

THE DATA ANALYSIS PROCESS

SHARP SIGHT

QUICK RECAP

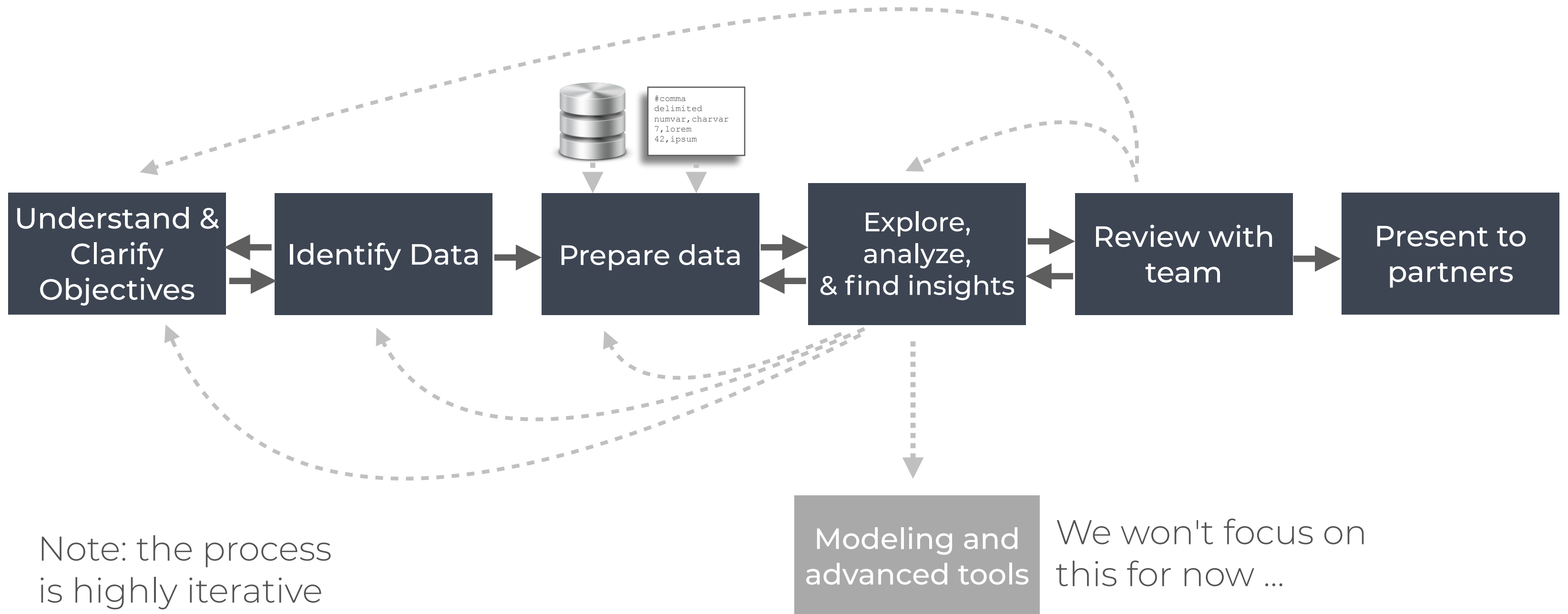
- You spent a lot of time learning tools & syntax
 - Pandas
 - Seaborn
 - Numpy
- Now, we'll talk about putting it all together
- We're going to integrate our tools to get things done

WHAT YOU'LL LEARN

- A high-level process for analyzing data
 - well defined process
 - deviations are normal
 - analyzing data can be messy & complex
 - these are just guidelines
- You'll learn the high level process
 - other videos will show parts of the process in greater depth

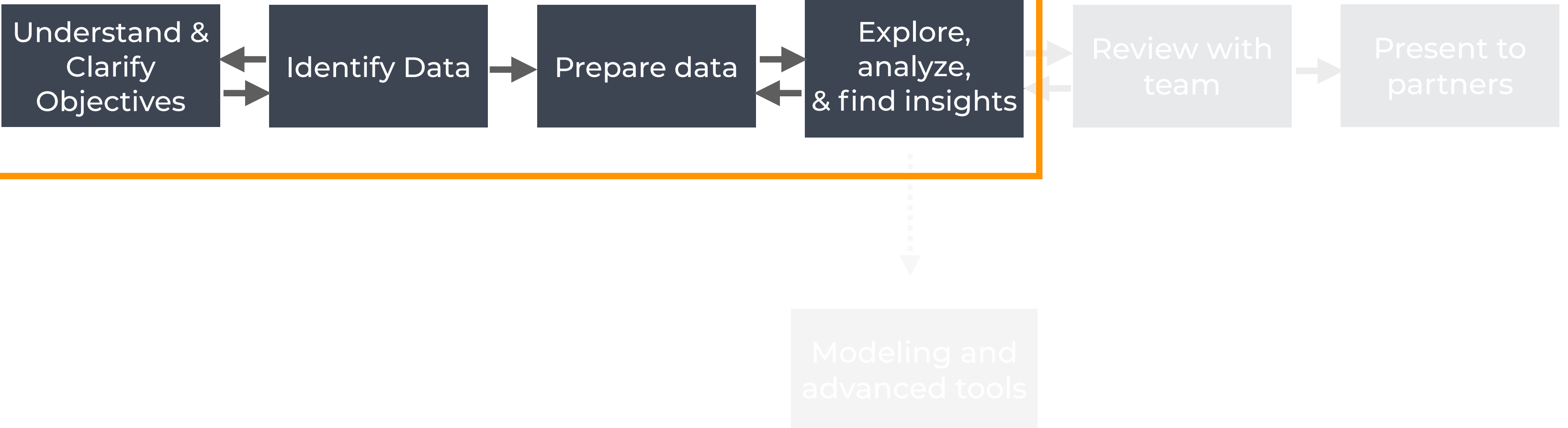
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THE DATA ANALYSIS PROCESS

