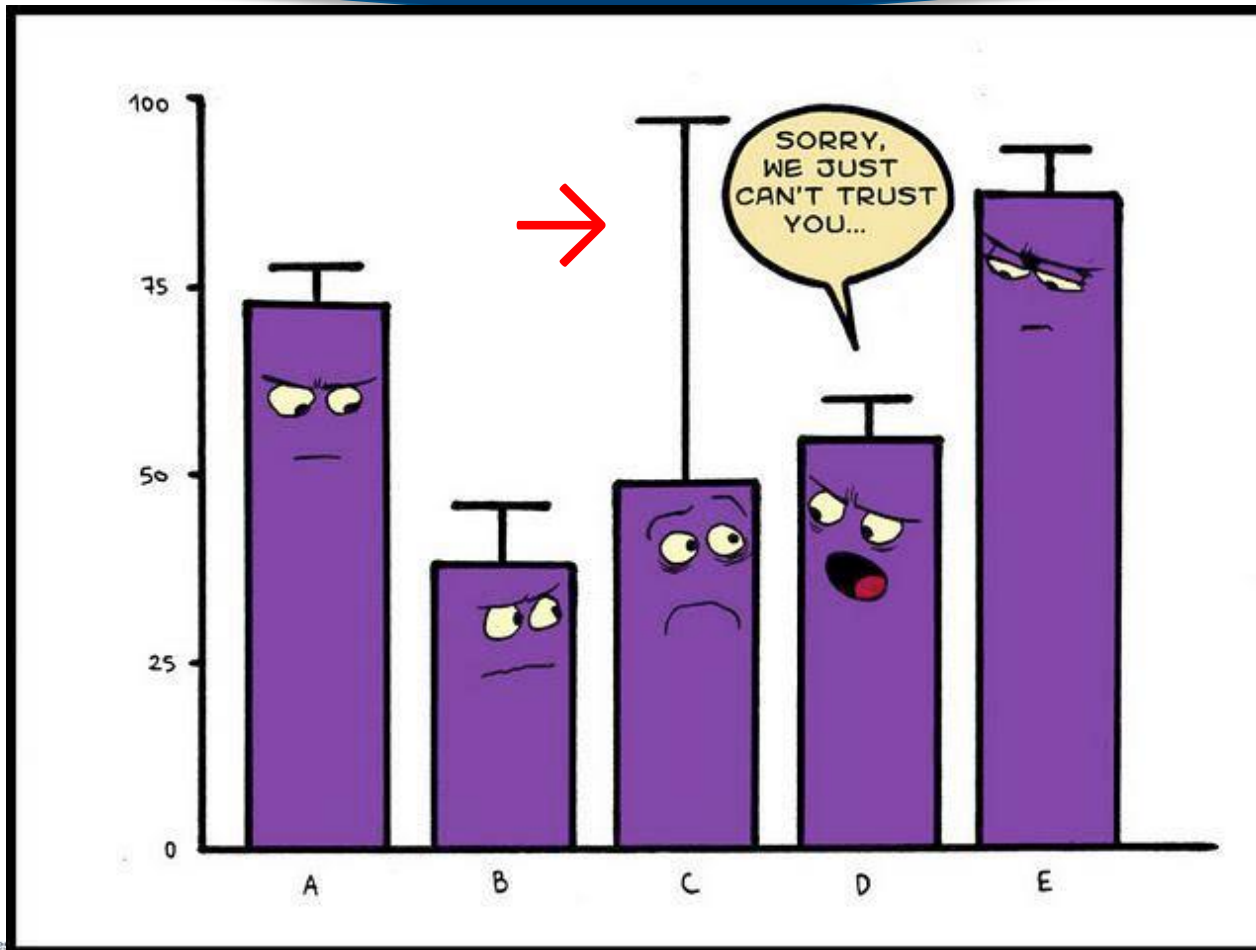
Aggregate the Data

- Bring the data elements together
- Define, clarify the context
- Make comparisons
- Create visualization

Strawberry
wins!



Flawed Data



What if the Data is Flawed?

