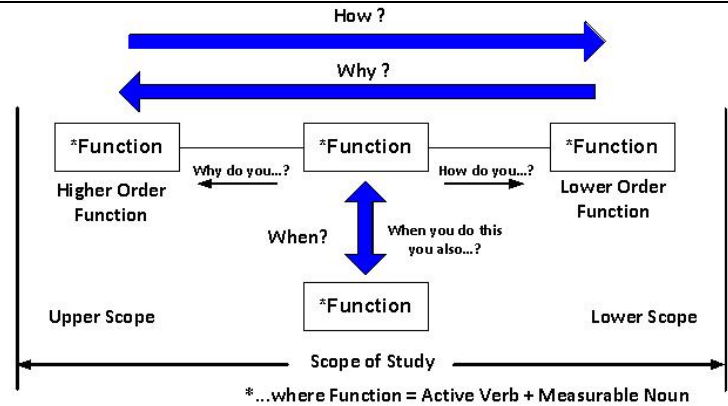


**Function Analysis System Technique (FAST)**

**What is it?**

The Function Analysis System Technique is a technique to show the logical relationships between functions of a project, product, process or service based on the questions “How” and “Why”.



**Why is it important?**

The function analysis system technique aids in thinking about the problem objectively and in identifying the scope of the project by showing the logical relationships between functions. The organization of the functions into a function-logic FAST diagram enables participants to identify all the required functions. The FAST diagram can be used to verify if, and illustrate how, a proposed solution achieves the needs of the project and to identify unnecessary or duplicate functions.

The technique helps:

- Identify missing functions.
- Define, simplify and clarify the problem.
- Organize and understand the relationships between functions.
- Identify the basic function of the project, process or product.
- Improves communication and consensus.
- Stimulate creativity.

**What is a function?**

A function is a two word Verb - Noun definition that describes a need. The two words used to describe a function are made up of an active verb and a measurable noun. The measurable noun identifies something that can be described and quantified.

**Is there a “correct” FAST Diagram?**

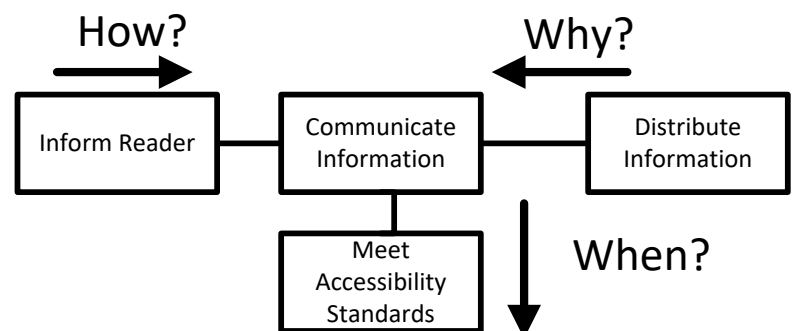
There is no ‘correct’ FAST diagram but there is a valid method of representing the logic in a diagram. The validity of a FAST model for a given situation is dependent on knowledge and scope of the workshop participants. The FAST diagram aids the team in reaching consensus on their understanding of the project

