Analysis of Competing Hypotheses: An Eight Step Process

1. **Identify all the possible hypotheses,** making sure they are mutually exclusive.
   (Use a group of analysts with different perspectives to brainstorm all plausible hypotheses.)

2. **Make a list of significant evidence and arguments** for and against all the hypotheses.
   (Remember to include assumptions, logical deductions, and the absence of things one would expect to see if a hypothesis were true.)

3. **Prepare a matrix to analyze the "diagnosticity" of the evidence and arguments.**
   (Array the hypotheses across the top and evidence down the side. Assess each input by working horizontally across the matrix.)

4. **Draw tentative conclusions** about the likelihood of each hypothesis.
   (Try to refute hypotheses rather than confirm them. Do the Inconsistents make a persuasive case for discounting this hypothesis?)

5. **Refine the matrix** and reconsider the hypotheses.
   (Determine how sensitive the lead hypotheses are to a few critical items of evidence. Consider the consequences of the analysis if that evidence were wrong, misleading, or subject to a different interpretation.)

6. **Compare your personal conclusions about the relative likelihood of each hypothesis with the Inconsistency scores.**
   (If they are not similar, figure out why and what you can learn from this.)

7. **Report your conclusions.**
   (Discuss the relative likelihood of all the hypotheses, not just the most likely one.)

8. **Identify indicators** or milestones for future observation.
   (Use these indicators to track which lead hypotheses are emerging or to show that events are taking a different course than expected.)