- Waste of time and money
- False impressions
- Poor forecasts
- Devalues decisions that follow

Turn Data into Information

So that you can USE the data to increase knowledge and improve decision makings



Varieties of Data Analysis

Data mining

Business intelligence

Descriptive statistics

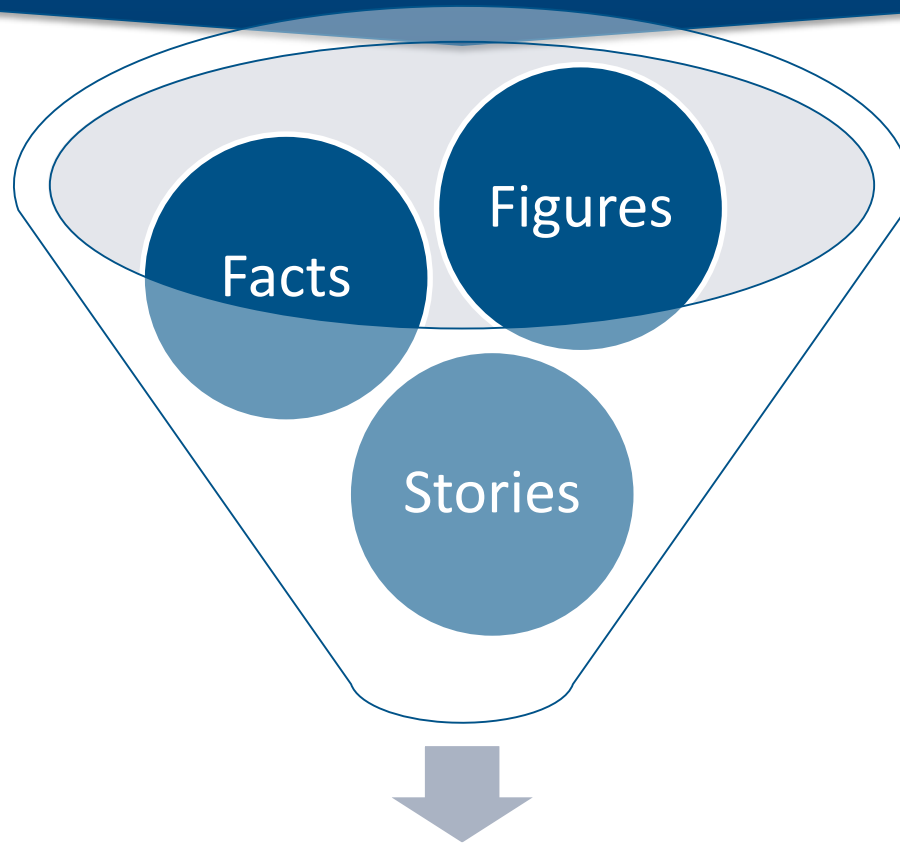
Exploratory

Confirmatory

Forecasting

Text analytics

Data Analysis



Useful Information

Count



How many?

This is a most important question!



What will you be counting?

- Number of individuals and families served
- Number of services delivered
- Number of outcomes achieved by those receiving services

What does the count mean?

- You will want to know if the numbers you have produced are “good”.
- In some cases, funding sources will only be looking for your counts.
- However, with a “results orientation” our network also wants to know what the counts mean.

Comparing Data

One important analysis technique with many different approaches



Compare Projected and Actual

Compare the actual program data with the projections you made at the beginning of the year

- How many projected to serve?
- How many actually served?
- How many projected to achieve an outcome?
- How many actually achieved the outcome?

Longitudinal Comparisons

Compare program data from year to year

- Quantity of service
- Population served
- Cost of program
- Outcomes achieved

Compare Local and National Data

From the National IS Data we know that the population served across the country is:

- Very low income (below 50% FPG)
 - 1/3 are children
 - 1/3 fixed income, 1/3 public benefits, 1/3 employment
- How does your client population compare?

Compare with Needs Assessment

- Refer back to your Assessment data.
- Remember what you identified about the needs.
- Then consider: Did you impact the needs?

Compare With Other Agencies

- What do other agencies who have similar outcomes achieve?
- How are services delivered in the other agency as compared to how we deliver our services?
- Are our populations similar?