**Key questions to ask:**

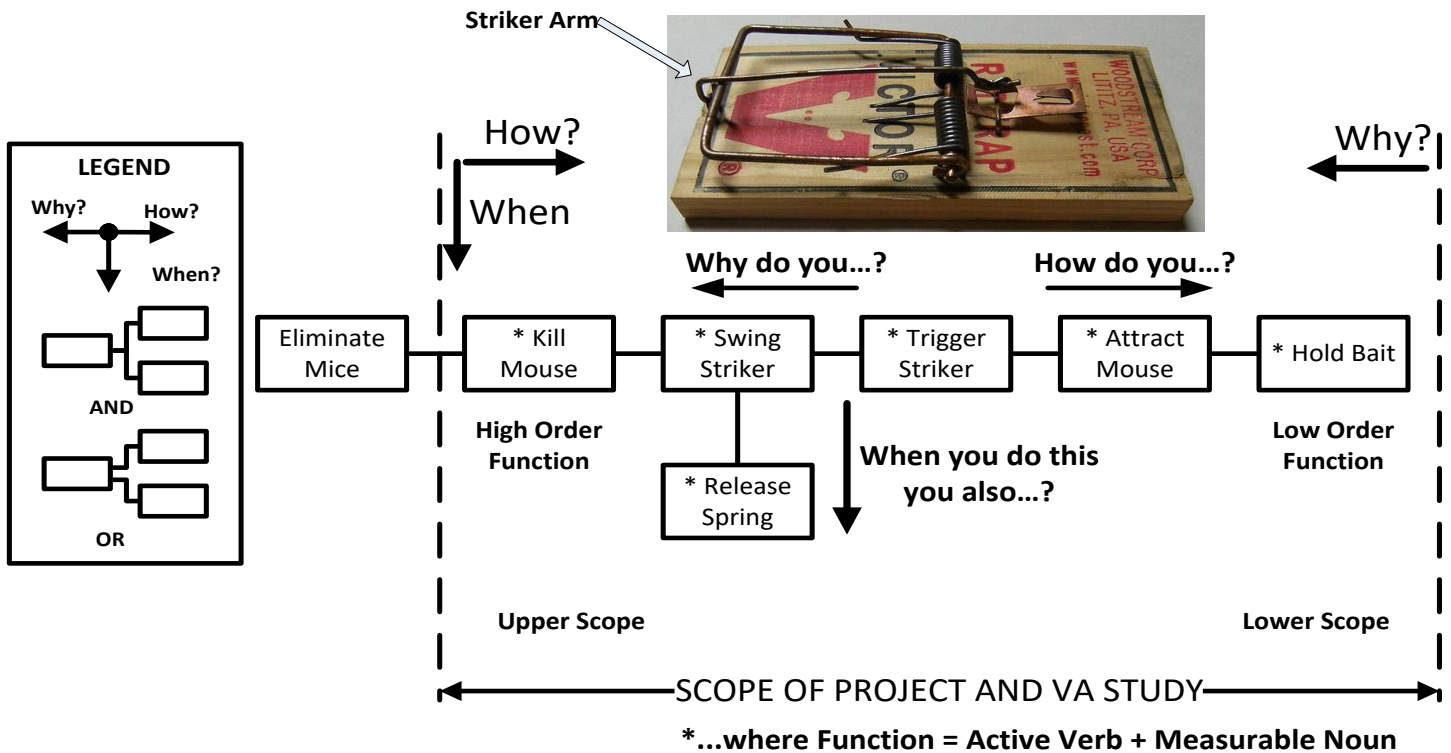
- How do you achieve this function?
- Why do you do this function?
- When you do this function what other functions must you do?

**Who is involved?**

The Function Analysis System Technique (FAST) diagram is usually prepared in a workshop setting and led by someone with experience in preparing FAST diagrams. Input for the diagram is received from workshop participants.



## Steps in constructing a FAST diagram



### Creating a FAST Diagram

- Start with the Functions identified using [Function Analysis](#)
- Expand the functions in the “How” and “Why” directions:
- Build along the “How” path by asking ‘how the function achieved’? Place the answer to the right in terms of an active verb and measurable noun.
- Test the logic in the direction of the “Why” path (right to left) by asking ‘why is this function undertaken?’ for each function in the reverse order (from right to left).
- When the logic does not work, identify any missing functions or adjust the order.
- To identify functions that happen at the same time, ask “when this function is done, what else is caused by this function?”
- The higher order functions (functions towards the left on the FAST diagram) describe what is being accomplished and lower order functions (functions towards the right on the FAST diagram) describe how they are being accomplished.
- “When” does not refer to time as measured by a clock, but functions that occur together with, or as a result of each other.

Learn more about **FAST Diagrams** by visiting:

Value Analysis Canada  
[Valueanalysis.ca](http://Valueanalysis.ca)