We'll cover these in detail



A DEEPER LOOK AT THE DATA ANALYSIS PROCESS

UNDERSTAND AND CLARIFY OBJECTIVES

- In this phase, you need to understand the problem you're trying to solve
 - Ask questions
 - Talk to partners
- Your objectives will inform how you approach data gathering

IDENTIFY DATA

- In this phase, you want to translate the objectives into data problems
 - What data do I need?
 - Where is that data?
 - Is the data available *right now*?
 - Are there any data quality problems
 - How can I combine different data sources

PREPARE DATA

- Here, we actually get the data and "wrangle" it
- This is primarily where we use Pandas data manipulation tools:
 - read in data with Pandas
 - manipulate data with Pandas functions
 - reshape data with `melt` and `pivot`
 - join data with `join` and `merge`

EXPLORE, ANALYZE, AND FIND INSIGHTS

- Here, we want to explore and find insights to answer questions and meet objectives
- Use Pandas and Seaborn for exploration:
 - Pandas to aggregate or reshape
 - Seaborn to visualize
 - We can also combine Pandas and Seaborn to explore and analyze in depth

REVIEW WITH TEAM

- Commonly, you'll share results with your immediate team and management
 - You're looking for feedback, suggestions, problems (that you need to fix)
- This process is iterative
 - Might include a simple 5-minute meeting at your desk
 - Often includes more formal meetings as the project progresses

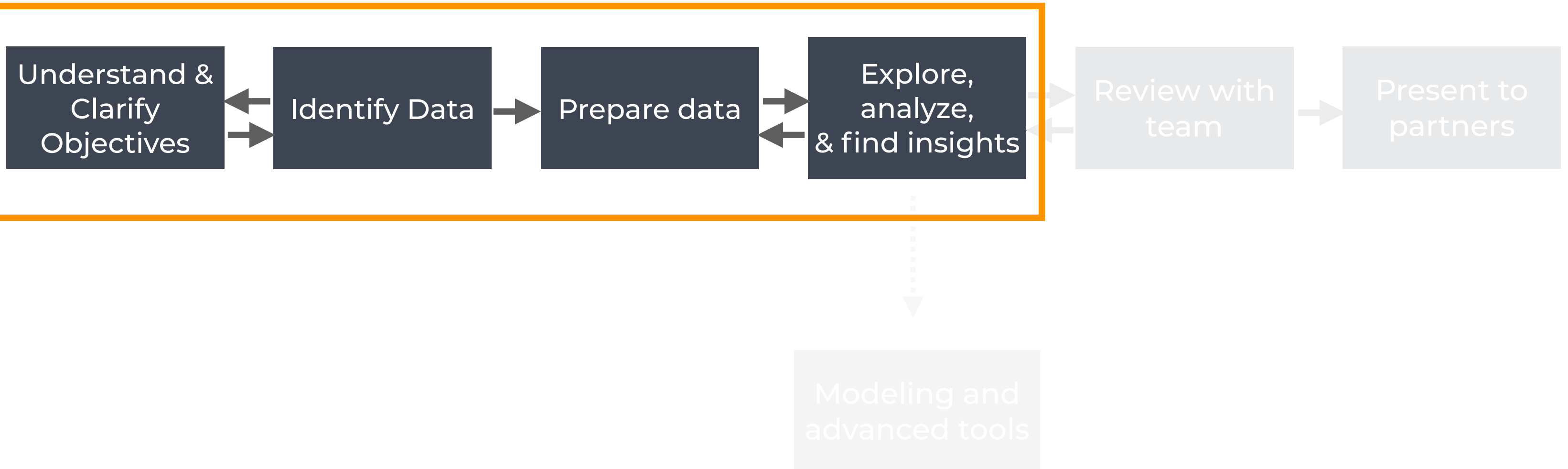
PRESENT RESULTS

- This is where you package and present your results to stakeholders:
 - managers/team-leads
 - high-level management
 - clients
 - partners
- In business, this is often a presentation deck:
 - PowerPoint (on PCs)
 - keynote (on Mac systems)

NEXT STEPS & RECAP

WE WILL DISCUSS THESE IN DEPTH

We'll cover these in more detail in other videos



KEY TAKEAWAYS

- Analysis can be broken down into steps
- This "process" is typical for most projects
- It's also common for there to be deviations and side-tracks
 - Completely normal
- We will discuss several of these phases in more depth in separate videos
- Note: work with simpler datasets and increase size/complexity of projects gradually