Identify the Trend



*Looking at data elements over time
will produce a “trend line”*



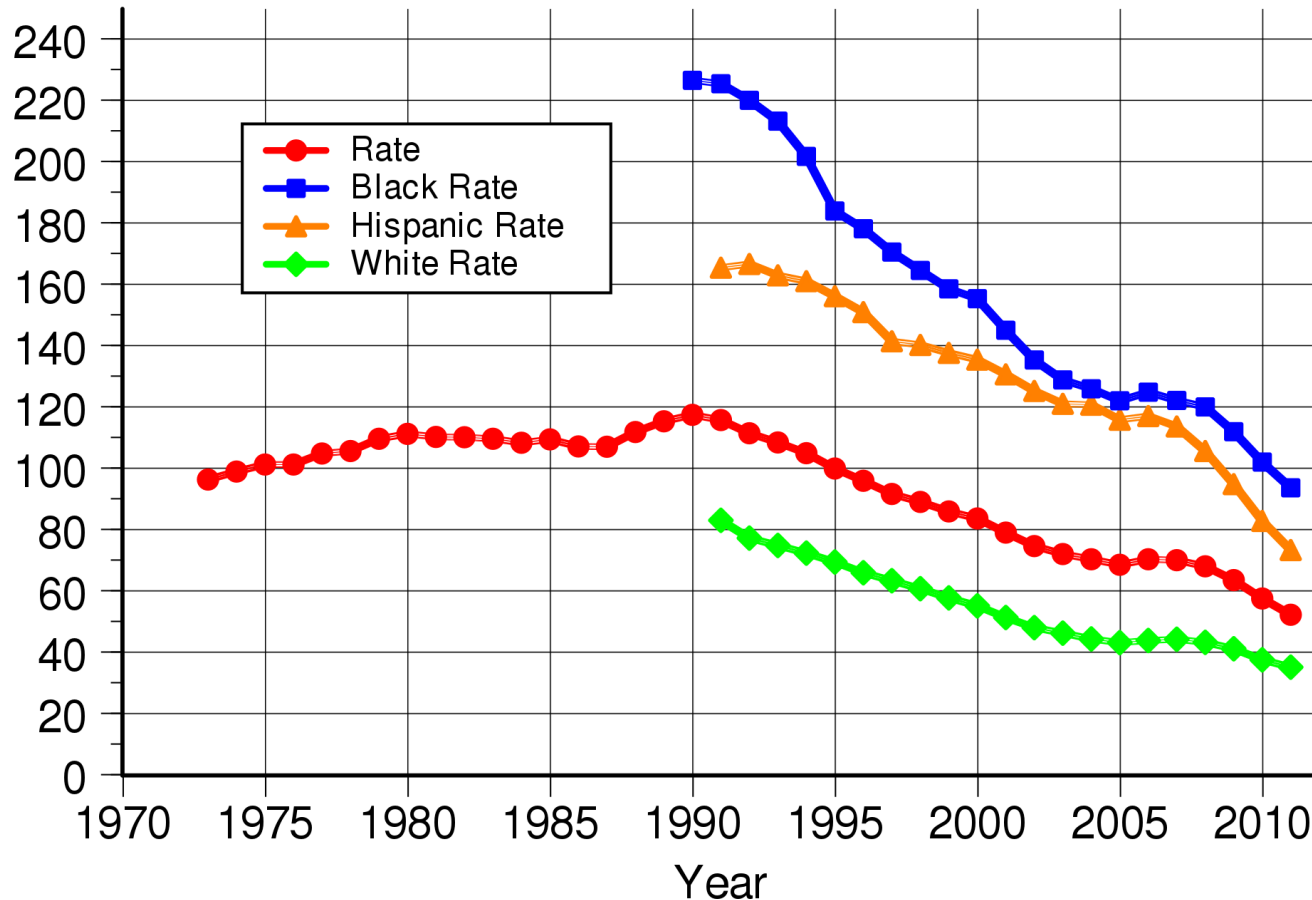
Identification of Trends

Are things changing? Staying the same?

- Demographics
- Opportunities for employment; kinds of businesses
- Environmental changes
- Opportunities for recreation
- Availability of health care professionals, facilities and systems

Explore the Trend

US Teen Pregnancy Rate



Using Information from Data Analysis to Make Decisions

The analysis of your data should lead to your agency maintaining or improving quality services and producing outcomes



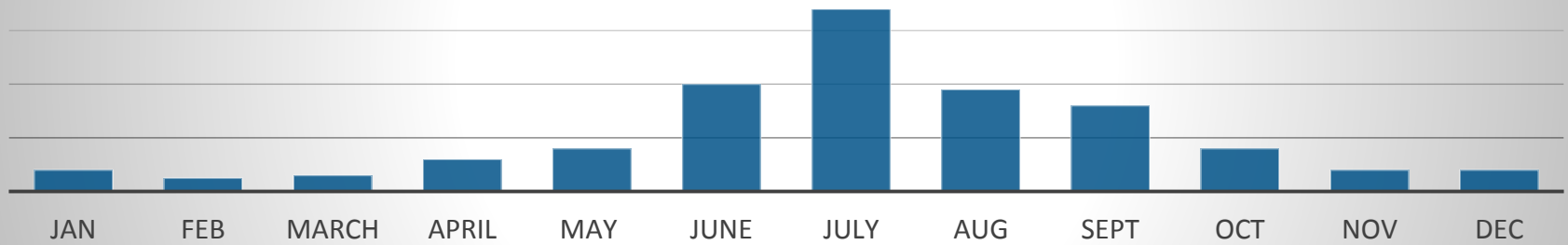
Avoid Making Conclusions Without All the Facts

- What happens if you compare two data elements that may be related, but are not dependent on one another?
- How can you identify if there are other data elements that should be included in your analysis?

