Example of Elicitation Worksheet

This is NOT a template–it is a customized design and format with questions specific to the way a certain team of automotive designers thinks about their component and its performance.

Worksheet for Component Performance

Subject Matter Expert John Doe
Component "new sensor element 1"
Date 11/30/99

To obtain an overall reliability estimate of the fuel system, we are asking you to provide your expert judgment regarding estimates of the reliability of its components and subsystems. See the attached reliability block diagram / fault trees for the components and subsystems that your group will be concerned with. For each component(s) or subsystem(s) that your Subject Matter Expert team discusses, please complete a separate, and appropriately labeled, worksheet.

As you complete the worksheet, restrict your thinking to this component alone. A failure is defined as the occurrence of any of the failure modes which your Subject Matter Expert team designates below. Assume that all other components function as they should.

1a) For the above named component, which failure modes do you consider significant?

Signal not received
Infant mortality

1b) Why are they significant?

Will cause unit to fail on demand

1c) What is the incidence of the key failure modes? That is, if a failure occurs, how would you apportion the occurrence of all these failure modes among the entire component listing (percentages)? These percentages should sum to 100.

Failure Mode	Incidence (%)
Signal not received	20 %
Infant mortality	80 %
	%
	%

2a) What is your guess of the most likely number of failures to occur, for any failure mode, in some number of parts in the population (e.g., how many parts will fail, for any reason, per 1000 parts) ?

20 IPTV

2b) If you have information involving time to failure or mileage to failure, please list it:

N/A

2c) Record any key considerations or assumptions that you made (e.g., to include or exclude any environments).

Nominal conditions only
Excluding extremes

3a) What is the worst performance, or the highest number of failures to occur, for any failure mode, in some number of parts in the population (e.g., what is the most number of parts that will fail, for any reason, per 1000 parts)?

250 IPTV

3b) If you have information involving time to failure or mileage to failure, please list it:

N/A

3c) Record any key considerations or assumptions that you made (e.g., to include or exclude any environments).

Nominal conditions only
Excluding extremes

4a) What is the best performance, or the lowest number of failures to occur, for any failure mode, in some number of parts in the population (e.g., what is the least number of parts that will fail, for any reason, per 1000 parts)?

10 IPTV

4b) If you have information involving time to failure or mileage to failure, please list it:

N/A

4c) Record any key considerations or assumptions that you made (e.g., to include or exclude any environments).

Nominal conditions only
Excluding extremes

If "old sensor element 1" failure mode data is available, please complete question 5:

5) Describe how you expect the "new sensor element 1" to perform with respect to that of "old sensor element 1"?

Better / Worse? Worse, the new technology is untested.

By what magnitude? (e.g., "new sensor element 1" performs x times better/worse than "old sensor element 1").

New sensor element 1 is 5 to 10 times worse.