



Applied Systems Thinking

Use the Power of Structure to Create Lasting Change

**From the AST Library
Practice
Article 3**

Conducting an Effective Systems Analysis By David Peter Stroh

An effective systems analysis meets **four criteria**. It:

1. Expands the context of the presenting problem in time (to consider both its earliest antecedents and likely future) and space (to consider the views of stakeholders whose perspectives are often ignored or denigrated);
2. Illuminates the often diverse viewpoints of multiple stakeholders;
3. Uncovers how the people who are undertaking or commissioning the analysis might be unwittingly contributing to the very problem they are trying to solve;
4. Shows how critical variables (see Practice article on "*Defining Variables*") have been changing over time.

We've found that **ten questions** are especially helpful in ensuring that we meet these criteria.

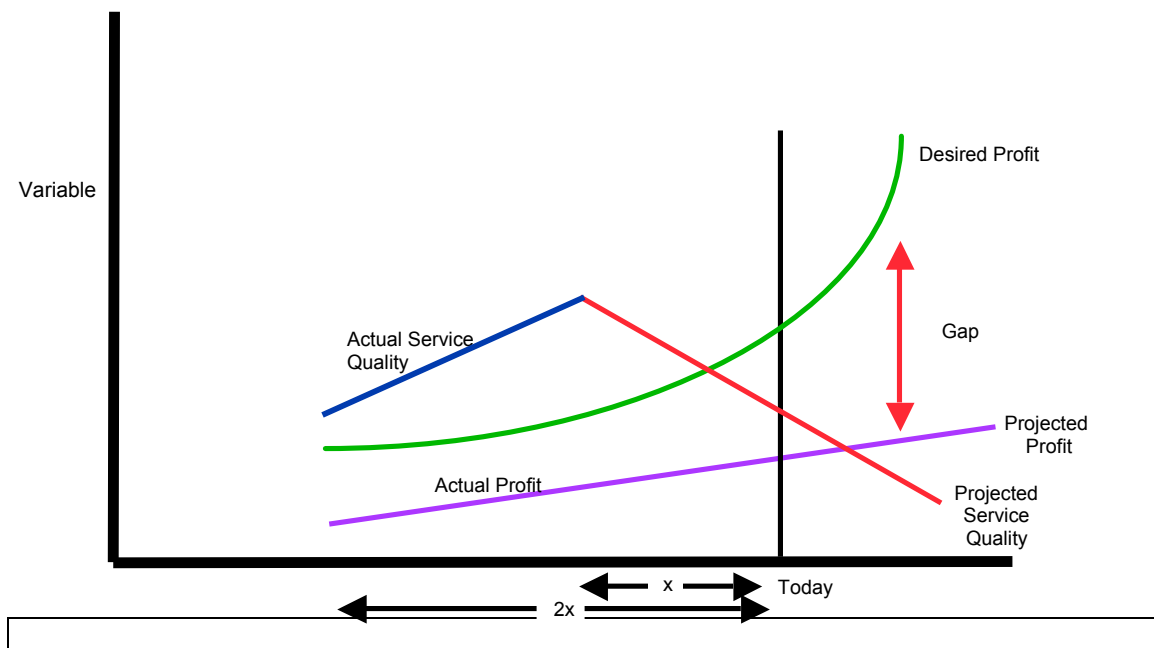
- 1) Consider first what has been happening around the problem you want to explore. Is the problem chronic? Does it have a known pattern of behavior over time? How does the actual pattern relate to what you want or expect to occur?

Describe this pattern, e.g. key variables exhibit one or more of the following over time:

- i. Oscillations
- ii. S shaped growth
- iii. Steeply rising, runaway growth
- iv. Flat line, no growth
- v. Gradual decline

Referring to the Table 1-1 below:

Table 1-1: A Simple Graph



2) State your definition of the problem by completing the following sentence, "Why, despite our best efforts, has X been happening?" Ensure that your statement is not defined as a solution.

Example: "Why does quality gradually decline over time instead of continuously increase?"

- 3) What are the earliest antecedents of the problem? Also, describe any previous attempts to solve the problem. What was tried, by whom, and with what outcome?
- 4) What is likely to happen in the future if this problem is not solved? What are the costs of not changing?
- 5) How would this issue look from an upper management viewpoint? What factors or components would that level see? How do they think about the issue?
- 6) How would other stakeholders, including customers, see the issue? What is important to each of them? How do they think about it?
- 7) What other causes are affecting this system? What other effects (particularly those which are distant or unintended) does the system produce?
- 8) What part of the issue is internal to my work group? What is a manageable chunk that relates to my position?
- 9) In what ways do I or my group create or contribute to the issue through what I/we think, say (or choose not to say), or do (or choose not to do)?
- 10) What is the apparent purpose of this system,

Example: What appear to be the outcomes of people's efforts?
How is this different from what people really want?

About the Author:

David Peter Stroh is a Principal with Applied Systems Thinking and Founder and Principal of www.bridgewaypartners.com. David is an expert in applying Systems Thinking to organizational and social change. You can contact him at dstroh@appliedsystemsthinking.com.