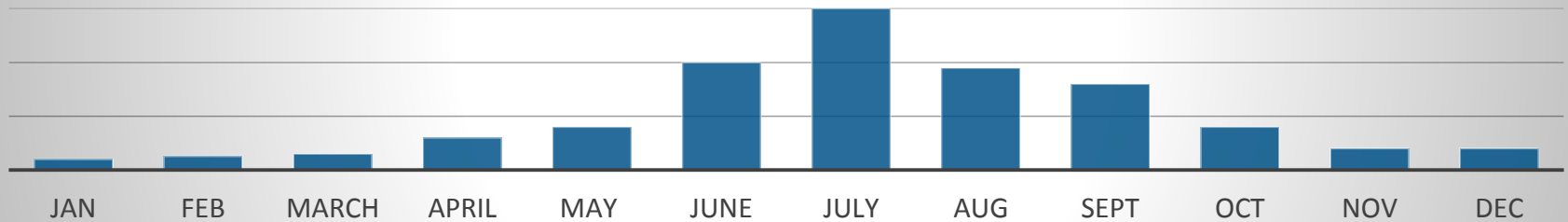


Ice Cream and Drowning

Drowning



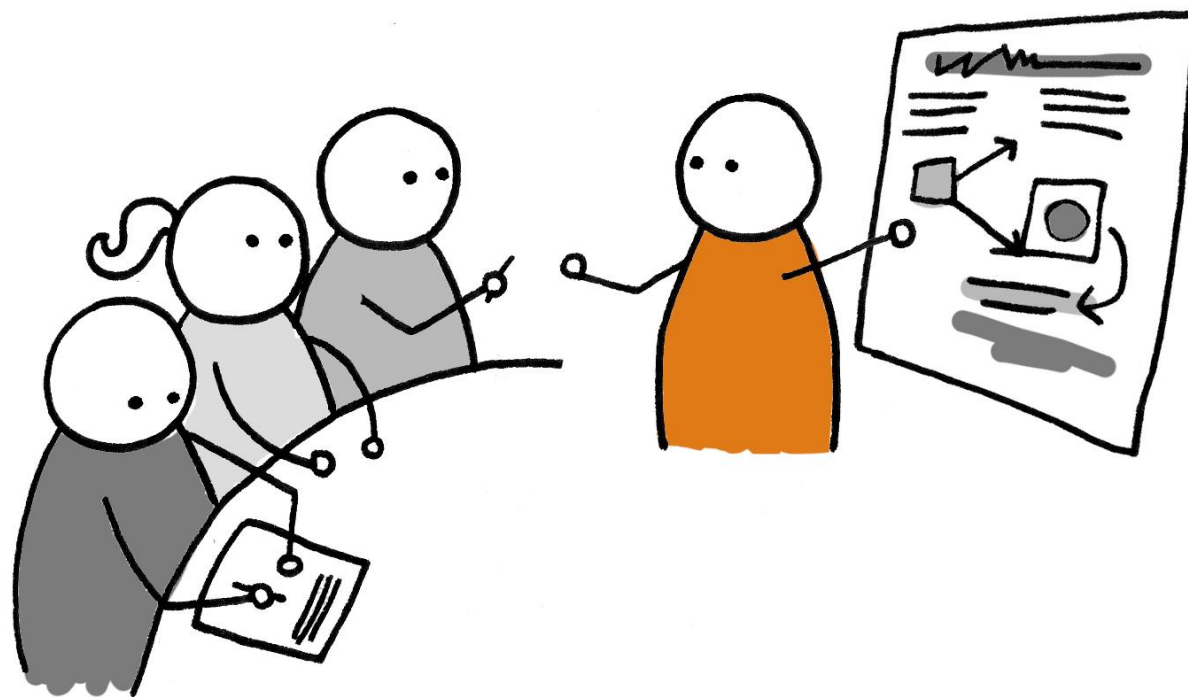
Ice Cream Sales



Summary Thoughts

- Be sure your data is “clean” (accurate, complete, timely)
- Count
- Compare
- Look at Trends
- Identify what else you need to know.

NEXT STEPS



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The Promise of Community Action

Community Action changes lives,
embodies the spirit of hope
and makes America a better place to live.
We care about the entire community,
and we are dedicated to
helping people help themselves and each other.

For More Information

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